Research Evaluation 2000-2010

Department of Mathematical Sciences

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Research Evaluation
2000 - 2010

Aalborg University

MATHEMATICAL SCIENCES

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Department of Mathematical Sciences
Aalborg University
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Mathematical Sciences, Aalborg University
Research Evaluation 2000-2010.

Edited by Morten Nielsen

Preface

It was decided in 2010 that the Department of Mathematical Sciences at Aalborg University would conduct a research evaluation. The present report documents this third research evaluation of the Department of Mathematical Sciences and covers the period 2000-2010. The previous evaluations covered the periods 1987–1992 and 1993–1999, respectively.

A two-day internal Department meeting was held in March 2011 to discuss the format of the evaluation. There was full agreement on setting up an external evaluation committee to carry out the evaluation.

The department was delighted when Professor Niels Keiding (University of Copenhagen) and Professor Kristian Seip (Norwegian University of Science and Technology, Trondheim) agreed to be on the committee. The committee visited the Department June 6–8, 2012, where research staff including PhD students were interviewed resulting in the evaluation report that can be found in Part I of this document.

Part II of this document contains a self-evaluation of the Department including background material about the department, individual reports and research plans for the research groups in the Department. All researchers in the department contributed to the self-evaluation. As editor of this evaluation, I thank them all for their assistance and support.

August 2012 *Morten Nielsen*

Contents

Part I

Evaluation of the Department

Chapter 1

Guidelines for the Evaluation

The following guidelines describe the framework and considerations that form the point of departure for the evaluation process that we ask the expert evaluators to follow in performing the research evaluation for Department of Mathematical Sciences at Aalborg University.

- The purpose of the evaluation is to provide an independent assessment of the department's scientific production in the period 2000-2010.
- The panel is also invited to give constructive suggestions that can be used strategically by the department to strengthen the department's scientific standing over the next 5 years, i.e. in the period 2012-2016.
- In the future research will to a greater extend rely on funding from larger (often interdisciplinary) research grants. The panel is invited to make suggestions on how the department better can position itself to obtain such grants.
- The department is hosted by the Faculty of Engineering and Science and it is important for the department to be in alignment with the strategy of the Faculty. The panel is invited to make suggestions on how to ensure this.
- To ensure that the process and results are regarded as trustworthy, we ask the evaluators to apply the best of his/her professional skills, knowledge and ethics in evaluating the research at the department in accordance with these guidelines and the timetable provided by the department.
- No research related topic is off-limit to the panels investigation, and all findings and suggestions by the evaluators will be made public in unedited form as part of the research evaluation.

The department will provide a comprehensive documentation of the department's research activitites and the scientific staff.

We expect the evaluators to contribute in the following way.

- To read and assess the documentation provided by the department in April 2012. Each evaluator is expected to focus on the documentation within his/her area of expertise while keeping an eye on the bigger picture.
- To work together with the department representative on the evaluation panel.
- To visit the department for approximately one week in June 2012 in order to:
  - conduct interviews with faculty members and the department leadership.
  - finalize the panel report with recommendations before the end of the visit.

The research evaluation is initiated by the department and the department covers all expenses related to the evaluation.

The target group for the evaluation is the members of the department and the Faculty of Engineering and Science at Aalborg University.

Chapter 2

Report from the Evaluation Committee

2.1 Introduction

In March 2012 the Department of Mathematical Sciences at Aalborg University appointed Professor of Biostatistics Niels Keiding, University of Copenhagen, and Professor of Mathematics Kristian Seip, Norwegian University of Science and Technology, to evaluate the research of the department made during the past decade and give constructive suggestions 'to strengthen the department's scientific standing over the next 5 years'; see Chapter 1 for the full set of evaluation guidelines. The evaluation was centered around a site visit 6-8 June 2012.

2.1.1 Documentation

The department supplied a self-evaluation report[1] containing background material about the department, individual reports and research plans for the 9 research groups, and extensive material about the publication output from the department. At the request of the evaluators, additional material was provided ahead of the site visit: Publications stratified on research groups, lists from each research group of the publications that they valued most highly themselves, a description (in Danish) of the groups in biostatistics in Aalborg outside of the Department of Mathematical Sciences, the accreditation application regarding a new math-tech programme, and the Faculty Strategy 'Towards New Knowledge and New Solutions 2015' (in Danish).

[1] The self-evaluation report consisted of Chapters 3, 4, and 5 of the present report.

2.1.2 The site visit

The evaluators visited Aalborg on 6-8 June 2012, the programme can be found here. The main part of the programme consisted of interviews with the 9 research groups, merged into 5 larger groups. In addition 3 PhD students were interviewed while a scheduled interview with 2 secretaries was replaced by a written contribution. Brief summaries of all interviews are reported below. In addition, the evaluators had frequent conversations with Institute Chair Søren Højsgaard and Vice-Chair Morten Nielsen.

Conclusion and recommendations are at the end of this report.

2.2 Interviews with the research groups

2.2.1 Interview with groups in Statistical genetics and econometrics, 6/6-2012

Participants: Niels Keiding, Kristian Seip;

Poul Svante Eriksen, Susanne Christensen, Rasmus Waagepetersen, Torben Tvedebrink (Statistical genetics)

Poul Svante Eriksen, Susanne Christensen, Esben Høg, Rasmus Waagepetersen (Econometrics)

This interview was uncharacteristic in that both groups were formed rather recently so that the discussion had more weight on the future development than on past achievements.

Research in Statistical Genetics has so far mainly been related to a fruitful collaboration with the Department of Forensic Genetics (Niels Morling) at the University of Copenhagen, which has contributed significantly financially to staffing in that area. In addition R. Waagepetersen has maintained collaboration with D. Sorensen and his group at Research Center Foulum on modern tools for classical quantitative genetics problems.

Important new challenges will arise in connection with the expected demand for both general advice and collaboration in biostatistics and more specific expertise in bioinformatics in connection with the emerging Medical Faculty at Aalborg University. It is an important question to which extent these new developments should be housed within the Department of Mathematical Sciences and to which extent it would be desirable to attempt to transfer staff from existing biostatistical groups at the hospitals in Aalborg into the Department of Mathematical Sciences. Special conditions about the distribution of work load across research, teaching of mathematicians, service teaching and consulting would most likely have to be developed and negotiated.

Regarding *bioinformatics*, all experience indicates that full time dedication is mandatory if the effort is to be competitive, so this field cannot be handled by slicing existing staff even further into a refined matrix organization. It was reported that the statistician Martin B. Hansen, formerly at this department and currently at the Department of Haematology at Aalborg Hospital, has started an interest in bioinformatics.

The activities in *econometrics* were triggered by the Dean's recent initiative to start a study programme in mathematics and economics at Aalborg University. The programme has been successful in attracting more students with mathematical interests. Unfortunately the core group of economists at the Faculty of Social Sciences in Aalborg is not particularly strong in quantitative economics, which adds to the difficulties of generating a critical mass around the only full

time person so far in the area, Assoc. Prof. Esben Høg. We discussed whether it might be useful to focus on other aspects of math. econ./operation research with better response on the substantive side, particularly among the engineers.

2.2.2 Interview with the groups in Graph Theory/Mathematics for Communication 6/6-2012

Participants: Niels Keiding, Kristian Seip;
Lars D. Andersen, Leif K. Jørgensen (Graph Theory)
Olav Geil, Diego Ruano (Mathematics for communication)

The two groups cover different aspects of discrete mathematics related to computer science and electrical engineering (signal processing). Internationally, their field of expertise (graph theory, coding and information theory, finite fields and their applications) is intertwined with the corresponding engineering disciplines. The research of the Aalborg team is of high quality and seems well positioned with respect to current developments in the field. There is close collaboration with the engineering departments regarding advanced teaching, but only sporadic contact regarding research. However, the researchers in Aalborg co-author papers with computer scientists and engineers elsewhere. Altogether, this appears to be a well functioning pattern of local and global collaboration.

Both groups benefit from strong national networks (respectively involving DTU/SDU and DTU) that have received sustained support from the Danish National Research Foundation; both groups have good international networks, and the Mathematics for Communication team is involved in "Danish-Chinese Center for Applications of Algebraic Geometry in Coding Theory and Cryptography".

Both groups stress the algebraic nature of their fields; in either case combinatorial methods are combined with techniques coming from algebraic disciplines such as commutative algebra, algebraic geometry, and the theory of finite fields. A future position in pure algebra would therefore be welcomed to complement and support the research of the two groups.

The group's own judgement is that the teaching load is high, a situation that impedes the research output.

The number of PhD students (2) seems healthy, given the size of the groups and the general potential for recruitment of PhD students.

The two groups find the initiative to launch a new study programme in engineering mathematics interesting, but have so far not been involved in the planning of the programme. The research profile of the two groups should fit well into such a programme.

2.2.3 Interview with the groups in Mathematical Physics/Applied Harmonic Analysis 7/6-2012

Participants: Niels Keiding, Kristian Seip;
Arne Jensen, Horia Cornean (Mathematical Physics)
Arne Jensen, Morten Nielsen (Applied Harmonic Analysis)

The research in mathematical physics centers around problems in operator theory, spectral theory, and partial differential equations. The work in applied harmonic analysis is linked to this activity in several ways, for instance through the study of pseudodifferential operators and function spaces. The research on sparse representations and nonlinear approximation takes place in a fast developing area related to compressed sensing; the Aalborg team, in spite of its modest size, has contributed significantly to the field.

The work in mathematical physics has a strong international profile; in addition, Cornean has developed a sustained collaboration with theoretical physicists in Aalborg resulting in a number of joint publications. The group in applied harmonic analysis similarly has an excellent international standing, and has at the same time a local focus and is developing collaboration with statisticians and engineers in Aalborg. Members of the group are able to have extensive stays abroad thanks to a flexible system of sharing teaching duties.

The group has an excellent record in attracting external funding; major projects in the past were MaPhySto and WAVES. In particular, as a result, the group members have been able to travel extensively and to attract a large number of foreign guests to Aalborg. The group also has a strong national network, and Arne Jensen made an exemplary effort to disseminate wavelet techniques to lecturers in Danish university colleges during the late 1990's. WAVES was a project done in collaboration with Department of Electronic Systems in Aalborg; this collaboration seems to have paved the way for the promising initiative to launch a study programme in engineering mathematics. The research of the group would contribute substantially to the success of this programme.

The group has altogether 5 PhD students. The group has in recent years had several promising young members who have now left; the group now wishes to attract a young researcher at assistant professor level.

Probabilistic methods play an increasingly important role in the theory of sparse representations, and the group is therefore planning to develop a collaboration with Jesper Møller and his group. Research proposals in this direction have been submitted; the potential for fruitful synergy between these two excellent groups appears to be considerable.

2.2.4 Interview with groups in Applied probability and statistics and Spatial and computational statistics, 7/6-2012

Participants: Niels Keiding, Kristian Seip;

Jesper Møller, Rasmus Waagepetersen, Kasper Klitgaard Berthelsen, Jakob Gulddahl Rasmussen, Ege Rubak (Applied probability and statistics)

Jesper Møller, Rasmus Waagepetersen, Kasper Klitgaard Berthelsen, Poul Svante Eriksen, Jakob Gulddahl Rasmussen, Ege Rubak, Robert Jacobsen (Spatial and computational statistics)

These areas have formed the main strengths in probability and statistics in the recent past of the Department of Mathematical Sciences with convincing contributions led by Professors Jesper Møller and Rasmus Waagepetersen, often in collaboration with current or past PhD students.

In *applied probability* most of the work concerns point processes and stochastic geometry, with such highlights as the strong contributions of Jesper Møller et al. on perfect simulation, as well as studies by several members of the group of several new classes of point processes and tesselations.

In *applied statistics* the group has collected a somewhat diverse group of papers, ranging from the results of standard biostatistical projects in collaboration with medical researchers to modelling efforts inspired by more or less exotic biological problems or operational research-type efforts to track lost baggage in airports.

Some of these projects arose from the statistical consultancy service in the department, and some form the basis for PhD projects.

The area of *spatial statistics* has been the flagship activity of the statisticians in the department since Professor Steffen Lauritzen's departure halfway through the period under review. The driving force is Jesper Møller, and the emphasis is on theoretical developments of the deductive type, although some methodological work seems to be inspired by concrete applications. There is a fruitful collaboration with the Aarhus-based 'Center for Stochastic Geometry and Advanced Bioimaging (CSGB)'. The number and quality of publications are impressive, as are the national and international networks, with which specific external travelling grants have facilitated frequent contacts.

Computational statistics is mainly done in connection with Markov Chain Monte Carlo-type approaches to various statistical problems for point processes, but to this area also belongs P. Svante Eriksen's study on generalizations of graphical models.

The groups have been successful in attracting grants. Their own assessment of obstacles to further development primarily concerns the teaching load, which they consider as heavy, and probably heavier than at other Danish universities.

2.2.5 Interview with the group in Topology with Applications in Computer Science 7/6-2012

Participants: Niels Keiding, Kristian Seip;
Lisbeth Fajstrup, Iver Ottosen, Martin Raussen

Two of the group members, Lisbeth Fajstrup and Martin Raussen, have over a period of more than 15 years developed a profound and interesting research activity on the foundations of directed algebraic topology with motivations from and applications to concurrency theory in computer science. The Aalborg team has developed a broad international network involving for instance computer scientists in France, with whom several key publications have been co-authored.

The third member of the group, Iver Ottosen, has so far done more traditional work in algebraic topology related for instance to different aspects of free loop spaces. The collaboration between Ottosen and the two other members of the group is hampered by the fact that Ottosen lives in Copenhagen as the only mathematician attached to the Copenhagen branch of Aalborg University.

Raussen now chairs the steering committee of the newly established ESF research network program "Applied and Computational Algebraic Topology". This is clearly a very valuable activity, but it comes with a limited amount of funding. For many years, the group participated in a national research network supported by the Danish National Research Foundation, but this network has now ceased to exist. It is therefore at present a challenge for the group to attract sufficient external funding. The group now makes efforts to attract funding from the Danish National Research Foundation based on its own research strength.

The group has had three PhD students in the past and hopes to attract new students in the future, but finding both funding and suitable candidates could be challenging. The group has a hope that students could be attracted through its international network.

The group's own judgement is that the teaching load is too high, a situation that impedes the research output. In addition, building up a well functioning service teaching at the Copenhagen branch of Aalborg University has been time consuming. The group would welcome a closer relation between its research profile and teaching obligations.

The group welcomes the initiative to launch a new study programme in engineering mathematics, but recognizes that it may be a challenge to get strongly involved because of the lack of courses offered in algebraic topology.

It is noticeable that both Martin Raussen and Lisbeth Fajstrup serve the European mathematical community at a high level as vice presidents of respectively the European Mathematical Society (EMS) and European Women in Mathematics. In addition, Raussen was for a number of years the editor of the EMS Newsletter, and he has also for 10 years, in collaboration with Christian Skau,

conducted interviews with all Abel Laureates, broadcasted by the Norwegian TV channel NRK and published widely, for instance in the Notices of the American Mathematical Society. Such admirable outreach activity and service to the mathematical community deserve recognition and support.

2.2.6 Interview with PhD student Mikkel Andersen 8/6-2012

Andersen works on forensic genetics supervised by P. Svante Eriksen and co-supervised by Professor of Forensic Genetics Niels Morling, University of Copenhagen. The project started in August 2010 and is 2/3 sponsored by the Department of Forensic Medicine, University of Copenhagen. The project is partly motivated by the difficulty in rape cases of making sure that the DNA traces in question are actually from the perpetrator rather than from the victim. A radical solution is to only look at the Y chromosome, since this has to be from a male. Andersen is engaged in developing the special variant of population genetics necessary for the Y chromosome (collaboration with colleagues in Kiel; A. has also been on the well-known Bruce Weir Summer School in genetic statistics in Seattle). Andersen is very satisfied with his project and the other researchers in that area, and there has been no shortage of possibilities for keeping contact with the forensic geneticists in Copenhagen or for getting to conferences and present contributions.

Andersen believes that his project is going well 'but this is hard to know without more experience'. Before his PhD study he ran a course in statistics for psychologists, supervised and monitored by Assoc. prof. Jakob Gulddahl Rasmussen. After the PhD he would like to continue in bioinformatics or biostatistics, but is unsure what will happen at the Department of Mathematical Sciences – 'but then there is always Novo Nordisk'. Andersen does not have much contact with other PhDstudents, he clearly identifies much more 'vertically' with researchers in closely related projects than 'horizontally' with his fellow PhD students at the Department of Mathematical Sciences.

2.2.7 Interview with PhD student Stefano Martin 8/6-2012

Martin works on coding theory and is supervised by Olav Geil and co-supervised by Diego Ruano. He started his project in October 2011, after obtaining a MSc degree from the University of Trento. Martin is part of a research network consisting of members in Aalborg, at DTU, and in Shanghai. He already made one trip to Shanghai and is planning a three month stay there in the winter of 2013. Martin has already produced one paper to be presented at a conference in July this year. The process of immigration to Denmark was relatively painless, thanks partly to effective support from the university.

Martin's PhD project has a strong international orientation and seems to be running well.

2.2.8 Interview with PhD student Mikkel Brynildsen 8/6-2012

Brynildsen works in the mathematics of rigorous solid state physics and is supervised by Horia Cornean. He started his project in August 2011, after obtaining a MSc degree in physics at Aalborg University. Brynildsen's work is part of an ongoing research collaboration with members of the Department of Physics. A paper has already been submitted and will be presented at the IAMP conference in Aalborg in August 2012. Brynildsen will spend the fall semester 2012 at the Mittag-Leffler Institute participating in a programme in Mathematical Physics.

Brynildsen's PhD project is part of an interesting collaboration between the physicists and mathematical physicists in Aalborg. It has at the same time a strong international orientation. It seems to be running well.

2.3 Conclusion

2.3.1 Research output

In the well-established groups the research output over the evaluation period has been strong to excellent and the ideas for future development are generally convincing. We return below to specific comments about the emerging groups in statistics.

2.3.2 Organisation of research groups

Each member of the scientific staff belongs to one or several of the nine research groups presented in the self-evaluation, which thus represent *research topics* rather than a strict division of the scientific staff into distinct groups. This flexible matrix organization seems quite reasonable and indeed encourages collaboration across mathematical subdisciplines. The department may consider to make the "philosophy" of its organization more explicit and perhaps also visible in its web presentation.

2.3.3 Applicability of research

Most of the research in the Department of Mathematical Sciences is driven by classical mathematical criteria: desire to solve basic mathematical questions, develop generic mathematical and statistical methodology, generalize earlier theory, and to respond to new general questions from application areas. It should be recognized that this emphasis on basic research in mathematical sciences is of utmost importance for the scientific quality of the department and indeed in turn for the department's involvement in interdisciplinary research. On the other hand, while only few results attempt to solve concrete practical problems, it is our view that most of the mathematical output is actually rather concretely useful for many application areas, which however may not be represented at the moment at Aalborg University. We find that situation quite natural and are pleased to see that the strong culture in the Department of Mathematical Sciences of national and international networking in most cases satisfies the need for concrete contacts with applications in cases where such areas are not at the moment well represented in Aalborg.

2.3.4 Outreach to other departments in Aalborg University

At the moment the most successful collaboration perspectives seem to be the contacts between Applied Harmonic Analysis and Point Processes at the Depart-

ment of Mathematical Sciences and the signal processing group at the Department of Electronic Systems. These are being consolidated through the promising plans developed for a new math-tech study programme, the establishment of which is in itself hoped to facilitate further research collaboration. We return below to the emerging situation in biostatistics and bioinformatics that has arisen with the new Faculty of Medicine at Aalborg.

2.3.5 Research training

The Department of Mathematical Sciences has maintained an impressively steady course in PhD-training, even with an upward trend at the end of the evaluation period. This activity seems to be very important indeed in the context: it brings life to often rather small research groups, it provides recruitment possibilities for new staff, and it directly and indirectly strengthens the networking activities. We recommend that this activity will be given high priority in the future as well.

From our conversations we got the impression that there is not a very strong 'horizontal' PhD student culture at the Department. It might be useful to encourage more joint meetings among the PhD students, where they could for example present their projects (and possible progress therein!) to each other.

2.3.6 Infrastructure

The department has several rather small research groups, but each of them generally works seriously with their research and compensate for their small size and isolated geographical situation by having dedicated national and international networks. There are only few concerns (detailed below) and in general we recommend the present infrastructure of the department to be maintained as it is.

2.3.7 Research administration

Based on various conversations and the report from the secretary mainly responsible for support to research administration it is our general opinion that the Department is well equipped in this regard, so that the researchers are not unduly overwhelmed by clerical tasks.

2.4 Concerns

2.4.1 Teaching load

Many researchers said in the interviews that they considered the teaching load heavy, hampering research possibilities. We have not attempted to verify this general impression by comparison to official norms or actual loads at comparable universities, particularly in Denmark. However, an obvious possibility in the environment would be to attempt a more formal sabbatical leave system. This could be tied more or less to various incentives: documented excessive teaching or excessive administrative duties may be balanced by extra free time for focusing on research, or a strong series of successful publications could be rewarded by extra freedom to do more of the same. This would also correspond well to the well-developed culture at the Department of strong national and international networks.

2.4.2 Aalborg University branches elsewhere

Aalborg University has branches in Copenhagen and Esbjerg, and elementary mathematics is taught at both places. As we understand it, political reasons motivate that this teaching should be done by persons appointed by Aalborg and working only in the local branch of Aalborg university, despite the existence (Copenhagen!) of strong local mathematical groups. The Aalborg mathematicians will necessarily be very isolated in the very small mathematical environments, making it less likely that high quality research can result.

2.4.3 Emerging groups in statistics: Mathematics and economics

A new math-econ study programme has recently been introduced, and the question is how this can be reasonably supported by adequate research activity. As we understand the situation, there is not a very strong interest in quantitative economics at the Faculty of Social Sciences, and so far there is only one associate professor at the Department of Mathematical Sciences principally dedicated to this activity. His principal suggestion for future development is to work in continuous-time financial mathematics, which is a serious and currently popular discipline, however this work is often done by mathematicians/probabilists in isolation in their own departments.

Some further staff are contributing with various math-econ related work, but serious collaborative efforts with applications – at Aalborg or elsewhere – seem rather limited so far. As we see it, more resources and more outreach would be

needed if this study programme is to have serious research underpinning. In the interview, we briefly touched on the possibilities of taking advantage of the many engineers at Aalborg University to upgrade classical operation research disciplines (which for many years formed the backbone of math-econ in Aarhus), but we have no serious comment regarding the practical feasibility of this idea.

2.4.4 Emerging groups in statistics: Biostatistics

There has been an active research environment in clinical medicine for many years at the hospitals in Aalborg, until very recently formally associated with the medical faculty at Aarhus University. There have been various attempts over the last two decades to associate outgoing biostatistical activity in this medical environment with research in biostatistical methodology at the Department of Mathematical Sciences, but so far no long term viable structure has succeeded, with the modest exception of a consultancy service that had not even made it to the otherwise very detailed documentation about the department that we received before the site visit. In the meantime one rather large group of biostatisticians have been established at the hospital, with mostly rather practical consulting ambitions.

Recently Aalborg University has started its own medical faculty, and the question of the possible formal involvement of the Department of Mathematical Sciences has reappeared. In our view this issue will require very careful consideration of the many conflicting interests and cultures. On the positive side some merger between practical biostatistics and mathematical statistics can produce very fruitful new methodology, but on the other the roles of the partners in such a collaborative effort need to be worked out in considerable detail. Much biostatistical consulting can be quite demanding, among other things because the clients often need very elementary guidance, and this therefore needs to be regarded in parallel with elementary teaching. On the other hand successful biostatistical consulting requires considerable knowledge and experience, even if it technically speaking may look elementary to mathematicians, probabilists and mathematical statisticians. If they are not treated with sufficient respect, the serious practical biostatisticians will not thrive in the Department of Mathematical Sciences and the quality of their practical work will ultimately suffer. We do not want to make assumptions or recommendations on where these negotiations should end, but advise that many aspects be taken into account in the process.

2.4.5 Emerging groups in statistics: Bioinformatics

In our report on the relevant interview above we briefly mentioned that all experience shows that successful research in bioinformatics requires full-time ded-

ication, the reason being that not only does one have to follow the technical development in the methods, it is also necessary to follow the fast subject-matter development in genetics. For the activity to succeed, a senior person needs to be dedicated. Bioinformatics has been a very productive branch of activity in many biostatistics departments internationally, while the success within statistics (or mathematics) departments has been much more limited so far in Denmark. Should the Department of Mathematical Sciences succeed in attracting a suitable senior person to start bioinformatics, the environment around that person will have to respect the special demands that this activity requires. For example, this person could not just be given standard teaching obligations.

Part II

The Department and its Research Activities 2000-2010

Chapter 3

The Department

This chapter contains a brief description of the Department of Mathematical Sciences at Aalborg University. It gives an overview of its history, its staff, and its economical resources. Furthermore, it is attempted to give a picture of the working conditions for researchers at the Department as of today.

3.1 Background

Aalborg University (AAU) was established in 1974. In 2007 the Danish Building Research Institute (SFI) became part of the university, and in 2010 the Faculty of Medicine was established as an independent faculty. At present AAU encompasses the following five faculties:

- The Faculty of Humanities
- The Faculty of Social Sciences
- The Faculty of Engineering and Science
- The Faculty of Medicine
- Danish Building Research Institute

The Department of Mathematical Sciences is part of the Faculty of Engineering and Science, which encompasses 13 departments, and compared to the other departments Mathematical Sciences is below average in size, employing approximately 30 full time faculty member and 6 members of technical/administrative staff. Mathematical Sciences became an independent department in 1999 after a split-up of the Department of Computer Science and Mathematics. Earlier on

both Mathematics and Computer Science were sections in the large Institute of Electronic Systems.

3.1.1 Department Management

The management structure and general organization of the Department has changed fundamentally during the period of this evaluation.

Until 2003 university leaders (rector, deans, and heads of departments) at Danish Universities were elected by colleagues, students and technical/administrative staff. However, in 2003 a new university law was adopted in Denmark that abolished the election process and introduced a new management structure modelled on the structure of for-profit corporations.

Now Aalborg University is directed by a Board, which is the university's highest authority. The Board appoints the rector, the rector recruits the deans and the deans hire the heads of department.

3.1.2 Funding Structure

Until 2009 the Department's resources consisted of positions, physical resources and external funding. The number of positions was primarily determined by the quantity of teaching activities delivered as requested by the various study boards.

In 2010 the Faculty of Engineering and Science introduced a new economical model where resources are transferred to the Departments as a sum of money. Funding of salaries is based on three elements: Teaching, publications and external funding.

The new model is intended to provide the departments with more freedom in the management of resources and to give incentive to publication activity and to attract external funding.

3.2 The Department in figures

We now turn to a discussion of some key figures that show the development of the Department and its research environment during the period under review.

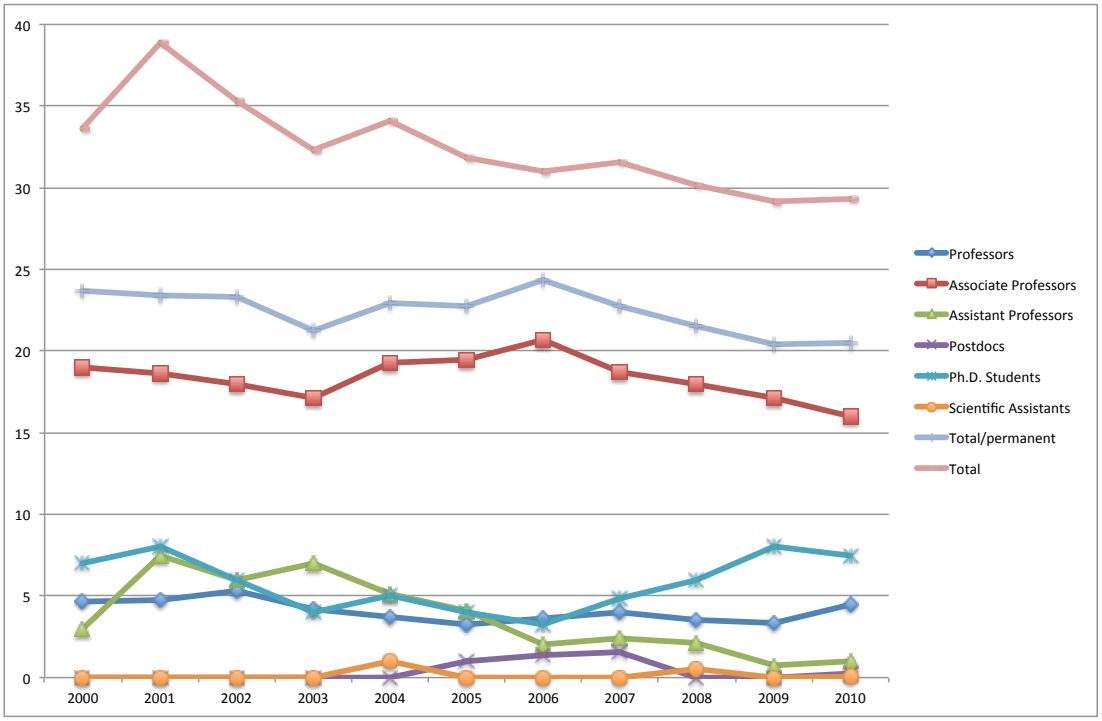
3.2.1 The development in faculty and staff

The table below gives a numerical overview over the staff employed at the Department in the evaluation period. The unit applied is a *man-year*.

Positions	2000	2001	2002	2003	2004
Professors	4.67	4.75	5.30	4.21	3.71
Associate professors	19.00	18.66	18.00	17.08	19.25
Assistant professors	3.00	7.50	6.00	7.00	5.17
PostDocs	0.00	0.00	0.00	0.00	0.00
Ph.D. students	7.00	8.00	6.00	4.00	5.00
Scientific assistants	0.00	0.00	0.00	0.00	1.00

Positions	2005	2006	2007	2008	2009	2010
Professors	3.25	3.67	4.00	3.50	3.33	4.50
Associate professors	19.50	20.67	18.75	18.00	17.08	16.00
Assistant professors	4.08	2.00	2.42	2.16	0.75	1.00
PostDocs	1.00	1.42	1.58	0.00	0.00	0.25
Ph.D. students	4.00	3.25	4.83	6.00	8.00	7.50
Scientific assistants	0.00	0.00	0.00	0.50	0.00	0.08

The table shows that the total number of permanent faculty (professors and associate professors) has decreased slightly during the period of review, and that the number of assistant professors has decreased significantly from 2003 and onwards. A graphical representation of the numbers is given in the following chart.



The next table shows the number of positions devoted to administrative and techical support (of research and teaching); Unit = man-year:

Positions	2000	2001	2002	2003	2004
Admin. support	4.59	4.59	4.59	4.59	4.59
Technical support	2.00	2.00	2.00	2.00	2.00

Positions	2005	2006	2007	2008	2009	2010
Admin. support	4.59	4.42	4.39	4.45	4.45	4.45
Technical support	2.00	2.00	1.50	1.00	1.00	1.00

3.2.2 Visitors

The Department has both short term and long term visitors on a regular basis. Some visitors have their own grants, others are financed via our grants or directly by Department funds. In fact, resources are made available on a yearly basis in the Department budget for the faculty to invite short-term and long-term guest researchers from around the world. The Department sponsored long-term visits during the period of review are summarised in the next table; Unit = man-month. The scientific return of this investment is reflected in the publication lists in Chapter 5.

Visiting Researcher	2000	2001	2002	2003	2004
P. Briet	0.5	1.0			
I. Beltita		1.0			
P. Duclos	0.5				
R. Gribonval				1.0	
B. Hartnell		1.0		1.0	
M. Henning			.75		
K. Ickstadt	1.0				
M. Klin	.25				
G. Nenciu			1.0		2.0
G. Nicolls	.25				3.0
G. Sabidussi	1.0				
W. Sickel					1.0
M. Taksar			1.0		1.5
A. Thomas				1.0	
Z. Tuza					2.0
R. Wolpert	1.0				

Visiting researchers; Unit=man-month.

Visiting Researcher	2005	2006	2007	2008	2009	2010
F. Bentosela				1.0	1.0	
A.S. Finbow		1.0				
B. Hartnell			1.0			
M. Henning	1.0		1.0			
P. Hislop			1.0			
G. Nenciu	2.0	2.0	2.0	2.0	2.0	2.0
R. Purice				1.0		
B. Randerath			1.0			
J. Rosicky		1.0				
M. Sala			1.0			
M. Taksar		3.0				
Z. Tuza		1.0				
E. Vigne	1.0					
K. Yajima		1.0		1.0	1.0	
A. Yeo		1.0				

Visiting researchers; Unit=man-month.

3.2.3 External Funding

In recent years, it has been possible to launch and further research activities thanks to several research grants. The grants were mainly allocated by the Danish `forskningsråd` and several research programmes under the European Union. In the table below, we summarize the grants (in 1,000 Dkr).

Support from	Grant ID	DKR ,000 2000	2001	2002	2003	2004	2005
EU	`ERB-FMRX-CT96-0095`	1,068					
SNF	`51-00-0026`	275					
SparNord	`JM`		250				
SNF	`9502634`	1,090					
SNF	`50-00-0143`		1,635				
SNF	`21-02-0519`				300		
DG	`MaPhySto`				2,606		
SNF	21-04-0385						250
DG	`MaPhySto`						408

EU – ERB-FMRX-CT96-0095 TMR Network (Training and Mobility of Researchers) within Spatial Statistics. Aalborg Project Leader – Jesper Møller Project Coordinator – Gareth Roberts, Warwick.
SNF – 9502634 DINA (Danish Informatics Network in the Agricultural Sciences) Aalborg Project Leaders – Steffen L. Lauritzen and Finn Verner Jensen (Computer Science) Project Coordinator – Mogens Flensted Jensen, KVL.

SNF – 50-00-0143 Wavelets in audio/visual electronic systems Math.Dept. project organizer – Arne Jensen. AAU Project Coordinator, Dept. of Automation and Control.

DG – MaPhySto Mathematical Physics and Stochastics Scientific Director Arne Jensen.

Support from	Grant ID	DKR ,000 2006	2007	2008	2009	2010
Miscellaneous		180				
Min. Science	AGR	250				
FNU	272-05-0251	1,294				
FNU	09-062325		2,293			
FNU	09-061872/UFO		1,852			
KU	Forensic Department		1,192			
KU	Forensic Department					235
KU	Forensic Department					154
FNU	09-065927				931	
FNU	09-072331					216
SparNord	MN					250
Miscellaneous			137	87		

FNU 272-05-0251 Mathematical Physics and Partial Differential Equations.. Project Coordinator Arne Jensen.

FNU – 09-062325 Point Process Modelling and Statistical Inference. Project Coordinator Jesper Møller.

FNU – 09-061872/UFO Seven International PhD Studentships for the Doctoral School of Mathematics and Physics. Supervisor Jesper Møller.

KU – Forensic Dept. 2/3 PhD Stipend. Supervisor P. Svante Eriksen.

Moreover, many faculty members have benefitted from financial support for travelling and conference participation obtained from various sources such as *Det Obelske familiefond*, Carlsbergfondet and the Embassy of France in Copenhagen.

3.3 Teaching

Research and teaching are intimately connected at any university. Here we give a short description of the teaching of mathematics at Aalborg University.

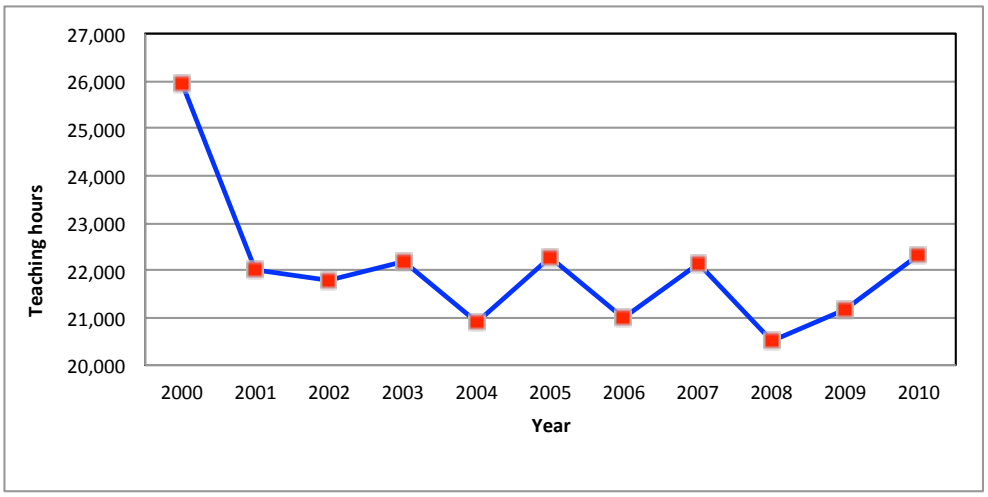
The teaching duties of the faculty in mathematics are mainly directed towards the following areas:

1. The basic year at the Faculty of Engineering and Science that initiates all the students of this faculty (around 800 per year) to scientific studies and to the pedagogical model used at Aalborg University.
2. Engineering mathematics to students of some branches of engineering.
3. Mathematics both at bachelor level (for students of mathematics, computer science and physics) and at master's level.

4. Research education at Ph.D. level.

The four categories contribute to the total teaching load with the following weights (2010 numbers): 1: 38%, 2: 26%, 3: 30% and 4: 6%.

The total number of teaching hours delivered by the Department has evolved during the period of review as follows:



It should be noted that the figures from 2000 to 2009 do not include hours delivered by the department's teaching assistants, whereas these hours are included in the 2010 figure.

3.4 The Physical Work Environment

3.4.1 Building

The Department moved to a new building in 2001. Although this building is a so-called temporary "pavillion", the faculty and staff have been satisfied. The building is spacious and well adapted to mathematics classes with two well suited main lecture rooms and several smaller meeting rooms and a small mathematical library.

However, the current building is beginning to suffer from wear and tear, and the University plan to find new housing for the Department within the next 3 years.

3.4.2 Computing network

The Department is equipped with a modern fast computer network and all researchers have a networked PC in their office. The Department also offers all

employees a PC for their home office enabling them to connect to the Department's network. However, currently Department sponsored broadband internet connections for home use is not offered.

3.4.3 Library facilities

The Department maintains a small mathematics library that holds a number of research monographs and textbooks. The library also holds a (limited) selection of printed journals, but only out of historic interest, and new printed journal volumes have not been added to the library for a number of years. The Department researchers now almost exclusively rely on online journal access through a general AAU subscription. It should be noted that the selection of journals that can be accessed is excellent, and that any special request that is not immediately available can be processed by the general AAU library.

Chapter 4

Research Groups: Topics, Accomplishments, and Visions

This chapter gives a presentation of the research groups in the Department of Mathematical Sciences. The research groups are:

- Applied Harmonic Analysis
- Applied Probability and Statistics
- Econometrics
- Graph Theory
- Mathematics for Communication
- Mathematical Physics
- Spatial and Computational Statistics
- Statistical Genetics
- Topology with Applications in Computer Science.

Each presentation is written by the research group itself and consists of

- scientific profile
- associated faculty
- visions for future work.

4.1 Applied Harmonic Analysis

4.1.1 Profile

The applied harmonic analysis group conducts research in a wide range of topics within harmonic analysis. The research is to a high degree motivated by problems arising within signal processing and the ever increasing need for efficient and robust data representations that lend themselves to scientific analysis and computation. During the review period the group has produced more than 60 peer-reviewed journal articles, many of those appearing in top journals within the group's research area.

The group covers the spectrum from fundamental to applied areas of research in harmonic analysis, of which the principal research areas are:

- Studies of a variety of properties of time-frequency systems suitable for sparse representation of data. Such systems include generalized wavelet systems, brushlets, curvelets, Gabor frames, and wavelet frames. Fast algorithms for sparse data representation are also studied.
- In nonlinear approximation with redundant dictionaries the group's goal is to establish quantitative estimates that relates approximation properties of function systems to associated discrete sparse expansions.
- Stochastic methods for signal processing, including feature identification algorithms and compressed sensing methods.
- Pseudodifferential operators. Here sparse time-frequency expansions are used to study boundedness of operators and other related results. Discretization of various partial differential equations using time-frequency methods are also studied.
- Function spaces. Harmonic analysis is adopted for the fine regularity properties of solutions to partial differential equations. In particular when the function spaces involve different degrees of integrability in space and time directions.

4.1.2 Staff

Current Staff

Professors: Arne Jensen, Morten Nielsen
Associate Professors: Jon Johnsen
Ph.d.-students: Sabrina Munch Hansen, Chr. Robert Jacobsen, Kenneth Niemann Rasmussen

Staff development

Arne Jensen has been instrumental in first establishing and then strenghening the applied harmonic analysis group during the period 2000-2010. He also secured the participation in the WAVES project.

A significant part of the staff development during this period has been the return of Morten Nielsen to AAU in 2002 as an Associate Professor. He was appointed Full Professor in applied mathematical analysis in 2010. Lasse Borup took up a postdoc position under the WAVES project in 2002 after completing his Ph.d. He left for the private enterprise Energinet.dk in 2007.

The current Ph.d.-students are expected to finish their degrees in 2011, 2012, and 2013, respectively.

Doctoral degrees

In 2009 Morten Nielsen obtained the dr.scient. degree for his dissertation 'Aspects of nonlinear approximation with dictionaries'. In 2010 Jon Johnsen submitted the dissertation 'On the theory of type 1,1 operators', for which he obtained the dr.scient. degree in 2011.

4.1.3 Visions

Harmonic analysis has undergone a tremendous development during the period under review. The group started with a fairly selective focus on wavelets and wavelet packets, but later the focus has broadened with the general concept of sparse representations being the main source of inspiration.

The focus on sparse representation has been very successful for the group, and we anticipate that research within this area will continue in the coming five year period.

The group also anticipates that the interplay between statistics and harmonic analysis will become increasingly important. The current success of compressed sensing is one example to support this. The group therefore finds it very natural to strengthen the collaboration with the statisticians of the Department in order to exploit the synergy between the two reasearch groups.

We also anticipate that insights gained through the study of abstract harmonic analysis will continue to play a significant role both in the study of partial differential equations and in developing new and more efficient algorithms for sparse representations. It is therefore important for the group to maintain strong research in the more abstract areas of harmonic analysis, even when more applied research is perhaps favoured on the funding level.

Currently the group is small in size, and it is therefore essential for a continued success that at least an influx of phd students is maintained; ideally at a moderately increased rate.

4.2 Applied Probability and Statistics

4.2.1 Profile

The research within the applied probability and statistics group is and has been quite diverse ranging from methodological research in applied probability, graphical models and inverse problems to applications of statistics in a wide variety of disciplines such as medicine, planning, ecology and Förster resonance energy transfer (FRET) microscopy. During the review period the group has produced 48 peer-reviewed journal papers. The current main topics of research are:

- Biodiversity (Rasmus Waagepetersen (RW)): The high tree species diversity of tropical rain forests is of primary interest in ecological research with emphasis on various mechanisms for species coexistence. Statistical methodology for inhomogeneous spatial point processes (with key contributions from the spatial statistics group) offers a natural and useful approach to disentangle and quantify the effects of the various mechanisms.

- FRET (RW, Kasper K. Berthelsen (KKB), Ege Rubak (ER), Jan-Otto Hooghoudt (JOH)): Förster resonance energy transfer (FRET) microscopy is an imaging technique which allows for indirect measurements of proximity of proteins at the nano scale. The indirect measure of proximity is a nonlinear function of three different color intensities, and ER develops statistical tools for analyzing these types of data. JOH is investigating how clustering patterns of proteins may be inferred from FRET data.

- Micro-columns (Jesper Møller (JM), Jakob Gulddahl Rasmussen (JGR), Farzaneh Safavimanesh, FS): a debated hypothesis in neuro-science is that neurons and glia cells in the cerebral cortex (outer layer of the brain) form column-like structures which may be associated with various diseases such as schizophrenia. FS will develop methodology based on theory for three-dimensional spatial point processes with the aim of investigating the micro-column hypothesis.

- Stochastic geometry (JM, JGR): stochastic geometry deals with models for random sets, and two major topics are spatial point processes and random tessellations. JM has particularly focused on developing a fundamental theory for random Voronoi and Johnson-Mehl tessellations. He has also studied probabilistic aspects of spatial point processes with applications in e.g. computer science. JGR has studied simulation and inference for Hawkes processes which form an important class of space-time point processes used e.g. in seismology. JM and JGR use Bayesian models based on

Voronoi tessellations for the analysis of various datasets concerning badger territories, barrows, mountain tops, and daisies.

- Baggage handling (KKB, Esben Høg, NN): lost luggage in the aviation industry due to mishandling is a well-known problem. The purpose of the BagTrack project is to build a system which can evaluate the quality of the bag handling process based on data collected from so-called RFID tags attached to selected bags. NN will develop statistical tools for selecting bags for tagging, for assessment of handling quality based on tag data, and for analysis of the handling processes.

4.2.2 Staff

Current staff

Professors: Jesper Møller and Rasmus Waagepetersen.
Associate professors: Kasper Klitgaard Berthelsen, Susanne Christensen, Søren L. Buhl, Esben Høg, Jakob Gulddahl Rasmussen.
Post docs: Ege Rubak.
PhD-students: Jan-Otto Hooghoudt, Anders Gorst-Rasmussen, Farzaneh Safavimanesh.

Staff development

A large number of researchers have been associated with the applied probability and statistics group in addition to the current staff listed above. Martin Bøgsted Hansen, Bjarne Højgaard and Kim Emil Andersen conducted research in applied probability and inverse problems. Susanne Bøttcher, Malene Højbjerre, Claus Dethlefsen, and Søren Lundbye-Christensen worked on graphical and state-space models. These persons are now employed in the private sector or at Aalborg Hospital.

Regarding the current staff, Anders-Gorst Rasmussen will defend his thesis in November 2011 while Jan-Otto Hooghoudt and Farzaneh Safavimanesh initiated their PhD-studies in the autumn 2011. Ege Rubak will continue as post doc until July 31, 2012. Ege Rubak's postdoc position is funded by the VKR Centre for Stochastic Geometry and Advanced Bioimaging (CSGB). Jan-Otto Hooghoudt and Farzaneh Safavimanesh are both jointly funded by the Department and CSGB.

4.2.3 Visions

The applied probability and statistics group's cross-disciplinary research activities have been very succesful and have lead to a large number of publications in recognized journals. The group plans to continue collaborative research with focus on the main topics listed above. In addition to this, the new School of Medicine at Aalborg University will provide new exciting opportunities for development and application of medical statistics in collaboration with medical scientists.

Regarding staff development in the next two or three years, the group aims at appointing one assistant professor and one post doc or PhD-student associated with the Centre for Stochastic Geometry and Advanced Bioimaging.

4.3 Econometrics

4.3.1 Profile

The econometrics research group was formed late in the 10-year period, in 2009, following a newly created study programme in mathematical-economics at Aalborg University. To a high degree the research is motivated by statistical problems in risk management and finance.

The econometrics group performs research in several areas of econometrics and statistics, applied as well as theoretical:

- In financial econometrics and risk management the group has been involved in the predictive accuracy of competing price forecast densities. The group has examined the benefits of utilizing the forward-looking information that is embedded in the prices of derivative contracts. This has been investigated by using risk-neutral densities.

  In the field of financial risk, credit risk management is among the crucial issues. Credit risk analysis and risk assessments in general have received great attention by the financial and banking industry. One important issue is the ability to discriminate good customers from bad ones. Predicting and mitigating *default* is the core of risk management and this can effectively be helped by using relevant statistically based quantitative models. Effective estimation of the probabilities of default of individual corporate borrowers is crucial to the granting of bank loans and investing in financial products.

  By using classical statistical techniques, such as qualitative response models, the group has also been involved in studying integrated foreign exchange risk management by emphasising the role of import in medium-sized manufacturing firms.

- The group also has an interest in time series, notably time series econometrics. As quantitative economics is often concerned with modelling *dynamics*, research in this area is often synonymous with time series econometrics, i.e. theoretical and empirical issues in statistical inference for economic time series. In this context time series analysis plays an important role in the modelling of long–term as well as short–term relationships in finance.

4.3.2 Staff

Current staff

Susanne Christensen, Poul Svante Eriksen, Esben Høg, Rasmus Waagepetersen.

Staff development

The group was established in 2009 when Esben Høg took up a new position as associate professor in econometrics and statistics and with associate professor, head of department, Susanne Christensen and associate professor in statistics Poul Svante Eriksen also joining the group. In 2010 Rasmus Waagepetersen returned to AAU as professor of statistics working both on statistical and econometric problems.

4.3.3 Visions

The group intends to do future research in *financial risk management*. The group also anticipates that the pricing and risk management of *energy derivatives* and *weather derivatives* will become increasingly important.

This applies for example to

- Statistical modelling of market risk, liquidity risk, operational risk, and credit risk. Some central keywords are financial engineering methods, volatility and correlation modelling, and derivatives pricing and risks.
- Pricing and risk management of energy derivatives: Spot and futures price modelling of energy commodities, for example wind, oil, and gas. Forward curve dynamics and forward curve models in energy markets.
- Credit risk modelling in continuous time: The calculation of capital requirements for banks under Basel II is based on formulas for risk weights involving the key parameters probability of default (PD) and loss given default (LGD). These parameters are often estimated using discrete-time models depending on a particular choice of consecutive observation periods for defaults. A more flexible approach is to use continuous-time point process models for the default events.

The group also anticipates an interplay between harmonic analysis and econometrics:

- In relation to filtration methods in applied econometrics an interesting methodological development is to supplement Kalman filtering and other classical methods in econometrics with wavelet methods. This is important in relation to the practical estimation of complicated dynamic models.
- Research on alternative volatility estimators, including a method based on wavelets.

In collaboration with the Faculty of Social Sciences the group is planning the formation of a centre for risk management and quantitative finance. The centre is a continuation of the study programme in mathematical-economics and is intended to facilitate the research in quantitative finance at the Faculty of Engineering and Science and the Faculty of Social Sciences. With the collaboration of several researchers from both faculties, and with a strong focus on applications of quantitative methods, the centre is intended to integrate the skills from quantitative finance with other approaches in the area.

Also a collaboration with the ECE, Paris Ecole d'Ingénieurs is planned for the future. At ECE, Paris Ecole d'Ingénieurs they have established a programme in financial engineering, and we anticipate exchange of both researchers and students between AAU and ECE in the future. One advantage is that a formalised cooperation already exists between AAU Department of Electronic Systems and ECE, Paris Ecole d'Ingénieurs.

4.4 Graph Theory

4.4.1 Profile

The main area of research in this group is graph theory, however, the group also have an interest in related combinatorial subjects: association schemes, latin squares and combinatorial designs. Recently the group has focused on the degree/diameter problem. This graph theory problem has applications in designing the topology of communication networks with high transmission speed (low diameter) and low cost (number of connections). The goal is to construct large graphs with a given degree and diameter and to prove better upper bounds on the order of the graph.

The main research topics covered by the group are:

- The study of graphs with given degree and diameter and order close to the trivial upper bound, known as the Moore bound. This study usually leads to non-existence results. Proofs often involve methods from algebraic graph theory.
- The investigation of graphs and digraphs close to the Moore bound has also led to a study of graphs with a high degree of local structure. This includes directed strongly regular graphs, association schemes and normally regular digraphs.
- Extremal results on graph parameters involving dominating sets, independent sets and related subjects.
- The group has worked on several aspects of automorphisms of graphs, including connections between automorphisms and pseudo-similarity of edges.
- Especially in the the first half of the review period the group has worked on extremal graph minor theory.

4.4.2 Staff

Current staff

Associate Professors: Leif K. Jørgensen
Ph.d.-students: Anita A. Sillasen
Professors: Lars D. Andersen (currently Vice Dean)

Staff development

With the retirement of associate professor Preben D. Vestergaard the group has decreased in size to a critical level. And the group also has lost its expertice in domination theory and related subjects.

Lars Døvling Andersen was appointed full professor in the group in 1996, but has since then been involved in administration (vice dean) and has not been able to devote much time to the group.

The current Ph.d.-student is expected to finish her degree in 2013.

4.4.3 Visions

The topology of communication networks continues to be an active area of research in graph theory and our group will also focus on graph theory problems from this area in the coming years. In the past few years directed strongly regular graphs have been the subject of an increasing number of research papers. The group will also continue to study these graphs.

The group has been succesful in combining combinatorial methods with algebraic methods. It is therefore natural to continue collaboration with other research groups applying algebra. In construction of graphs with particular properties we have often applied computer search. It is expected that in the future there will be an increased focus on computer enumeration in graph theory.

The size of the group is currently very small. One condition for a future flow of research papers at the same level as in the review period is that there will be Ph.d. students or other new staff members in this group.

4.5 Mathematics for Communication

4.5.1 Profile

The Mathematics for Communication group conducts research in topics related to digital communication. The point of view is mostly discrete. Among the methods used are combinatorics, commutative algebra, algebraic geometry and the theory of finite fields. The main focus is on error-correcting codes but also other applications such as network coding are considered. Moreover the group contributes to the areas of algebraic function field theory, commutative algebra and the theory of finite fields. The principal research areas can be defined as follows:

- The group studies properties of error-correcting codes, devise new families of codes and decoding algorithms. The methods involved are algebraic and algebraic geometric.
- The group takes part in the development of order domain theory.
- Methods are developed to estimate the number of zeros of multivariate polynomials (including multiplicity). Similarly the number of rational places of algebraic function fields is related to their Weierstrass semigroups.
- Methods are developed to estimate the success probability of random network coding.

The Mathematics for Communication group at the Department works closely together with a similar group at the Technical University of Denmark (DTU). This has been formalized in a number of Danish National Research Foundation (FNU) grants and is presently formalized in participation of "Danish-Chinese Center for Applications of Algebraic Geometry in Coding Theory and Cryptography" which is supported in part by Danish National Research Foundation.

4.5.2 Staff

Current staff

Visiting Professor: Ryutaroh Matsumoto (Velux Visiting Professor - Villum Foundation)
Associate Professor: Olav Geil
Assistant Professor: Diego Ruano
PhD-student: Stefano Martin (funded by "Danish-Chinese Center for Applications of Algebraic Geometry in Coding Theory and Cryptography.")

Staff development

The following people has been employed as part of the group:

- Christian Thommesen, associate professor –2010,
- Bo Hove, assistant professor –2001,
- Olav Geil, assistant professor –2002, associate professor 2002–,
- Diego Ruano, assistant professor 2009–,
- Henning E. Andersen, PhD student, graduation 2005,
- Casper Thomsen, PhD student, graduation 2011.

4.5.3 Visions

The vision of the research group is to conduct research at a high level in the interplay of pure mathematical theories and discrete applications. Besides continuing the ongoing work as described above it is the goal to include new topics such as:

- Cryptography.
- Error-correcting codes for networks.
- Secret sharing schemes.

It is the goal to further develop the collaboration with the group at DTU. This includes strengthening the role played by the AAU group. Mathematics for Communication at AAU is small in size but functions well. Clearly such a small group is vulnerable and it is therefore strongly desirable that measures are taken always to have two permanent staff members. The group will work continuously on attracting external funding of PhD students and postdocs.

4.6 Mathematical Physics

4.6.1 Profile

Mathematical Physics is a research area at the interface between mathematics and physics. On one hand one endeavors to find mathematically precise descriptions of observed physical phenomena, and on the other hand one strives to develop new (and improve existing) theoretical and mathematical tools for the analysis of concrete physical systems.

Mathematical Physics is represented at Aalborg University mainly in areas related to partial differential equations, operator theory, and spectral theory. The interplay between mathematics and physics has been an important characteristic of the research activities during the last 10 years, in collaboration with several theoretical physicists.

The research of the group has been extensive in the last 10 years, with more than 50 peer reviewed publications. Some highlights are

- Solvability and regularity properties of non-linear partial differential equations with boundary conditions.
- Threshold properties of Schrödinger operators.
- Effective Hamiltonians and intermediate time behavior of small quantum systems, including the Fermi Golden Rule and exponential time decay.
- Quasi-particles in carbon nanotubes.
- Quantum transport in mesoscopic quantum systems.

4.6.2 Staff

Current Staff

Professor: Arne Jensen
Associate Professors: Horia Cornean, Jon Johnsen.
PhD Students: Sabrina Munch Hansen, Ann-Eva Christensen, Mikkel H. Brynildsen, Martin Qvist.

Staff development

Previous members of the group:

PhD Students: Troels Rønnow (2011), Kim Knudsen (2002), Steen Møller (2002).
Assistant Professor: Kim Knudsen (2002–2004, 2005–2008), Thomas Østergaard Sørensen (2000–2005, on leave 2000–01, 2004–05).

Associate Professors: Thomas Østergaard Sørensen (2005–11, on leave 2009–11), Svend Berntsen (–2002).

Long Term Visitors:

All visits of at least one month. Some people have visited several times, e.g. G. Nenciy and P. Duclos.
Visiting Professor: G. Nenciu (Bucharest), R. Purice (Bucharest), K. Yajima (Tokyo), F. Bentosela (Marseille), P. Duclos (Marseille), P. Briet (Marseille), I. Herbst (Charlottesville, Virginia), P. Hislop (Lexington, Kentucky), W. Sickel (Jena).
Visiting Assistant Professor/PostDoc: V. Moldoveanu (Bucharest), K. Ito (Tsukuba), (2009-2010, joint with Univ. Aarhus).

4.6.3 External Funding

During the period under review the group has attracted substantial external funding. During 2000–2010 all members have been supported by the Danish Council for Independent Research | Natural Sciences (FNU). During the period 2004–2010 Arne Jensen was responsible for the grant. Funding has covered travel, visitors, and during 2009–10 also a postdoc. During 2000-2006 Arne Jensen, Horia Cornean and Thomas Østergaard Sørensen were part of the Danish National Research Foundation Network for Mathematical Physics and Stochastics (MaPhySto). The positions of Horia Cornean and Thomas Østergaard Sørensen were partially funded by this grant. The group has received funding for visiting professors from the Villum Foundation.

4.6.4 Dissemination

The group is active in disseminating the research results at a high level. This includes invited talks at conferences, workshops, and seminars. During the period 2001–2011 the group has given more than 100 invited talks.

The group also organizes conferences and workshops. A series of workshops on Mathematical Models for Transport in Macroscopic and Mesoscopic Systems have been held in collaboration with groups in Marseille, Berlin, Bucharest, and Dublin. A large international conference on Spectral Theory and Partial Differential Equations was organized in 2008 in collaboration with researchers from University of Copenhagen. The group has been selected by the International Association for Mathematical Physics to organize its triennial International Congress on Mathematical Physics in August 2012. It is expected that 500 researchers will attend the congress.

Furthermore, all members have spent time at international research institutes. These include the Mittag-Leffler Institute and Mathematisches Forschungsinstitut Oberwolfach.

4.6.5 Vision

Mathematical Physics is well represented in Denmark, and the contribution of the group is recognized both nationally and internationally. The main concern for the future is to keep up the production of high quality research. Another mission is to identify and recruit talented young PhD students and postdocs. It is also important to further develop the international dimension, as is done in the case of the international congress mentioned above. This event will further strengthen the international position of the Aalborg group in Mathematical Physics. It is also important to continue having visiting professors and postdocs, at least at the current level.

An increased number of PhD-students and allocation of postdoc positions (adjunkter) would be preferable, in order to make full use of the group's expertise at international level and its many contacts abroad.

4.7 Spatial and Computational Statistics

4.7.1 Profile

The spatial and computational statistics group conducts research in a wide range of topics in spatial statistics and computational statistics. The research is to a high degree motivated by real applications in a wide range of scientific and technological disciplines. During the review period, the group has produced about 70 peer-reviewed journal articles, many of those appearing in top journals within the group's research area, and a number of peer-reviewed proceeding and book chapter contributions. Jesper Møller and Rasmus Plenge Waagepetersen are the authors of the monograph "Statistical inference and simulation for spatial point processes" and Jesper Møller is the editor of the volume "Spatial and computational statistics".

The group covers both basic research and more applied areas of research in spatial statistics and computational statistics. Members of the spatial and computational statistics group have in particular

- a general interest in statistical methodology for spatial and spatio-temporal processes exhibiting interaction;
- contributed with computational methods for Bayesian and frequentist-based inference for spatial processes, as well as methodological and applied aspects of various general Markov chain Monte Carlo algorithms;
- often been working with problems related to agricultural research, archeology, computer science, communication technology, plant and animal ecology, medical image analysis and physics;
- have a general interest in model selection and message passing algorithms that scales well to high dimensionality.

They are at the forefront in the spatial and computational statistics community and collaborate with the leading experts in these fields. Their research projects have been supported by EU and national research grants. They are currently associated to The Center for Stochastic Geometry and Advanced Bioimaging at Aarhus University.

4.7.2 Staff

Current Staff

Professors: Jesper Møller, Rasmus Plenge Waagepetersen.
Associate Professors: Kasper Klitgaard Berthelsen, Poul Svante Eriksen, Jakob

Gulddahl Rasmussen.
Postdocs: Ege Rubak.
PhD-students: Mohammad Ghorbani, Jan Otto Hooghoudt, NN.

Staff development

Jesper Møller has been instrumental in first establishing and then strengthening the spatial and computational statistics group during the period 2000-2010. In 2002, he was appointed Full Professor.

Rasmus Plenge Waagepetersen was Assistant Professor 2000-2003 and Associate Professor 2003-2008. In 2008-2010 he was a credit risk analyst at Spar Nord Bank (on leave from Aalborg University). In 2010, he was appointed Full Professor.

Kasper Klitgaard Berthelsen was Assistant Professor 2003-2008, and since 2008 he has been Associate Professor. In 2005-2007, he was postdoc at Lancaster University (on leave from Aalborg University).

Poul Svante Eriksen has been Associate Professor at the department since 1988.

Jakob Gulddahl Rasmussen was a postdoc and Assistant Professor 2006-2008, and since 2008 he has been Associate Professor.

Ege Rubak has been a postdoc since 2010 after completing his PhD

The current PhD-students are expected to finish their degrees in 2014.

4.7.3 Visions

During the period under review the spatial and computational statistics group at Aalborg University has been very active and productive. The group expects to continue as a frontier research group, with many national and international collaborators. The training of younger researchers within spatial and computational statistics will continually play an important role.

The focus on spatial point process modelling, likelihood and simulation-based inference, and other methodology for spatial point pattern analysis has been very successful for the group. It is anticipated that fundamental research within these areas will continue in the coming years. For instance, insight gained through the study of permanental and determinantal point processes should be exploited for developing new inference procedures.

New statistical methodology for 3D spatial dataset analysis will be established in connection with research projects associated to The Center for Stochastic Geometry and Advanced Bioimaging. One major project concerns the statistical analysis of fluorescence microscopy data, primarily signals from FRET (Fluorescence Resonance Energy Transfer) microscopy. Such data can be char-

acterized as multivariate random fields. Another major project concerns the investigation of the hypotheses of existence and size of microcolumns consisting of neurons and accompanying glia cells in the cerebral cortex. This involves the development of new summary statistics and 3D spatial point process models.

An important challenge is the development of inference procedures for spatial point processes beyond the traditional approaches based on summaries. A number of recent techniques remain to be investigated in a spatial point process setting, including particle filtering and so-called approximate Bayesian computation.

Point processes on linear networks (such as road networks approximated by connected line segments) are relevant for modelling many point patterns. Point process models, inferential procedures and summary statistics specifically designed to handle point patterns observed on these inherently inhomogeneous spaces are important for correct analyses of such datasets.

Another vision is to promote spatial point processes amongst practitioners by developing easily accessible statistical software. The spatial statistics group will work towards this goal by contributing to existing software packages.

Several research projects will be concerned with or inspired by data collected within forestry, in particular data for rain forest containing hundreds of thousands of trees, hundreds of species, and with tree sizes measured at several points in time. Constructing models for and gaining insight in the complex dynamics of rainforest is a formidable challenge.

Methodology for space-time point processes is still in its infancy, and the group plans to contribute with the development of new models, summary statistics, and estimation techniques. Ideas for cooperative sequential adsorption models will be adapted for modelling marked point process models for growing geometric objects. Efficient Bayesian estimation for marked space-time Hawkes processes can be based on an underlying branching and clustering structure of such processes, but such estimation is influenced by so-called edge effects. By exploring the branching and clustering structure, such edge effects can be removed or quantified in simulations of the Hawkes process, but it is an open question whether edge effects can also be removed or at least quantified in the context of Bayesian inference using the underlying structure.

The group also anticipates that the interplay between statistics and applied harmonic analysis will become increasingly important. The current success of compressed sensing is one example that supports this. The group therefore finds it very natural to strengthen the collaboration with the group in applied harmonic analysis at the Department.

Finally, to consolidate and strengthen the continued success of the group's research activities, it is essential to receive research funding, to maintain an influx

of PhD-students and postdocs, and in the near future to appoint an Assistant Professor in spatial and computational statistics.

4.8 Statistical Genetics

4.8.1 Profile

The group in statistical genetics has emerged during the last 3-4 years of the review period as a result of the increasing statistical challenges associated with population genetics and bioinformatics. During the review period the group has produced about 15 peer-reviewed journal articles, many of those appearing in top journals within the group's research area, and a few peer-reviewed proceeding contributions.

The group covers both basic research and more applied areas of research in statistical genetics. Members of the statistical genetics group have in particular

- a special interest in quantitative genetics related to animal breeding
- a special interest in bioinformatics related to
  - the analysis of gene expression and exon arrays
  - the development of algorithms for regression with ultra high dimensional features
- a special interest in forensic genetics related to
  - population genetics and methods for estimating population parameters from databases of DNA-profiles
  - methods for quantification and presentation of the weight of DNA evidence related to e.g. immigration-, paternity- or criminal cases

Their research projects have been carried out in collaboration and with financial support from The Danish Institute of Agricultural Sciences, Aarhus University Hospital and The Department of Forensic Medicine, University of Copenhagen.

4.8.2 Staff

Current Staff

Professors: Rasmus Plenge Waagepetersen.
Associate Professors: Susanne Christensen, Poul Svante Eriksen.
Postdocs: Torben Tvedebrink.
PhD-students: Mikkel Meyer Andersen, Maria Rodrigo Domingo, Anders Gorst Rasmussen.

Staff development

Rasmus Plenge Waagepetersen was Assistant Professor 2000-2003 and Associate Professor 2003-2008. In 2008-2010, he was a credit risk analyst at Spar Nord Bank (on leave from Aalborg University). In 2010, he was appointed Full Professor.

Susanne Christensen has been Associate Professor at the department since 1992.

Poul Svante Eriksen has been Associate Professor at the department since 1988.

Torben Tvedebrink has been a postdoc since 2010 after completing his PhD

Anders Gorst Rasmussen completed his Ph.D in 2011.

The current PhD-students are expected to finish their degrees in 2013.

4.8.3 Visions

The activities in bioinformatics are fairly new and have been limited to a collaboration with Aarhus University Hospital. It is expected that the activities related to health sciences will increase with the establisment of Aalborg University Hospital. Besides this, there are informal relations to The Department of Biotechnology, Chemistry and Environmental Engineering, Alborg University, and there seems to be a great potential for developing these contacts into a more formalised scientific cooperation.

Quantitative genetics are gradually turning towards bioinformatics. As dense SNP data are becoming routinely available, this allows for direct estimation of the relation between a phenotypic trait and the SNP values. This in principle removes the need for pedigree data. However, another option is to combine the best of two worlds. In collaboration with Daniel Sorensen, Aarhus University, the research group will study approaches to obtain improved breeding values by utilizing both pedigree and SNP information. A similar project is expected to emerge in collaboration with Aalborg University Hospital, where biomarker data are collected from pedigrees with a high prevalence of schizophrenia.

The activities in forensic genetics are fairly well-established as a result of the collaboration with The Department of Forensic Medicine, University of Copenhagen. Scientifically, there are still some great challenges, e.g. related to

- realistic modelling of population dynamics and efficient algorithms for estimating population parameters, e.g. when we want to do haplo type frequency estimation
- a realistic quantitative model for the full DNA electropherogram signal and its integration into the calculation of evidence - in particular in case of DNA mixtures.

4.9 Topology with Applications in Computer Science

4.9.1 Profile

Historically topology arose as an abstract framework for geometrical problems in Poincaré's studies of dynamical systems. It has gone through a tremendous internal development and has linked up with most mathematical research areas. In recent years, we have witnessed an explosion of insights, techniques and tools from algebraic topology used to great advantage in examining computation problems in data analysis, dynamical systems, robotics, distributed networks and concurrency theory.

Topological methodology has recently been successfully applied to concurrency, the study of parallel computations. A theory of directed topological spaces – with direction reflecting the time flow – had to be developed: in general and for particular geometric/combinatorial models for parallel programs. The topology of associated path spaces modelling executions is investigated theoretically and for the purpose of analysing and verifying correctness of parallel computations. Algorithms for calculations of invariants of execution spaces are under development in collaboration with partners from France and Poland. Techniques from category theory help to organize and analyse directed spaces and associated path spaces. More specifically, members of the group have worked within the following areas:

- Within (standard) algebraic topology, the topology of (free) loop spaces has been studied using a combination of Morse theoretical methods and intricate homology computations. The main motivation and the interest in the results comes from string topology and topological cyclic homology.
- Properties of directed topological spaces (with specific, classes of directed paths) have been investigated both theoretically and with applications primarily in concurrency theory in mind.
- Specific models (Higher Dimensional Automata) are pre-cubical sets with directed execution paths. For these, the group has shown how to extract simplicial models for the spaces of execution paths – essential in applications – making it possible to reason via and to calculate algebraic topological invariants.

During the review period, the group has contributed to 28 peer-reviewed journal articles in journals that are well-estimated in the mathematics and/or the computer science community. Very recently, the group has started collaboration

within the research network programme Applied and Computational Algebraic Topology of the European Science Foundation with topologists all over Europe working in different application areas.

4.9.2 Staff

Current Staff

Associate Professors: Lisbeth Fajstrup, Iver Ottosen, Martin Raussen

Staff development

The interest of Lisbeth Fajstrup and Martin Raussen was drawn to applications of algebraic topology in computer science during a conference at the Isaac Newton Institute in Cambridge, UK, back in 1995. They have gradually shifted to make the foundations of directed algebraic topology with motivations and applications from concurrency theory to their main research focus.

Iver Ottosen was appointed as assistant professor in 2006. Since 2007, he holds a position as associate professor at the Copenhagen branch of Aalborg University.

The group has supervised the work of three PhD-students: Rafael Wisniewski, PhD in 2005, is now a professor at the Department of Electronic Systems at Aalborg University. Ulrich Fahrenberg, PhD in 2005, is currently a postdoc at Institut de Recherche en Informatique et Systèmes Aléatoires, Rennes, France. John Leth is a postdoc at the Department of Electronic Systems at Aalborg University.

Martin Raussen is the chairman of the steering committee of the newly established research network programme Applied and Computational Algebraic Topology – ACAT of the European Science Foundation facilitating cooperation and meetings between European researchers in this wider research area.

4.9.3 Visions

- Also in the future the group anticipates to work with foundational issues of directed algebraic topology and with applications, probably with a wider scope than just concurrency theory. Traffic goes both ways: Engineering and computer science come up with problem areas that give rise to new questions within (directed) topology. Theoretical developments can help to work with and sometimes solve the original problems.
  Moreover, ongoing work on the topology of loop spaces and related topics should be followed up.

- The group hopes to extend contacts with scientists in the Department of Computer Science and in the Control Section of the Department of Electronic Systems at Aalborg University.

- Collaboration with foreign partners has been essential and will continue so in the future. The group has profited very much from contacts with French partners at Commissariat à l' énergie atomique et aux énergies alternatives from the very beginning, with regard to motivations, theoretical developments and, last not least, algorithmic implementations. Recently, the group has begun collaboration with colleagues in Krakow, Poland, who are specialized in fast homology calculations. This collaboration will hopefully continue and grow; it is our aim to have this framework financed on the European level in the future. Moreover, the group profits from contacts with researchers in applied algebraic topology in the United States and in Mexico.

- In general, the group will try to profit from new and old contacts within the ACAT network to broaden existing connections to areas in which topological methods are applied. Within computer science, there are relations to the work of Herlihy et al. in distributed computing that should be investigated more conceptually. There are common interests with the area of topological robotics to be sorted out. Finally, relations to the recently very active and succesful area persistent homology should be investigated more closely.

- The group is currently (too) small in size. It will try to attract PhD-students and/or postdocs; the ACAT programme will hopefully be helpful in achieving this.

Chapter 5

Publications

This chapter contains bibliometric data documenting the scientific output of the Department of Mathematical Sciences during the period 2000-2010. The production totals 300+ journal articles, so to make the chapter more readable the publications have been split in the following categories.

Bibl. #1 Publications appearing in the Web of Science database. Web of Sciences is currently considered the benchmark database for bibliometric information.

Bibl. #2 All publications registred as peer reviewed journal articles in the Aalborg University VBN database.

Bibl. #3 A large percentage of the entries in bibliography #2 also appear in Web of Science. To help quantifying this, bibliography #3 contains all non-duplicate entries of bibliography #1 and #2. We also point out that bibliography #3 documents a number of articles appearing in journals now recognised which, however, at the time of publication did not meet the selection criteria used for the Web of Science database.

Bibl. #4 Other publications. This bibliography also include monographs, Ph.D. theses and doctoral theses.

For each of the four bibliographies, hyperlinked Mathematical Review numbers (MR#) have been added to all entries also appearing in the Mathematical Reviews Database.

5.1 Web of Science Publications, 2000-2010

[1] M. Nielsen. Walsh-type wavelet packet expansions. *Appl. Comput. Harmon. Anal.*, 9(3):265–285, 2000. MR1793419.

[2] I. Ottosen. Higher cyclic reduced powers. *J. Pure Appl. Algebra*, 151(3):239–272, 2000. MR1776429.

[3] J. Topp and P. Vestergaard. alpha k- and gamma k-stable graphs. *Discrete Mathematics*, 212:149–160, 2000. MR1748682.

[4] H. Hundborg, M. Højbjerre, O. Christiansen, and S. Lauritzen. Familial tendency to foetal loss analysed with bayesian graphical models by gibbs sampling. *Statistics in Medicine*, 19(16):2147–2168, 2000.

[5] O. Geil and T. Høholdt. Footprints or generalized bezout's theorem. *I E E E Transactions on Information Theory*, 46, 2000.

[6] B. Jørgensen and S. Lauritzen. Multivariate dispersion models. *Journal of Multivariate Analysis*, 74(2):267–281, 2000. MR1794004.

[7] A. Baddeley, J. Møller, and R. Waagepetersen. Non- and semi-parametric estimation of interaction in inhomogeneous point patterns. *Statistica Neerlandica*, 54:329–350, 2000. MR1804002.

[8] P. Eggers, C. Thommesen, and J. Andersen. On spatial power gradients. *I E E E Transactions on Vehicular Technology*, 49(1):235–238, 2000.

[9] J. Johnsen. On the spectral properties of witten-laplacians, their range projections and brascamp-lieb's inequality. *Integral Equations and Operator Theory*, 36:288–324, 2000. MR1753421.

[10] W. Kendall and J. Møller. Perfect stimulation using dominating processes on ordered spaces, with application to locally stable point processes. *Advances in Applied Probability*, 32(3):844–865, 2000. MR1788098.

[11] S. Asmussen, K. Binswanger, and B. Højgaard. Rare events simulation for heavy-tailed distributions. *Bernoulli*, 6(2):303–322, 2000. MR1748723.

[12] J. Johnsen. Traces of besov spaces revisted. *Zeitschrift fuer Analysis und Ihre Anwendungen*, 19(3):763–779, 2000. MR1784130.

[13] R. Gribonval and M. Nielsen. Approximate weak greedy algorithms. *Adv. Comput. Math.*, 14(4):361–378, 2001. MR1865101.

[14] R. Gribonval and M. Nielsen. Some remarks on non-linear approximation with Schauder bases. *East J. Approx.*, 7(3):267–285, 2001. MR1861393.

[15] M. Nielsen. On the construction and frequency localization of finite orthogonal quadrature filters. *J. Approx. Theory*, 108(1):36–52, 2001. MR1808853.

[16] K. Andersen, S. Brooks, and M. Hansen. A bayesian approach to crack detection in electrically conducting media. *Inverse Problems*, 17:121–136, 2001. MR1818496.

[17] R. Waagepetersen and D. Sørensen. A tutorial on reversible jump mcmc with a view toward applications in qtl-mapping. *International Statistical Review*, 69:49–61, 2001.

[18] A. Jensen and G. Nenciu. A unified approach to resolvent expansions at thresholds. *Reviews in Mathematical Physics*, 13(6):717–754, 2001. MR1841744.

[19] A. Barg, J. Justesen, and C. Thommesen. Concatenated codes with fixed inner code and random outer code. *I E E E Transactions on Information Theory*, 47:361–365, 2001. MR1820380.

[20] C. Bergljung and S. Bertnsen. Diffraction by a dielectric wedge at skew incidence. *Quarterly Journal of Mechanics and Applied Mathematics*, 54(4):549–598, 2001. MR1863924.

[21] L. Jørgensen. Directed strongly regular graphs with $\mu = \lambda$. *Discrete Mathematics*, 231(1-3):289–293, 2001. MR1821967.

[22] K. Andersen and M. Hansen. Multiplicative censoring: density estimation by a series expansion approach. *Journal of Statistical Planning and Inference*, 98:137–155, 2001. MR1860231.

[23] M. Hansen and E. van Zwet. Nonparametric estimation of the chord length distribution. *Advances in Applied Probability*, 33(3):541–558, 2001.

[24] K. Knudsen. On a local uniqueness result for the inverse sturm-liouville problem. *Arkiv foer Matematik*, 39(2):361–373, 2001. MR1861065.

[25] S. Mase, J. Møller, D. Stoyan, R. Waagepetersen, and G. Döge. Packing densities and simulated tempering for hard core gibbs point processes. *Annals of the Institute of Statistical Mathematics.*, 53(4):661–680, 2001. MR1879603.

[26] A. Mira, J. Møller, and G. Roberts. Perfect slice samplers. *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, 63(Part 3):593–606, 2001. MR1858405.

[27] S. Lauritzen and D. Nilsson. Representing and solving decision problems with limited information. *Guanli Kexue*, 47(9):1235–1251, 2001.

[28] A. Brix and J. Møller. Space-time multi type log gaussian cox processes with a view to modelling weeds. *Scandinavian Journal of Statistics*, 28(3):471–488, 2001. MR1858412.

[29] S. Lauritzen and F. Jensen. Stable local computation with conditional gaussian distributions. *Statistics and Computing*, 11:191–203, 2001. MR1837138.

[30] D. Edwards and S. Lauritzen. The tm algorithm for maximising a conditional likelihood function. *Biometrika*, 88:961–972, 2001. MR1872213.

[31] L. Jørgensen. Vertex partitions of $K_{4,4}$-minor free graphs. *Graphs and Combinatorics*, 17(2):265–274, 2001. MR1844873.

[32] M. G. Bertelsen, D. Tustin, and R. Waagepetersen. Effects of ga3 and ga4+7 on early bud development of "pacific rose". *Journal of Horticultural Science and Biotechnology*, 77:83–90, 2002.

[33] O. Geil. A class of Gröbner basis theoretically based evaluation codes. *I E E E Signal Processing Society*, 2002.

[34] I. Ottosen. Equivariant evaluation on free loop spaces. *Math. Z.*, 239(3):611–643, 2002. MR1893855.

[35] K. Berthelsen and J. Møller. A primer on perfect simulation for spatial point processes. *Sociedade Brasileira de Matematica. Boletim, Nova Serie*, 33(3):351–367, 2002. MR1978833.

[36] A. Jensen and K. Yajima. A remark on l-p-boundedness of wave operators for two dimensional schrödinger operators. *Communications in Mathematical Physics*, (225):633–637, 2002. MR1888876.

[37] O. Christensen and R. Waagepetersen. Bayesian prediction of spatial count data using generalized linear mixed models. *Biometrics*, 58(2):280–286, 2002. MR1908167.

[38] S. Lauritzen and T. Richardson. Chain graph models and their causal interpretations. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 64(3):321–361, 2002. MR1924296.

[39] É. Goubault and M. Raussen. *Dihomotopy as a tool in state space analysis*, pages 16–37. IEEE Computer Society Press, 2286 edition, 2002. MR1966113.

[40] M. Nielsen. Highly nonstationary wavelet packets. *Applied and Computational Harmonic Analysis*, 12:209–229, 2002. MR1884235.

[41] M. Nielsen and D.-X. Zhou. Mean size of wavelet packets. *Applied and Computational Harmonic Analysis*, 13:22–34, 2002. MR1930174.

[42] A. Jensen. On perturbation of eigenvalues embedded at thresholds in a two channel model. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 112(1):107–116, 2002. MR1894546.

[43] O. Geil and R. Pellikaan. On the structure of order domains. *Finite Fields and Their Applications*, 8:369–396, 2002. MR1910398.

[44] M. Nielsen. Size properties of wavelet packets generated using finite filters. *Revista Matematica Iberoamericana*, 18(2):249–265, 2002. MR1949828.

[45] T. Scheike. The additive nonparametric and semiparametric aalen model as the rate function for a counting process. *Lifetime Data Analysis*, 8(3):247–262, 2002. MR1920086.

[46] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. The electron density is smooth away from the nuclei. *Communications in Mathematical Physics*, 228(3):401–415, 2002. MR1918782.

[47] B. Flyvbjerg, M. Holm, and S. Buhl. Underestimating costs in public works projects. *American Planning Association. Journal*, 68(3):279 – 295, 2002.

[48] I. Ottosen. On the Borel cohomology of free loop spaces. *Math. Scand.*, 93(2):185–220, 2003. MR2009581.

[49] M. Bøhlen, L. Bukauskas, P. Eriksen, S. Lauritzen, A. Mazeika, P. Musaeus, and P. Mylov. 3d visual data mining: goals and experiences. *Computational Statistics & Data Analysis*, 43(4):445 – 469, 2003. MR2005448.

[50] K. Knudsen. A new direct method for reconstructing isotropic conductivities in the plane. *Physiological Measurement*, 24(2):391–401, 2003.

[51] L. Borup and M. Nielsen. Approximation with brushlet systems. *Journal of Approximation Theory*, 123(123):25–51, 2003. MR1985014.

[52] P. Blackwell and J. Møller. Bayesian analysis of deformed tessellation models. *Advances in Applied Probability*, 35(1):4–26, 2003. MR1974300.

[53] K. Andersen, S. Brooks, and M. Hansen. Bayesian inversion of geoelectrical resistivity data. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 65(part 3):619–642, 2003. MR1998625.

[54] B. Flyvbjerg, M. Holm, and S. Buhl. Cost overrun in public works projects. *American Planning Association. Journal*, 69(1):83, 2003.

[55] J. Møller. Efficient construction of reversible jump markov chain monte carlo proposal distributions. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 65:42–43, 2003. MR1959092.

[56] L. Borup and M. Nielsen. Fast adaptive expansions in local trigonometric bases. *Signal Processing*, 83(2):445–451, 2003.

[57] S. Lauritzen and N. Sheehan. Graphical models for genetic analyses. *Statistical Science*, 18(4):489–514, 2003. MR2059327.

[58] B. Flyvbjerg, M. Holm, and S. Buhl. How common and how large are cost overruns in transport infrastructure projects? *Transport Reviews*, 23(1):71–88, 2003.

[59] B. Flyvbjerg, M. Holm, and S. Buhl. Incorporating ecology into land use planning - the songbirds; case for clustered development - response. *American Planning Association. Journal*, 69(1):83–83, 2003.

[60] S. Berntsen. Inverse acoustic scattering in a half-space. *Inverse Problems*, 19(6):1247–1262, 2003. MR2036529.

[61] K. Berthelsen and J. Møller. Likelihood and non-parametric bayesian mcmc inference for spatial point processes based on perfect simulation and path sampling. *Scandinavian Journal of Statistics*, 30(3):549–564, 2003.

[62] C. Dethlefsen. *Markov random field extensions using state space models*, pages 493–501. Oxford University Press, 2003. MR2003193.

[63] L. Jørgensen. Non-existence of directed strongly regular graphs. *Discrete Mathematics*, 264(1-3):111–126, 2003. MR1972025.

[64] T. Bisgaard and H. Cornean. Nonexistence in general of a definitizing ideal of the desired codimension. *Positivity*, 7(4):297–302, 2003. MR2017309.

[65] D. Sorensen and R. Waagepetersen. Normal linear models with genetically structured residual variance heterogeneity: a case study. *Genetics Research*, 82(3):207–222, 2003.

[66] O. Geil. On codes from norm-trace curves. *Finite Fields and Their Applications*, 9(3):351–371, 2003. MR1983054.

[67] O. Geil and T. Høholdt. *On hyperbolic type codes*, page 331. IEEE Signal Processing Society, 2003.

[68] J. Mortera, A. Dawid, and S. Lauritzen. Probabilistic expert systems for dna mixture profiling. *Theoretical Population Biology*, 63(3):191–205, 2003.

[69] M. Højbjerre. Profile likelihood in directed graphical models from bugs output. *Statistics and Computing*, 13(1):57–66, 2003. MR1973867.

[70] S. Lauritzen. *Rasch models with exchangeable rows and columns*, pages 215–232. Oxford University Press, 2003. MR2003175.

[71] J. Johnsen. *Regularity results and parametrices of semi-linear boundary problems of product type*, pages 353–360. 2003. MR1984183.

[72] E. Jensen, S. Lundbye-Christensen, L. Pedersen, H. Sørensen, and H. Schønheyder. Seasonal variation in meningococcal disease in denmark. *Scandinavian Journal of Infectious Diseases*, 35(4):226–229, 2003.

[73] J. Møller. Shot noise cox processes. *Advances in Applied Probability*, 35(3):614–640, 2003. MR1990607.

[74] R. Gribonval and M. Nielsen. Sparse representations in unions of bases. *I E E E Transactions on Information Theory*, 49(12):3320–3325, 2003. MR2045813.

[75] L. Jørgensen and M. Klin. Switching of edges in strongly regular graphs. i. a family of partial difference sets on 100 vertices. *Electron. J. Combin.*, 10(1), 2003. MR1975767.

[76] A. Galtbayar, A. Jensen, and K. Yajima. The nelson model with less than two photons. *Annales Henri Poincare*, 4(4):239–273, 2003. MR1985773.

[77] E. Jensen, S. Lundbye-Christensen, S. Samuelsson, H. Sørensen, and H. Schønheyder. A 20-year ecological study of the temporal association between influenza and meningococcal disease. *European Journal of Epidemiology*, 19(2):181–187, 2004.

[78] T. Sørensen, S. Fournais, M. Hoffmann-Ostenhof, and T. Hoffmann-Ostenhof. Analyticity of the density of electronic wavefunctions. *Arkiv foer Matematik*, 42(1):87–106, 2004. MR2056546.

[79] L. Borup, R. Gribonval, and M. Nielsen. Bi-framelet systems with few vanishing moments characterize besov spaces. *Applied and Computational Harmonic Analysis*, 17(1):3–28, 2004. MR2067913.

[80] L. Fajstrup, M. Raussen, E. Goubault, and E. Haucourt. Components of the fundamental category. *Applied Categorical Structures*, 12(1):81–108, 2004. MR2057412.

[81] R. Waagepetersen. Convergence of posteriors for discretized log gaussian cox processes. *Scandinavian Journal of Statistics*, 66(3):229–235, 2004. MR2044908.

[82] S. Lauritzen. Discussion on causality. *Scandinavian Journal of Statistics*, 31(2):189–192, 2004. MR2066248.

[83] P. Briet, H. Cornean, and V. Zagrebnov. Do bosons condense in a homogeneous magnetic field? *Journal of Statistical Physics*, 116(5 & 6):1545–1578, 2004. MR2096047.

[84] J. Johnsen. Domains of type 1,1 operators. *Academie des Sciences. Comptes Rendus. Mathematique*, 339(2):115–118, 2004. MR2078300.

[85] A. Jensen and G. Nenciu. Erratum to the paper "a unified approach to resolvent expansions at thresholds". *Reviews in Mathematical Physics*, 16(5):675–677, 2004. MR2079122.

[86] M. Ros, D. Sorensen, R. Waagepetersen, M. Dupont-Nivet, M. SanCristobal, J.-C. Bonnet, and J. Mallard. Evidence for genetic control of adult weight plasticity in the snail helix aspersa. *Genetics*, 168(4):2089–2097, 2004.

[87] G. Döge, K. Mecke, J. Møller, D. Stoyan, and R. Waagepetersen. Grand canonical simulations of hard-disk systems by simulated tempering. *International Journal of Modern Physics C: Physics and Computers*, 15(1):129–147, 2004.

[88] R. Gribonval and M. Nielsen. Letter to the editor. *Journal of Fourier Analysis and Applications*, 10(4):433–437, 2004. MR2078266.

[89] A. Jensen, A. Galtbayar, and K. Yajima. Local time-decay of solutions to schrodinger equations with time-periodic potentials. *Journal of Statistical Physics*, 116(1-4):231–282, 2004. MR2083143.

[90] R. Gribonval and M. Nielsen. Nonlinear approximation with dictionaries i. direct estimates. *Journal of Fourier Analysis and Applications*, 10(1):51–71, 2004. MR2045524.

[91] K. Knudsen, J. Mueller, and S. Siltanen. Numerical solution method for the dbar-equation in the plane. *Journal of Computational Physics*, 198(2):500–517, 2004. MR2062911.

[92] R. Gribonval and M. Nielsen. On approximation with spline generated framelets. *Constructive Approximation*, 20(2):207–232, 2004. MR2036641.

[93] R. Gribonval and M. Nielsen. *On the strong uniqueness of highly sparse representations from redundant dictionaries*, pages 201–208. Lecture Notes in Artificial Intelligence. 2004.

[94] H. Cornean, P. Duclos, and T. Pedersen. One-dimensional models of excitons in carbon nanotubes. *Few-Body Systems*, 34(1-3):155–161, 2004.

[95] B. Højgaard and M. Taksar. Optimal dynamic portfolio selection for a corporation with controllable risk and dividend distribution policy. *Quantitative Finance*, 4(3):315–327, 2004. MR2071840.

[96] K. Knudsen and A. Tamasan. Reconstruction of less regular conductivities in the plane. *Communications in Partial Differential Equations*, 29(3-4):361–381, 2004. MR2041600.

[97] T. Fischer, S. Lundbye-Christensen, S. Johnsen, H. Schønheyder, and H. Sørensen. Secular trends and seasonality in first-time hospitalization for acute myocardial infarction. *International Journal of Cardiology*, 97(3):425–431, 2004.

[98] F. Tøgersen and R. Waagepetersen. Statistical modelling and deconvolution of yield meter data. *Scandinavian Journal of Statistics*, 31(2):247–264, 2004. MR2066252.

[99] H. Andersen and O. Geil. *The missing evaluation codes from order domain theory*, page 78. IEEE Signal Processing Society, 2004.

[100] B. Flyvbjerg, M. Holm, and S. Buhl. What causes cost overrun in transport infrastructure projects? *Transport Reviews*, 24(1):3–18, 2004.

[101] B. Flyvbjerg, M. Holm, and S. Buhl. *What Causes Cost Overrun in Transport Infrastructure Projects?* Aalborg Universitetsforlag, 2004.

[102] M. Bökstedt and I. Ottosen. A splitting result for the free loop space of spheres and projective spaces. *Q. J. Math.*, 56(4):443–472, 2005. MR2182460.

[103] M. Bökstedt and I. Ottosen. A spectral sequence for string cohomology. *Topology*, 44(6):1181–1212, 2005. MR2168574.

[104] U. Fahrenberg. *A category of higher-dimensional automata*, pages 187–201. Lecture Notes in Computer Science. 2005. MR2179116.

[105] K. Andersen and M. Højbjerre. A population-based bayesian approach to the minimal model of glucose and insulin homeostasis. *Statistics in Medicine*, 24(15):2381–2400, 2005. MR2151712.

[106] H. Cornean, A. Jensen, and V. Moldoveanu. A rigorous proof of the landauer-buttiker formula. *Journal of Mathematical Physics*, 46(4):1–28, 2005. MR2131222.

[107] L. Borup and M. Nielsen. Approximation with wave packets generated by a refinable function. *American Mathematical Society. Proceedings*, 133(8):2409–2418, 2005. MR2138884.

[108] L. Borup. Brushlet characterization of the hardy space h-1(r) and the space bmo. *Collectanea Mathematica*, 56(2):157–179, 2005. MR2154302.

[109] P. Vestergaard and M. Kouider. Connected factors in graphs - a survey. *Graphs and Combinatorics*, 21(1):1–26, 2005. MR2136707.

[110] B. Flyvbjerg, M. Holm, and S. Buhl. Credibility problem for transit. *American Planning Association. Journal*, 71(4):452–452, 2005.

[111] L. Fajstrup. Dipaths and dihomotopies in a cubical complex. *Advances in Applied Mathematics*, 35(2):188–206, 2005. MR2152887.

[112] P. Vestergaard and B. Hartnell. Dominating sets with at most k components. *Ars Combinatoria*, 74:223–229, 2005. MR2119004.

[113] J. Møller and G. Torrisi. Generalised shot noise cox processes. *Advances in Applied Probability*, 37(1):48–74, 2005. MR2135153.

[114] L. Jørgensen. Girth 5 graphs from relative difference sets. *Discrete Mathematics*, 293(1-3):177–184, 2005. MR2136061.

[115] B. Flyvbjerg, M. Skamris, and S. Buhl. How (in)accurate are demand forecasts in public works projects? *American Planning Association. Journal*, 71(2):131–146, 2005.

[116] A. Jensen and M. Krishna. New criteria to identify spectrum. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 115(2):217–226, 2005. MR2142467.

[117] L. Borup, M. Nielsen, and R. Gribonval. Nonlinear approximation with redundant dictionaries. *I E E E International Conference on Acoustics, Speech and Signal Processing. Proceedings*, 1-5:261–264, 2005.

[118] M. Hansen. *Nonparametric estimation of the stationary M/G/1 workload distribution function*, pages 869–877. IEEE Signal Processing Society, 2005.

[119] M. Nielsen and L. Borup. On the equivalence of brushlet and wavelet bases. *Journal of Mathematical Analysis and Applications*, 309(1):117–135, 2005. MR2154031.

[120] J. Møller and J. Rasmussen. Perfect simulation of hawkes processes. *Advances in Applied Probability*, 37(3):629–646, 2005. MR2156552.

[121] L. Jørgensen. Rank of adjacency matrices of directed (strongly) regular graphs. *Linear Algebra and Its Applications*, 407:233–241, 2005. MR2161928.

[122] A. Baddeley, R. Turner, J. Møller, and M. Hazelton. Residual analysis for spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 67(5):617–651, 2005. MR2210685.

[123] R. Waagepetersen. Residual analysis for spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 67:662, 2005. MR2210685.

[124] S. Lundbye-Christensen, T. Fischer, S. Johnsen, H. Schoenheyder, and H. Sørensen. *Secular changes in case-fatality and its seasonality in Danish patients with acute myocardial infarction from 1980 to 2002*. 2005.

[125] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Sharp regularity results for coulombic many-electron wave functions. *Communications in Mathematical Physics*, 255:183–227, 2005. MR2123381.

[126] T. Pedersen, K. Pedersen, H. Cornean, and P. Duclos. Stability and signatures of biexcitons in carbon nanotubes. *Nano Letters*, 5(2):291–294, 2005.

[127] A. Drewes, H. Reddy, C. Staahl, P. Funch-Jensen, L. Arendt-Nielsen, H. Gregersen, and S. Lundbye-Christensen. Statistical modeling of the response characteristics of mechanosensitive stimuli in the human esophagus. *Journal of Pain*, 6(7):455–462, 2005.

[128] T. Sørensen. The large-z behavior of pseudorelastivistic atoms. *Journal of Mathematical Physics*, 46, 2005. MR2142995.

[129] P. Vestergaard and A. Pedersen. The number of independent sets in unicyclic graphs. *Discrete Applied Mathematics*, 152(1-3):246–256, 2005. MR2174205.

[130] R. Waagepetersen. A simulation-based goodness-of-fit test for random effects in generalized linear mixed models. *Scandinavian Journal of Statistics*, 33(4):721–731, 2006. MR2300912.

[131] L. Fajstrup, M. Raussen, and E. Goubault. Algebraic topology and concurrency. *Theoretical Computer Science*, 357(1-3):241–278, 2006. MR2242768.

[132] I. Ottosen and M. Bökstedt. An alternative approach to homotopy operations. *American Mathematical Society. Transactions*, 358(9):3985–3995, 2006. MR2219006.

[133] J. Møller, A. Pettitt, R. Reeves, and K. Berthelsen. An efficient markov chain monte carlo method for distributions with intractable normalising constants. *Biometrika*, 93(2):451–458, 2006. MR2278096.

[134] J. Møller and J. Rasmussen. Approximate simulation of hawkes processes. *Methodology and Computing in Applied Probability*, 8(1):53–64, 2006. MR2253076.

[135] L. Borup and M. Nielsen. Banach frames for multivariate alpha-modulation spaces. *Journal of Mathematical Analysis and Applications*, 321(2):880–895, 2006. MR2241162.

[136] L. Borup and M. Nielsen. Boundedness for pseudo differential operators on multivariate a-modulation spaces. *Arkiv foer Matematik*, 44(2):241–259, 2006. MR2292720.

[137] P. Vestergaard and A. Pedersen. Bounds on the number of vertex independent sets in a graph. *Taiwanese Journal of Mathematics*, 10(6):1575–1587, 2006. MR2275147.

[138] L. Fajstrup. Cubical local partial orders on cubically subdivided spaces - existence and construction. *Theoretical Computer Science*, 365(3):199–205, 2006. MR2269452.

[139] K. Knudsen, M. Lassas, J. Mueller, and S. Siltanen. D-bar method for electrical impedance tomography with discontinuous conductivities. *S I A M Journal on Applied Mathematics*, 67(3):893–913, 2006. MR2300316.

[140] M. Raussen. Deadlocks and dihomotopy in mutual exclusion models. *Theoretical Computer Science*, 365(3):247–257, 2006. MR2269456.

[141] P. Briet, H. Cornean, and D. Louis. Diamagnetic expansions for perfect quantum gases. *Journal of Mathematical Physics*, 47(8), 2006. MR2258610.

[142] J. Møller. Discussion on the paper by beskos, papaspiliopoulos, roberts and fearnhead. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 68(3):373, 2006.

[143] P. Næss, B. Flyvbjerg, and S. Buhl. Do road planners produce more 'honest numbers' than rail planners? *Transport Reviews*, 26(5):537–555, 2006.

[144] L. Bjerregaard, I. Aardestrup, R. Bülow, O. Frøbert, C. Dethlefsen, J. Rasmussen, and E. Schmidt. Fish consumption and serum levels of eicosapentaenoic and docosahexaenoic acid are not related to flow-mediated vasolidation, 2006.

[145] C. Dethlefsen and S. Lundbye-Christensen. Formulating state space models in r with focus on longitudinal regression models. *Journal of Statistical Software*, 16(1), 2006.

[146] M. Kouider and P. Vestergaard. Generalized connected domination in graphs. *Discrete Mathematics and Theoretical Computer Science (Online Edition)*, 8(1):57–64, 2006. MR2220137.

[147] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts. *Transport Reviews*, 26(1):1–24, 2006.

[148] C. Draghici. Inequalities for integral means over symmetric sets. *Journal of Mathematical Analysis and Applications*, 324(1):543–554, 2006. MR2262490.

[149] L. Andersen, P. Vestergaard, and T. Tuza. Largest non-unique subgraphs. *Graphs and Combinatorics*, 22(4):453–470, 2006. MR2270367.

[150] R. Waagepetersen and T. Schweder. Likelihood-based inference for clustered line transect data. *Journal of Agricultural, Biological, and Environmental Statistics*, 11(3):264–279, 2006.

[151] L. Borup and M. Nielsen. Nonlinear approximation in alpha-modulation spaces. *Mathematische Nachrichten*, 279(1-2):101–120, 2006. MR2193610.

[152] R. Gribonval and M. Nielsen. Nonlinear approximation with dictionaries. ii. inverse estimates. *Constructive Approximation*, 24(2):157–173, 2006. MR2239118.

[153] M. Hansen and S. Pitts. Nonparametric inference from the m/g/1 workload. *Bernoulli*, 12(4):737–759, 2006. MR2248235.

[154] H. Cornean, P. Duclos, and B. Ricaud. On critical stability of three quantum charges interacting through delta potentials. *Few-Body Systems*, 38(2-4):125–131, 2006.

[155] O. Geil and C. Thommesen. *On the Feng-Rao bound for generalized hamming weights*, volume 3857, pages 295–306. IEEE Computer Society Press, 2006. MR2243518.

[156] A. Jensen and G. Nenciu. Schrodinger operators on the half line. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 116(4):375–392, 2006. MR2346876.

[157] J. Frøkjær, S. Andersen, S. Lundbye-Christensen, P. Funch-Jensen, A. Drewes, and H. Gregersen. Sensation and distribution of stress and deformation in the human oesophagus. *Neurogastroenterology and Motility*, 18(2):104–114, 2006.

[158] R. Gribonval and M. Nielsen. Sparse approximations in signal and image processing. *Signal Processing*, 86(3):415–416, 2006.

[159] K. Knudsen. The calderon problem with partial data for less smooth conductivities. *Communications in Partial Differential Equations*, 31(1):57–71, 2006. MR2209749.

[160] H. Cornean, G. Nenciu, and T. Pedersen. The faraday effect revisited: General theory. *Journal of Mathematical Physics*, 47(1), 2006. MR2202529.

[161] A. Jensen and G. Nenciu. The fermi golden rule and its form at thresholds in odd dimensions. *Communications in Mathematical Physics*, 261(3):693–727, 2006. MR2197544.

[162] H. Cornean, A. Jensen, and V. Moldoveanu. *The Landauer-Büttiker formula and resonant quantum transport*, volume 690, pages 45–53. Springer, 2006. MR2234902.

[163] L. Knudsen, H.-H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs): population characteristics. *British Journal of Ophthalmology*, 90(11):1404–1409, 2006.

[164] L. Knudsen, H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study. population characteristics, 2006.

[165] P. McCullagh and J. Møller. The permanental process. *Advances in Applied Probability*, 38(4):873–888, 2006. MR2285685.

[166] B. Randerath and P. Vestergaard. Well-covered graphs and factors. *Discrete Applied Mathematics*, 154(9):1416–1428, 2006. MR2221561.

[167] D. Ruano. On the parameters of r-dimensional toric codes. *Finite Fields Appl.*, 13(4):962–976, 2007. MR2360532.

[168] D. Ruano. Computing the Feng-Rao distances for codes from order domains. *J. Algebra*, 309(2):672–682, 2007. MR2303200.

[169] J. Johnsen and W. Sickel. A direct proof of sobolev embeddings for quasi-homogeneous lizorkin-triebel spaces with mixed norms. *Journal of Function Spaces and Applications*, 5(2):183–198, 2007. MR2319603.

[170] M. Qvist, H.-P. Schwefel, and M. Hansen. *A quantitative decision model for bottleneck link upgrades in packet switched networks*, pages 171–177. European Council for Modelling and Simulation (ECMS), 2007.

[171] H.-P. Schwefel, R. Olsen, and M. Hansen. *Adaptive Caching Strategies for Context Management Systems*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, 2007.

[172] R. Waagepetersen. An estimating function approach to inference for inhomogeneous neyman-scott processes. *Biometrics*, 63(1):252–258, 2007. MR2345595.

[173] M. Nielsen. An example of an almost greedy uniformly bounded orthonormal basis for $L_p(0,1)$. *Journal of Approximation Theory*, 149(2):188–192, 2007. MR2374604.

[174] C. Draghici. An inequality of rearrangements on the unit circle. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 137(4):757–769, 2007. MR2345779.

[175] P. Vestergaard and A. Pedersen. An upper bound on the number of independent sets in a tree. *Ars Combinatoria*, 84:85–96, 2007. MR2332890.

[176] Ø. Skare, J. Møller, and E. Jensen. Bayesian analysis of spatial point processes in the neighbourhood of voronoi networks. *Statistics and Computing*, 17(4):369–379, 2007. MR2409801.

[177] G. Nielsen, C. Dethlefsen, H. Sørensen, J. Pedersen, and L. Molsted-Pedersen. Cognitive function and army rejection rate in young adult male offspring of women with diabetes. *Diabetes Care*, 30:2827–2831, 2007.

[178] M. Stender, J. Frøkjær, T. Nielsen, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. Combined use of clinical pretest probability and d-dimer test in the diagnosis of preoperative deep venous thrombosis in colorectal cancer patients. *Thrombosis Research*, 120(Suppl.2):S174–S175, No. PO–93, 2007.

[179] J. G. Rasmussen, J. Møller, B. H. Aukema, K. F. Raffa, and J. Zhu. Continuous time modelling of dynamical spatial lattice data observed at sparsely distributed times. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 69(4):701–713, 2007. MR2370076.

[180] K. Knudsen and M. Salo. Determining nonsmooth first order terms from partial boundary measurements. *Inverse Problems and Imaging*, 1(2):349–369, 2007. MR2282273.

[181] J. Møller, R. Waagepetersen, E. Jensen, and A. Penttinen. Discussion of "modern statistics for spatial point processes". *Scandinavian Journal of Statistics*, 34(4):685–711, 2007. MR2396935.

[182] A. Jensen, A. Olesen, C. Dethlefsen, and H. Sørensen. Do incident and new subsequent cases of non-melanoma skin cancer registered in a danish prospective cohort study have different 10-year mortality? *Cancer Detection and Prevention*, 31:352–358, 2007.

[183] M. Henning and P. Vestergaard. Domination in partitioned graphs with minimum degree two. *Discrete Mathematics*, 307(9-10):1115–1135, 2007. MR2292540.

[184] H. Cornean, P. Duclos, and B. Ricaud. Effective models for excitons in carbon nanotubes. *Annales Henri Poincare*, 8(1):135–163, 2007. MR2299196.

[185] J. Møller and K. Mengersen. Ergodic averages for monotone functions using upper and lower dominating processes. *Bayesian Analysis*, 2(4):761–782, 2007. MR2361974.

[186] L. Jørgensen and K.-i. Kawarabayashi. Extremal results for rooted minor problems. *Journal of Graph Theory*, 55(3):191–207, 2007. MR2327958.

[187] L. Borup and M. Nielsen. Frame decomposition of decomposition spaces. *Journal of Fourier Analysis and Applications*, 13(1):39–70, 2007. MR2296727.

[188] O. Geil and R. Matsumoto. *Generalized Sudan's List Decoding for Order Domain Codes*, pages 50–59. Lecture Notes in Computer Science. 2007.

[189] R. Wisniewski and M. Raussen. Geometric analysis of nondeterminacy in dynamical systems. *Acta Informatica*, 43(7):501–519, 2007. MR2292663.

[190] M. Stender, T. Nielsen, J. Frøkjær, T. Larsen, S. Lundbye-Christensen, and O. Thorlacius-Ussing. High preoperative prevalence of deep venous thrombosis in patients with colorectal cancer. *British Journal of Surgery*, 94(9):1100–1103, 2007.

[191] M. Stender, T. Nielsen, J. Frøkjær, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. High preoperative prevalence of deep venous thrombosis in patients with colorectal cancer. *Thrombosis Research*, 120(Suppl.2):S174, No. PO–92, 2007.

[192] R. Gribonval and M. Nielsen. Highly sparse representations from dictionaries are unique and independent of the sparseness measure. *Applied and Computational Harmonic Analysis*, 22(3):335–355, 2007. MR2311858.

[193] M. Raussen. Invariants of directed spaces. *Applied Categorical Structures*, 15(4):355–386, 2007. MR2350212.

[194] G. Nielsen, C. Dethlefsen, M. Møller, and H. Sørensen. Maternal glycated haemoglobin, pre-gestational weight, pregnancy weight gain and risk of large-for-gestational-age babies: a danish cohort study of 209 singleton type 1 diabetic pregnacies. *Diabetic Medicine*, 24(4):384–387, 2007.

[195] J. Møller and R. Waagepetersen. Modern statistics for spatial point processes. *Scandinavian Journal of Statistics*, 34(4):643–684, 2007. MR2392447.

[196] A. Gorst-Rasmussen, D. Spiegelhalter, and C. Bull. Monitoring the introduction of a surgical intervention with long-term consequences. *Statistics in Medicine*, 26(3):512–531, 2007. MR2339111.

[197] S. Fournais, T. Sørensen, M. Hoffmann-Ostenhof, and T. Hoffmann-Ostenhof. Non-isotropic cusp conditions and regularity of the electron density of molecules at the nuclei. *Annales Henri Poincare*, 8(4):731–748, 2007. MR2333780.

[198] M. Nielsen. On polynomial symbols for subdivision schemes. *Advances in Computational Mathematics*, 27(2):195–209, 2007. MR2317775.

[199] H. Andersen. On puncturing of codes from norm-trace curves. *Finite Fields and Their Applications*, 13(1):136–157, 2007. MR2287392.

[200] T. Pedersen and H. Cornean. Optical second harmonic generation from wannier excitons. *Europhysics Letters*, 78(2):27005, 2007.

[201] B. Rasmussen, H. Laugesen, J. Sollid, J. Grønlund, S. Rees, E. Toft, J. Gjedsted, C. Dethlefsen, and E. Tønnesen. Oxygenation and release of inflammatory mediators after off-pump compared with after on-pump coronary artery bypass surgery. *Acta Anaesthesiologica Scandinavica*, 51(9):1202–1210, 2007.

[202] H. Cornean, T. Pedersen, and B. Ricaud. *Perturbative vs. variational methods in the study of carbon nanotubes*, volume 447, pages 45–55. American Mathematical Society, 2007. MR2423570.

[203] E. Munk, A. Drewes, A. Gorst-Rasmussen, P. Funch-Jensen, H. Gregersen, and B. Nørgård. Risk of gastrointestinal cancer in patients with unexplained chest/epigastric pain and normal upper endoscopy: A danish 10-year follow-up study. *Digestive Diseases and Sciences*, 52(7):1730–1737, 2007.

[204] E. Munk, A. Drewes, A. Gorst-Rasmussen, H. Gregersen, P. Funch-Jensen, and B. Nørgaard. Risk of peptic ulcer, oesophagitis, pancreatitis or gallstone in patients with unexplained chest/epigastric pain and normal upper endoscopy. *Alimentary Pharmacology and Therapeutics*, 25(10):1203–1210, 2007.

[205] M. Nielsen and H. Sikic. Schauder bases of integer translates. *Applied and Computational Harmonic Analysis*, 23(2):259–262, 2007. MR2344615.

[206] K. Gradel, C. Dethlefsen, H. Schønheyder, T. Ejlertsen, H. Sørensen, R. Thomsen, and H. Nielsen. Severity of infection and seasonal variation of non-typhoid salmonelle occurence in humans. *Epidemiology and Infection*, 135(1):93–99, 2007.

[207] H. Cornean, I. Herbst, and E. Skibsted. Spiraling attractors and quantum dynamics for a class of long-range magnetic fields. *Journal of Functional Analysis*, 247(1):1–94, 2007. MR2319754.

[208] I. Ottosen and M. Bökstedt. String cohomology groups of complex projective spaces. *Algebraic & Geometric Topology*, 7:2165–2238, 2007. MR2366191.

[209] L. Knudsen, H.-H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs) 2. non-ophthalmic parameters and clinically significant macular oedema. *British Journal of Ophthalmology*, 91(12):1593–1595, 2007.

[210] J. Møller and G. Torrisi. The pair correlation function of spatial hawkes processes. *Statistics & Probability Letters*, 77(10):995–1003, 2007. MR2370426.

[211] M. Henning and P. Vestergaard. Trees with paired-domination number twice their domination number. *Utilitas Mathematica*, 74:187–197, 2007. MR2364000.

[212] N. Agerholm, R. Waagepetersen, N. Tradisauskas, and H. Lahrmann. Intelligent speed adaptation in company vehicles. In *IEEE Intelligent Vehicles Symposium*, pages 546–553, 2008.

[213] A. Jensen and G. Nenciu. Uniqueness results for transient dynamics of quantum systems. *Contemporary Mathematics*, pages 165–174, 2008. MR2423579.

[214] R. Waagepetersen, N. Ibanez-Escriche, and D. Sorensen. A comparison of strategies for markov chain monte carlo computation in quantitative genetics. *Genetics Selection Evolution*, 40(2):161–176, 2008.

[215] H. Cornean, K. Hoke, H. Neidhardt, P. Racec, and J. Rehberg. A kohn-sham system at zero temperature. *Journal of Physics A: Mathematical and Theoretical*, 41(38), 2008. MR2438486.

[216] P. Vestergaard. A short update on equipackable graphs. *Discrete Mathematics*, (2-3):161–165, 2008. MR2378011.

[217] H. Cornean, P. Duclos, G. Nenciu, and R. Purice. Adiabatically switched-on electrical bias and the landauer-buttiker formula. *Journal of Mathematical Physics*, 49(10), 2008. MR2464602.

[218] L. Borup, R. Gribonval, and M. Nielsen. Beyond coherence: Recovering structured time-frequency representations. *Applied and Computational Harmonic Analysis*, 24(1):120–128, 2008. MR2379118.

[219] R. Gribonval and M. Nielsen. Beyond sparsity. *Advances in Computational Mathematics*, 28(1):23–41, 2008. MR2358040.

[220] C. Cornou and S. Lundbye-Christensen. Classifying sows' activity types from acceleration patterns. *Applied Animal Behaviour Science*, 111(3-4):262–273, 2008.

[221] M. Stender, J. Frøkjær, T. Nielsen, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. Combined use of clinical pre-test probability and d-dimer test in the diagnosis of preoperative deep venous thrombosis in colorectal cancer patients. *Thrombosis and Haemostasis*, 99(2):396–400, 2008.

[222] P. Briet, H. Cornean, and D. Louis. Diamagnetic expansions for perfect quantum gases ii: Uniform bounds. *Asymptotic Analysis*, 59(1-2):109–123, 2008. MR2435675.

[223] R. Waagepetersen. Estimating functions for inhomogeneous spatial point processes with incomplete covariate data. *Biometrika*, 95(2):351–363, 2008. MR2422695.

[224] H. Andersen and O. Geil. Evaluation codes from order domain theory. *Finite Fields and Their Applications*, 14(1):92–123, 2008. MR2381480.

[225] A. Dall'Acqua, T. Sørensen, and E. Stockmeyer. Hartree-fock theory for pseudorelativistic atoms. *Annales Henri Poincare*, 9(4):711–742, 2008. MR2413201.

[226] K. Berthelsen and J. Møller. Non-parametric bayesian inference for inhomogeneous markov point processes. *Australian & New Zealand Journal of Statistics*, 50(3):257–272, 2008. MR2455432.

[227] L. Borup and M. Nielsen. On anisotropic triebel-lizorkin type spaces, with applications to the study of pseudo-diffibrential operators. *Journal of Function Spaces and Applications*, 6(2):107–154, 2008. MR2423282.

[228] O. Geil, R. Matsumoto, and C. Thomsen. *On Field Size and Success Probability in Network Coding*, pages 157–173. Lecture Notes in Computer Science. 2008. MR2476726.

[229] A. Jensen and K. Yajima. On l-p boundedness of wave operators for 4-dimensional schrodinger operators with threshold singularities. *London Mathematical Society. Proceedings*, 96(1):136–162, 2008. MR2392318.

[230] T. Sørensen and E. Stockmeyer. On the convergence of eigenfunctions to threshold energy states. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 138(1):169–187, 2008. MR2388942.

[231] A. Jensen and G. Nenciu. *On the Fermi Golden Rule*, pages 91–103. Theta Series in Advanced Mathematics. The Theta Foundation, 2008. MR2433029.

[232] O. Geil. On the second weight of generalized reed-muller codes. *Designs, Codes and Cryptography*, 48(3):323–330, 2008. MR2411119.

[233] H. Cornean, P. Duclos, and B. Ricaud. *On the skeleton method and an application to a quantum scissor*, volume 77, pages 657–672. American Mathematical Society, 2008. MR2459895.

[234] J. Johnsen and W. Sickel. On the trace problem for lizorkin-triebel spaces with mixed norms. *Mathematische Nachrichten*, 281(5):669–696, 2008. MR2401510.

[235] H. Cornean, A. Nenciu, and G. Nenciu. Optimally localized wannier functions for quasi one-dimensional nonperiodic insulators. *Journal of Physics A: Mathematical and Theoretical*, 41(12):125202–, 2008. MR2450481.

[236] J. Johnsen. Parametrices and exact paralinearization of semi-linear boundary problems. *Communications in Partial Differential Equations*, 33(10):1729–1787, 2008. MR2475318.

[237] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Positivity of the spherically averaged atomic one-electron density. *Mathematische Zeitschrift*, 259(1):123–130, 2008. MR2375619.

[238] J. Møller and K. Helisova. Power diagrams and interaction processes for unions of discs. *Advances in Applied Probability*, 40(2):321–347, 2008. MR2431299.

[239] N. Agerholm, R. Waagepetersen, N. Tradisauskas, L. Harms, and H. Lahrmann. Preliminary results from the danish intelligent speed adaptation project pay as you speed. *I E T Intelligent Transport Systems*, 2(2):143–153, 2008.

[240] A. Baddeley, J. Møller, and A. Pakes. Properties of residuals for spatial point processes. *Annals of the Institute of Statistical Mathematics.*, 60(3):627–649, 2008. MR2434415.

[241] M. Nielsen and H. Sikic. Quasi-greedy systems of integer translates. *Journal of Approximation Theory*, 155(1):43–51, 2008. MR2474705.

[242] J. Møller. Sampling bias and logistic models - discussion¡strong¿ ¡/strong¿. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 70(4):669, 2008. MR2523898.

[243] T. Tvedebrink, S. Lundbye-Christensen, R. Thomsen, C. Dethlefsen, and H. Schønheyder. Seasonal changes in climatic parameters and their relationship with the incidence of pneumococcal bacteraemia in denmark. *Clinical Microbiology and Infection*, 14(12):1183–1186, 2008.

[244] Y. Guan, R. Waagepetersen, and C. Beale. Second-order analysis of inhomogeneous spatial point processes with proportional intensity functions. *American Statistical Association. Journal*, 103(482):769–777, 2008. MR2524008.

[245] N. Ibanez-Escriche, D. Sørensen, R. Waagepetersen, and A. Blasco. Selection for environmental variation. *Genetics*, 180(4):2209–2226, 2008.

[246] J. Zhu, J. Rasmussen, J. Møller, B. Aukema, and K. Raffa. Spatial-temporal modeling of forest gaps generated by colonization from below- and above-ground bark beetle species. *American Statistical Association. Journal*, 103(481):162–177, 2008. MR2420224.

[247] S. Fournais, M. Hoffmann-Ostenhof, and T. Sørensen. Third derivative of the one-electron density at the nucleus. *Annales Henri Poincare*, 9(7):1387–1412, 2008. MR2453253.

[248] A. Frendrup, M. Henning, and P. Vestergaard. Total domination in partitioned trees and partitioned graphs with minimum degree two. *Journal of Global Optimization*, 41(3):385–399, 2008. MR2424474.

[249] P. Beelen and D. Ruano. The order bound for toric codes. In *Applied algebra, algebraic algorithms, and error-correcting codes*, volume 5527 of *Lecture Notes in Comput. Sci.*, pages 1–10. Springer, Berlin, 2009. MR2580848.

[250] F. Hernando, K. Lally, and D. Ruano. Construction and decoding of matrix-product codes from nested codes. *Appl. Algebra Engrg. Comm. Comput.*, 20(5-6):497–507, 2009. MR2564415.

[251] D. Ruano. On the structure of generalized toric codes. *J. Symbolic Comput.*, 44(5):499–506, 2009. MR2499927.

[252] L. Jørgensen. Algorithmic approach to non-symmetric 3-class association schemes. In *Algorithmic Algebraic Combinatorics and Gröbner Bases*, volume XII, pages 251–268. Springer, 2009. MR2605575.

[253] A. Frendrup, M. Henning, B. Randerath, and P. Vestergaard. An upper bound on the domination number of a graph with minimum degree 2. *Discrete Mathematics*, 309(4):639–646, 2009. MR2502174.

[254] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Analytic structure of many-body coulombic wave functions. *Communications in Mathematical Physics*, 289(1):291–310, 2009. MR2504851.

[255] A. Gorst-Rasmussen and M. Hansen. Asymptotic inference for waiting times and patiences in queues with abandonment. *Communications in Statistics: Simulation and Computation*, 38(2):318–334, 2009. MR2518349.

[256] O. Geil and R. Matsumoto. Bounding the number of $\mathbb{F}_q$-rational places in algebraic function fields using weierstrass semigroups. *Journal of Pure and Applied Algebra*, 213(6):1152–1156, 2009. MR2498805.

[257] T. Tvedebrink, P. Eriksen, H. Mogensen, and N. Morling. Estimating the probability of allelic drop-out of str alleles in forensic genetics. *Forensic Science International: Genetics*, 3(4):222–226, 2009.

[258] S. Lundbye-Christensen, C. Dethlefsen, A. Gorst-Rasmussen, T. Fischer, H. Schønheyder, K. Rothman, and H. Sørensen. Examining secular trends and seasonality in count data using dynamic generalized linear modelling: a new methodological approach illustrated with hospital discharge data on myocardial infarction. *European Journal of Epidemiology*, 24(5):225–230, 2009.

[259] A. Jensen and G. Nenciu. *Exponential decay laws in perturbation theory of threshold and embedded eigenvalues*, pages 525–538. Springer, 2009.

[260] J. Illian, J. Møller, and R. Waagepetersen. Hierarchical spatial point process analysis for a plant community with high biodiversity. *Environmental and Ecological Statistics*, 16(3):389–405, 2009. MR2749847.

[261] J. Møller and J. Rasmussen. *Modelling point patterns with linear structures*, pages 273–278. The MIRIAM Project Series (Milan Research Centre for Industrial and Applied Mathematics). 2009.

[262] V. Dinu, A. Jensen, and G. Nenciu. Nonexponential decay laws in perturbation theory of near threshold eigenvalues. *Journal of Mathematical Physics*, 50(1), 2009. MR2492626.

[263] C. Delorme, L. Jørgensen, M. Miller, and G. Pineda-Villavicencio. On bipartite graphs of defect 2. *European Journal of Combinatorics*, 30(4):798–808, 2009. MR2504638.

[264] C. Delorme, L. Jørgensen, M. Miller, and G. Pineda-Villavicencio. On bipartite graphs of diameter 3 and defect 2. *Journal of Graph Theory*, 61(4):271–288, 2009. MR2536883.

[265] H. Cornean, J. Derezinski, and P. Zin. On the infimum of the energy-momentum spectrum of a homogeneous bose gas. *Journal of Mathematical Physics*, 50(6), 2009. MR2541168.

[266] M. Lomholt Jakobsen, R. Olsen, and J. Rasmussen. *Online estimation of context dynamics and its impact on context sensitive applications*, pages 921–925. IEEE, 2009.

[267] L. Andersen and C. Rodger. Special issue: Graphs and designs in honour of anthony hilton preface. *Discrete Mathematics*, 309(14):4661–4662, 2009. MR2533125.

[268] T. Rønnow, T. Pedersen, and H. Cornean. Stability of singlet and triplet trions in carbon nanotubes. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 373:1478–1481, 2009.

[269] H. Cornean, H. Neidhardt, and V. Zagrebnov. The effect of time-dependent coupling on non-equilibrium steady states. *Annales Henri Poincare*, 10(1):61–93, 2009. MR2496303.

[270] H. Cornean and G. Nenciu. The faraday effect revisited. *Journal of Functional Analysis*, 257(7):2024–2066, 2009. MR2548029.

[271] A. Frendrup, P. Vestergaard, and A. Yeo. Total domination in partitioned graphs. *Graphs and Combinatorics*, 25(2):181–196, 2009. MR2511877.

[272] M. Raussen. Trace spaces in a pre-cubical complex. *Topology and Its Applications*, 156(9):1718–1728, 2009. MR2521708.

[273] M. Nielsen. Trigonometric quasi-greedy bases for $L_p(T;w)$. *Rocky Mountain Journal of Mathematics*, 39(4):1267–1278, 2009. MR2524713.

[274] R. Waagepetersen and Y. Guan. Two-step estimation for inhomogeneous spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 71(3):685–702, 2009. MR2749914.

[275] J. Johnsen. *Type 1,1-operators defined by vanishing frequency modulation*, pages 201–246. Operator Theory – Advances and Applications. 2009. MR2509099.

[276] C. Draghici and H. Hajaiej. Uniqueness and characterization of the maximizers of integral functionals with constraints. *Advanced Nonlinear Studies*, 9(1), 2009. MR2473157.

[277] R. Waagepetersen. A statistical modeling approach to build expert credit risk rating systems. *Journal of Credit Risk*, 6:81–94, 2010.

[278] J. Møller and E. Rubak. A model for positively correlated count variables. *International Statistical Review*, 78(1):65–80, 2010.

[279] H. Cornean, C. Gianesello, and V. Zagrebnov. A partition-free approach to transient and steady-state charge currents. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738106.

[280] B. Randerath and P. Vestergaard. All P_3-equipackable graphs. *Discrete Mathematics*, 310:355–359, 2010. MR2563051.

[281] P. Wogelius, D. Haubek, A. Nechifor, M. Nørgaard, T. Tvedebrink, and S. Poulsen. Association between use of asthma drugs and prevalence of demarcated opacities in permanenet first molars in 6-to-8-year old danish children. *Community Dentistry and Oral Epidemiology*, 38(2):145–151, 2010.

[282] L. Fajstrup. Classification of dicoverings. *Topology and Its Applications*, 157(15):2402–2412, 2010. MR2674038.

[283] T. Rønnow, T. Pedersen, and H. Cornean. Correlation and dimensional effects of trions in carbon nanotubes. *Physical Review B (Condensed Matter and Materials Physics)*, 81(20):205446, 2010.

[284] P. Briet, H. Cornean, and B. Savoie. Diamagnetism of quantum gases with singular potentials. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738103.

[285] T. Rønnow, T. Pedersen, and H. Cornean. Dimensional and correlation effects of charged excitons in low-dimensional semiconductors. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738126.

[286] T. Tvedebrink, P. Eriksen, H. Mogensen, and N. Morling. Evaluating the weight of evidence by using quantitative short tandem repeat data in dna mixtures. *Royal Statistical Society. Journal. Series C: Applied Statistics*, 59(5):855–874, 2010. MR2756924.

[287] H. Cornean and G. Nenciu. Faraday effect revisited: sum rules and convergence issues. *Journal of Physics A: Mathematical and Theoretical*, 43, 2010. MR2738107.

[288] R. Olsen, J. Figueiras, J. Rasmussen, and H.-P. Schwefel. How precise should localization be? a quantitative analysis of the impact of the delay and mobility on reliability of location information. *Globecom. I E E E Global Telecommunications Conference*, 2010, 2010.

[289] J. Møller and K. Helisova. Likelihood inference for unions of interacting discs. *Scandinavian Journal of Statistics*, 37(3):365–381, 2010. MR2724503.

[290] F. Hernando and D. Ruano. New linear codes from matrix-product codes with polynomial units. *Advances in Mathematics of Communication*, 4(3):363–367, 2010.

[291] A. Frendrup, M. Henning, B. Randerath, and P. Vestergaard. On a conjecture about inverse domination in graphs. *Ars Combinatoria*, 97A:129–143, 2010. MR2683740.

[292] P. Duclos and A. Jensen. On self-adjointness of singular floquet hamiltonians. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738114.

[293] M. Nielsen. On stability of finitely generated shift-invariant systems. *Journal of Fourier Analysis and Applications*, 16(6):901–920, 2010. MR2737763.

[294] H. Cornean. On the lipschitz continuity of spectral bands of harper-like and magnetic schrödinger operators. *Annales Henri Poincare*, 11(5):973–990, 2010. MR2736529.

[295] M. Nielsen. Orthonormal bases for α-modulation spaces. *Collectanea Mathematica*, 61(2):173–190, 2010. MR2666229.

[296] T. Tvedebrink. Overdispersion in allelic counts and θ-correction in forensic genetics. *Theoretical Population Biology*, 78(3):200–210, 2010.

[297] K. Berthelsen, L. Breyer, and G. Roberts. Perfect posterior simulation for mixture and hidden marko models. *London Mathematical Society. Journal of Computation and Mathematics*, 13:246–259, 2010. MR2678951.

[298] J. Møller, M. Huber, and R. Wolpert. Perfect simulation and moment properties for the matérn type iii process. *Stochastic Processes and Their Applications*, 120(11):2142–2158, 2010. MR2684739.

[299] B. Aukema, J. Zhu, J. Møller, J. Rasmussen, and K. Raffa. Predisposition to bark beetle attack by root herbivores and associated pathogens: Roles in forest decline, gap formation, and persistence of endemic bark beetle populations. *Forest Ecology and Management*, 259(3):374–382, 2010.

[300] J. Solovej, T. Sørensen, and W. Spitzer. Relativistic scott correction for atoms and molecules. *Communications on Pure and Applied Mathematics*, 63(1):39–118, 2010. MR2588386.

[301] L. Jørgensen. Schur rings and non-symmetric association schemes on 64 vertices. *Discrete Mathematics*, 310(22):3259–3266, 2010. MR2684099.

[302] J. Johnsen. Simple proofs of nowhere-differentiability for weierstrass' function and cases of slow growth. *Journal of Fourier Analysis and Applications*, 16(1):17–33, 2010. MR2587578.

[303] M. Raussen. Simplicial models of trace spaces. *Algebraic & Geometric Topology*, 10(3):1683–1714, 2010. MR2683749.

[304] A. Jensen and K. Yajima. Spatial growth of fundamental solutions for certain perturbations of the harmonic oscillator. *Reviews in Mathematical Physics*, 22(2):193–206, 2010. MR2655204.

[305] J. Møller and C. Diaz-Avalos. Structured spatio-temporal shot-noise cox point process models, with a view to modelling forest fires. *Scandinavian Journal of Statistics*, 37(1):2–25, 2010. MR2675937.

[306] L. Knudsen, H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs). *Acta Ophthalmologica*, 88(4):443–448, 2010.

[307] J. Møller and F. Schoenberg. Thinning spatial point processes into poisson processes. *Advances in Applied Probability*, 42(2):347–358, 2010. MR2675106.

[308] M. Nielsen. Trigonometric bases for matrix weighted L_p-spaces. *Journal of Mathematical Analysis and Applications*, 371(2):784–792, 2010. MR2670156.

5.2 Peer-reviewed articles (VBN database), 2000-2010

[1] M. Nielsen. Walsh-type wavelet packet expansions. *Appl. Comput. Harmon. Anal.*, 9(3):265–285, 2000. MR1793419.

[2] I. Ottosen. Higher cyclic reduced powers. *J. Pure Appl. Algebra*, 151(3):239–272, 2000. MR1776429.

[3] J. Topp and P. Vestergaard. alpha k- and gamma k-stable graphs. *Discrete Mathematics*, 212:149–160, 2000. MR1748682.

[4] B. Jørgensen and S. Lundbye-Christensen. Discussion of the paper by durbin and koopman. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 62(3):3–56, 2000.

[5] H. Hundborg, M. Højbjerre, O. Christiansen, and S. Lauritzen. Familial tendency to foetal loss analysed with bayesian graphical models by gibbs sampling. *Statistics in Medicine*, 19(16):2147–2168, 2000.

[6] O. Geil and T. Høholdt. Footprints or generalized bezout's theorem. *I E E E Transactions on Information Theory*, 46, 2000.

[7] L. Fajstrup and S. Solokowski. Infinitely running concurrent processes with loops from a geometric viewpoint. *Electronic Notes in Theoretical Computer Science*, 39(2), 2000.

[8] L. Fajstrup. Loops, ditopology and deadlocks. *Mathematical Structures in Computer Science*, 10:459–480, 2000. MR1786471.

[9] B. Jørgensen and S. Lauritzen. Multivariate dispersion models. *Journal of Multivariate Analysis*, 74(2):267–281, 2000. MR1794004.

[10] A. Baddeley, J. Møller, and R. Waagepetersen. Non- and semi-parametric estimation of interaction in inhomogeneous point patterns. *Statistica Neerlandica*, 54:329–350, 2000. MR1804002.

[11] P. Eggers, C. Thommesen, and J. Andersen. On spatial power gradients. *I E E E Transactions on Vehicular Technology*, 49(1):235–238, 2000.

[12] M. Raussen. On the classification of dipaths in geometric models for concurrency. *Mathematical Structures in Computer Science*, 10:427–457, 2000. MR1786470.

[13] H. Cornean. On the magnetization of a charged bose gas in the canonical ensemble. *Communications in Mathematical Physics*, 212(1):1–27, 2000. MR1764361.

[14] J. Johnsen. On the spectral properties of witten-laplacians, their range projections and brascamp-lieb's inequality. *Integral Equations and Operator Theory*, 36:288–324, 2000. MR1753421.

[15] S. Asmussen, B. Højgaard, and M. Taksar. Optimal risk control and dividend distribution policies. *Finance and Stochastics*, 4(3):299–324, 2000. MR1779581.

[16] W. Kendall and J. Møller. Perfect stimulation using dominating processes on ordered spaces, with application to locally stable point processes. *Advances in Applied Probability*, 32(3):844–865, 2000. MR1788098.

[17] S. Asmussen, K. Binswanger, and B. Højgaard. Rare events simulation for heavy-tailed distributions. *Bernoulli*, 6(2):303–322, 2000. MR1748723.

[18] H. Cordes, A. Jensen, S. Kuroda, G. Ponce, B. Simon, and M. Taylor. Tosio kato (1917-1999). *American Mathematical Society. Abstracts of Papers Presented*, 47(6):650–657, 2000. MR1764260.

[19] W. Farkas, J. Johnsen, and W. Sickel. Traces of anisotropic besov-lizorkin-triebel spaces - a complete treatment of the borderline cases. *Mathematica Bohemica*, 125:1–37, 2000. MR1752077.

[20] J. Johnsen. Traces of besov spaces revisted. *Zeitschrift fuer Analysis und Ihre Anwendungen*, 19(3):763–779, 2000. MR1784130.

[21] H. Cornean and G. Nenciu. Two dimensional magnetic schrödinger operators. *Annales Henri Poincare*, 1(2):203–222, 2000. MR1770797.

[22] L. Jørgensen. Directed strongly regular graphs with $\mu = \lambda$. *Discrete Mathematics*, 231(1-3):289–293, 2001. MR1821967.

[23] L. Jørgensen. Vertex partitions of $K_{4,4}$-minor free graphs. *Graphs and Combinatorics*, 17(2):265–274, 2001. MR1844873.

[24] R. Gribonval and M. Nielsen. Approximate weak greedy algorithms. *Adv. Comput. Math.*, 14(4):361–378, 2001. MR1865101.

[25] R. Gribonval and M. Nielsen. Some remarks on non-linear approximation with Schauder bases. *East J. Approx.*, 7(3):267–285, 2001. MR1861393.

[26] M. Nielsen. On the construction and frequency localization of finite orthogonal quadrature filters. *J. Approx. Theory*, 108(1):36–52, 2001. MR1808853.

[27] K. Andersen, S. Brooks, and M. Hansen. A bayesian approach to crack detection in electrically conducting media. *Inverse Problems*, 17:121–136, 2001. MR1818496.

[28] R. Waagepetersen and D. Sørensen. A tutorial on reversible jump mcmc with a view toward applications in qtl-mapping. *International Statistical Review*, 69:49–61, 2001.

[29] A. Jensen and G. Nenciu. A unified approach to resolvent expansions at thresholds. *Reviews in Mathematical Physics*, 13(6):717–754, 2001. MR1841744.

[30] J. Møller and Ø. Skare. Coloured voronoi tessellations for bayesian image analysis and reservoir modelling. *Statistical Modelling*, 1:213–232, 2001.

[31] A. Barg, J. Justesen, and C. Thommesen. Concatenated codes with fixed inner code and random outer code. *I E E E Transactions on Information Theory*, 47:361–365, 2001. MR1820380.

[32] C. Bergljung and S. Bertnsen. Diffraction by a dielectric wedge at skew incidence. *Quarterly Journal of Mechanics and Applied Mathematics*, 54(4):549–598, 2001. MR1863924.

[33] M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Electron wavefunctions and densities for atoms. *Annales Henri Poincare*, 2(1):77–100, 2001. MR1823834.

[34] O. Christensen, J. Møller, and R. Waagepetersen. Geometric ergodicity of metropolis-hastings algorithms for conditional simulation in generalized linear mixed models. *Methodology and Computing in Applied Probability*, 3:309–327, 2001. MR1891114.

[35] K. Andersen and M. Hansen. Multiplicative censoring: density estimation by a series expansion approach. *Journal of Statistical Planning and Inference*, 98:137–155, 2001. MR1860231.

[36] M. Hansen and E. van Zwet. Nonparametric estimation of the chord length distribution. *Advances in Applied Probability*, 33(3):541–558, 2001.

[37] K. Knudsen. On a local uniqueness result for the inverse sturm-liouville problem. *Arkiv foer Matematik*, 39(2):361–373, 2001. MR1861065.

[38] B. Højgaard and M. Taksar. Optimal risk control for a large corporation in the presence of returns on investments. *Finance and Stochastics*, 5(4):527–547, 2001. MR1862000.

[39] S. Mase, J. Møller, D. Stoyan, R. Waagepetersen, and G. Döge. Packing densities and simulated tempering for hard core gibbs point processes. *Institute of Statistical Mathematics. Annals*, 53(4):661–680, 2001. MR1879603.

[40] A. Mira, J. Møller, and G. Roberts. Perfect slice samplers. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 63(Part 3):593–606, 2001. MR1858405.

[41] S. Lauritzen and D. Nilsson. Representing and solving decision problems with limited information. *Guanli Kexue*, 47(9):1235–1251, 2001.

[42] A. Brix and J. Møller. Space-time multi type log gaussian cox processes. *Scandinavian Journal of Statistics*, 28(3):471–488, 2001. MR1858412.

[43] O. Bennedbæk, K. Carlsen, H. Roed, H. Vinding, and S. Lundbye-Christensen. Spædbørn med skrigeture. *Ugeskrift for Laeger*, årg. 163(27):3773–3778, 2001.

[44] S. Lauritzen and F. Jensen. Stable local computation with conditional gaussian distributions. *Statistics and Computing*, 11:191–203, 2001. MR1837138.

[45] D. Edwards and S. Lauritzen. The tm algorithm for maximising a conditional likelihood function. *Biometrika*, 88:961–972, 2001. MR1872213.

[46] M. Raussen. Symmetries on manifolds, deformations and rational homotopy: a survey. In *Current trends in transformation groups*, volume 7 of *K-Monogr. Math.*, pages 167–179. Kluwer Acad. Publ., Dordrecht, 2002. MR1941642.

[47] I. Ottosen. Equivariant evaluation on free loop spaces. *Math. Z.*, 239(3):611–643, 2002. MR1893855.

[48] G. Artbazar, A. Jensen, and K. Yajima. The Nelson model with few photons. *Sūrikaisekikenkyūsho Kōkyūroku*, (1255):124–142, 2002. Spectral and scattering theory and related topics (Japanese) (Kyoto, 2001). MR1927170.

[49] K. Berthelsen and J. Møller. A primer on perfect simulation for spatial point processes. *Sociedade Brasileira de Matematica. Boletim, Nova Serie*, 33(3):351–367, 2002. MR1978833.

[50] A. Jensen and K. Yajima. A remark on l-p-boundedness of wave operators for two dimensional schrödinger operators. *Communications in Mathematical Physics*, (225):633–637, 2002. MR1888876.

[51] M. Hansen, J. Møller, and F. Tøgersen. Bayesian contour detection in a time series of ultrasound images through dynamic deformable template models. *Biostatistics*, 3(2):213–228, 2002.

[52] O. Christensen and R. Waagepetersen. Bayesian prediction of spatial count data using generalized linear mixed models. *Biometrics*, 58(2):280–286, 2002. MR1908167.

[53] S. Lauritzen and J. Mortera. Bounding the number of contributors to mixed dna stains. *Forensic Science International*, 130:125–126, 2002.

[54] S. Lauritzen and T. Richardson. Chain graph models and their causal interpretations. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 64(3):321–361, 2002. MR1924296.

[55] Z. Tuza and P. Vestergaard. Domination in pertitioned graphs. *Discussiones Mathematicae. Graph Theory*, 22:199–210, 2002. MR1936237.

[56] M. Berthelsen, D. Tustin, and R. Waagepetersen. Effects of ga_3 and ga_{4+7} on early bud development of apple. *Journal of Horticultural Science and Biotechnology*, 77(1):83–90, 2002.

[57] S. Berntsen and S. Møller. Generalized fourier transforms classes. *Integral Transforms and Special Functions*, 13:447–459, 2002. MR1918335.

[58] S. Lauritzen. Graphical models in r. *R News*, 2(3):39, 2002.

[59] M. Nielsen. Highly nonstationary wavelet packets. *Applied and Computational Harmonic Analysis*, 12:209–229, 2002. MR1884235.

[60] S. Berntsen. Inverse acoustic problem of n homogeneous scatterers. *Inverse Problems*, (18):1–7, 2002. MR1910199.

[61] P. Briet and H. Cornean. Locating the spectrum for magnetic schrödinger and dirac operators. *Communications in Partial Differential Equations*, 27(5 & 6):1079–1101, 2002. MR1916557.

[62] M. Nielsen and D.-X. Zhou. Mean size of wavelet packets. *Applied and Computational Harmonic Analysis*, 13:22–34, 2002. MR1930174.

[63] M. Hansen and S. Lauritzen. Nonparametric bayes inference for concave distribution functions. *Statistica Neerlandica*, 56(1):110–127, 2002. MR1894231.

[64] M. Nielsen. On convergence of wavelet packet expansions. *Analysis in Theory and Applications*, 18(1):34–50, 2002. MR1911151.

[65] A. Jensen. On perturbation of eigenvalues embedded at thresholds in a two channel model. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 112(1):107–116, 2002. MR1894546.

[66] O. Geil and R. Pellikaan. On the structure of order domains. *Finite Fields and Their Applications*, 8:369–396, 2002. MR1910398.

[67] B. Randerath and P. Vestergaard. On well-covered graphs of odd girth 7 or greater. *Discussiones Mathematicae. Graph Theory*, 22:159–172, 2002. MR1936233.

[68] B. Højgaard. Optimal dynamic premium control in non-life insurance. maximizing dividend pay-outs. *Scandinavian Actuarial Journal*, 4:225–245, 2002. MR1934242.

[69] A. Jensen and M. Melgaard. Perturbation of eigenvalues embedded at a threshold. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 132A:163–179, 2002. MR1884476.

[70] M. Nielsen. Size properties of wavelet packets generated using finite filters. *Revista Matematica Iberoamericana*, 18(2):249–265, 2002. MR1949828.

[71] T. Scheike. The additive nonparametric and semiparametric aalen model as the rate function for a counting process. *Lifetime Data Analysis*, 8(3):247–262, 2002. MR1920086.

[72] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. The electron density is smooth away from the nuclei. *Communications in Mathematical Physics*, 228(3):401–415, 2002. MR1918782.

[73] B. Flyvbjerg, M. Holm, and S. Buhl. Underestimating costs in public works projects. *American Planning Association. Journal*, 68(3):279 – 295, 2002.

[74] I. Ottosen. On the Borel cohomology of free loop spaces. *Math. Scand.*, 93(2):185–220, 2003. MR2009581.

[75] M. Bøhlen, L. Bukauskas, P. Eriksen, S. Lauritzen, A. Mazeika, P. Musaeus, and P. Mylov. 3d visual data mining: goals and experiences. *Computational Statistics & Data Analysis*, 43(4):445 – 469, 2003. MR2005448.

[76] K. Knudsen. A new direct method for reconstructing isotropic conductivities in the plane. *Physiological Measurement*, 24(2):391–401, 2003.

[77] M. Raussen. A second look at normal curvature. *Normat*, 51(2):59–62, 2003.

[78] L. Borup and M. Nielsen. Approximation with brushlet systems. *Journal of Approximation Theory*, 123(123):25–51, 2003. MR1985014.

[79] P. Blackwell and J. Møller. Bayesian analysis of deformed tessellation models. *Advances in Applied Probability*, 35(1):4–26, 2003. MR1974300.

[80] K. Andersen, S. Brooks, and M. Hansen. Bayesian inversion of geoelectrical resistivity data. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 65(part 3):619–642, 2003. MR1998625.

[81] A. Mira, J. Møller, and G. O. Roberts. Corrigendum: "Perfect slice samplers". *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, 64:581, 2003.

[82] B. Flyvbjerg, M. Holm, and S. Buhl. Cost overrun in public works projects. *American Planning Association. Journal*, 69(1):83, 2003.

[83] S. Bøttcher and C. Dethlefsen. deal: A package for learning bayesian networks. *Journal of Statistical Software*, 8(20):1–40, 2003.

[84] L. Fajstrup. Dicovering spaces. *Homology, Homotopy and Applications*, 5(2):1–17, 2003. MR1994938.

[85] J. Møller. Efficient construction of reversible jump markov chain monte carlo proposal distributions. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 65:42–43, 2003. MR1959092.

[86] L. Borup and M. Nielsen. Fast adaptive expansions in local trigonometric bases. *Signal Processing*, 83(2):445–451, 2003.

[87] C. Dethlefsen. gr 2003. *R News*, 3(2):27–28, 2003.

[88] S. Lauritzen and N. Sheehan. Graphical models for genetic analyses. *Statistical Science*, 18(4):489–514, 2003. MR2059327.

[89] B. Flyvbjerg, M. Holm, and S. Buhl. How common and how large are cost overruns in transport infrastructure projects? *Transport Reviews*, 23(1):71–88, 2003.

[90] B. Flyvbjerg, M. Holm, and S. Buhl. Incorporating ecology into land use planning - the songbirds; case for clustered development - response. *American Planning Association. Journal*, 69(1):83–83, 2003.

[91] S. Berntsen. Inverse acoustic scattering in a half-space. *Inverse Problems*, 19(6):1247–1262, 2003. MR2036529.

[92] B. Flyvbjerg, M. Holm, and S. Buhl. Kostenunterschätzung bei öffentlichen bauprojekten. *Planungsrundschau : Theorie, Forschung, Praxis*, (8):15–34, 2003.

[93] K. Berthelsen and J. Møller. Likelihood and non-parametric bayesian mcmc inference for spatial point processes based on perfect simulation and path sampling. *Scandinavian Journal of Statistics*, 30(3):549–564, 2003.

[94] H. Cornean. Magnetic response in ideal quantum gases: the thermodynamic limit. *Markov Processes and Related Fields*, 9:547–566, 2003. MR2072242.

[95] L. Jørgensen. Non-existence of directed strongly regular graphs. *Discrete Mathematics*, 264(1-3):111–126, 2003. MR1972025.

[96] T. Bisgaard and H. Cornean. Nonexistence in general of a definitizing ideal of the desired codimension. *Positivity*, 7(4):297–302, 2003. MR2017309.

[97] D. Sorensen and R. Waagepetersen. Normal linear models with genetically structured residual variance heterogeneity: a case study. *Genetics Research*, 82(3):207–222, 2003.

[98] O. Geil. On codes from norm-trace curves. *Finite Fields and Their Applications*, 9(3):351–371, 2003. MR1983054.

[99] M. Kouider and P. Vestergaard. On even [2,b]-factors in graphs. *Australasian Journal of Combinatorics*, 27:139–147, 2003. MR1955394.

[100] B. Hartnell and P. Vestergaard. Partitions and domination in a graph. *J C M C C*, 46:113–128, 2003. MR2004843.

[101] J. Mortera, A. Dawid, and S. Lauritzen. Probabilistic expert systems for dna mixture profiling. *Theoretical Population Biology*, 63(3):191–205, 2003.

[102] M. Højbjerre. Profile likelihood in directed graphical models from bugs output. *Statistics and Computing*, 13(1):57–66, 2003. MR1973867.

[103] S. Lauritzen. Rundt på gulvet med komplekse tal. *Discrete Mathematics*, (14):16–17, 2003.

[104] E. Jensen, S. Lundbye-Christensen, L. Pedersen, H. Sørensen, and H. Schønheyder. Seasonal variation in meningococcal disease in denmark. *Scandinavian Journal of Infectious Diseases*, 35(4):226–229, 2003.

[105] J. Møller. Shot noise cox processes. *Advances in Applied Probability*, 35(3):614–640, 2003. MR1990607.

[106] R. Gribonval and M. Nielsen. Sparse representations in unions of bases. *I E E E Transactions on Information Theory*, 49(12):3320–3325, 2003. MR2045813.

[107] M. Raussen. State spaces and dipaths up to dihomotopy. *Homology, Homotopy and Applications*, 5(2):257–280, 2003. MR1994946.

[108] L. Jørgensen and M. Klin. Switching of edges in strongly regular graphs. i. a family of partial difference sets on 100 vertices. *Journal of Combinatorics*, 10(1), 2003. MR1975767.

[109] M. Bladt, A. Gonzalez, and S. Lauritzen. The estimation of phase-type related functionals using markov chain monte carlo methods. *Scandinavian Actuarial Journal*, (4):280–300, 2003. MR2025352.

[110] A. Galtbayar, A. Jensen, and K. Yajima. The nelson model with less than two photons. *Annales Henri Poincare*, 4(4):239–273, 2003. MR1985773.

[111] B. Flyvbjerg, M. Holm, and S. Buhl. What causes cost overrun in transport infrastructure projects? *Engineering World*, 13(4):33–40, 2003.

[112] E. Jensen, S. Lundbye-Christensen, S. Samuelsson, H. Sørensen, and H. Schønheyder. A 20-year ecological study of the temporal association between influenza and meningococcal disease. *European Journal of Epidemiology*, 19(2):181–187, 2004.

[113] A. Jensen. A fermi golden rule at thresholds. *Oberwolfach Reports*, 1(4):2843–2844, 2004.

[114] T. Sørensen, S. Fournais, M. Hoffmann-Ostenhof, and T. Hoffmann-Ostenhof. Analyticity of the density of electronic wavefunctions. *Arkiv foer Matematik*, 42(1):87–106, 2004. MR2056546.

[115] L. Borup, R. Gribonval, and M. Nielsen. Bi-framelet systems with few vanishing moments characterize besov spaces. *Applied and Computational Harmonic Analysis*, 17(1):3–28, 2004. MR2067913.

[116] L. Fajstrup, M. Raussen, E. Goubault, and E. Haucourt. Components of the fundamental category. *Applied Categorical Structures*, 12(1):81–108, 2004. MR2057412.

[117] R. Waagepetersen. Convergence of posteriors for discretized log gaussian cox processes. *Scandinavian Journal of Statistics*, 66(3):229–235, 2004. MR2044908.

[118] S. Lauritzen. Discussion on causality. *Scandinavian Journal of Statistics*, 31(2):189–192, 2004. MR2066248.

[119] P. Briet, H. Cornean, and V. Zagrebnov. Do bosons condense in a homogeneous magnetic field? *Journal of Statistical Physics*, 116(5 & 6):1545–1578, 2004. MR2096047.

[120] J. Johnsen. Domains of type 1,1 operators. *Academie des Sciences. Comptes Rendus. Mathematique*, 339(2):115–118, 2004. MR2078300.

[121] A. Jensen and G. Nenciu. Erratum to the paper "a unified approach to resolvent expansions at thresholds". *Reviews in Mathematical Physics*, 16(5):675–677, 2004. MR2079122.

[122] P. Vestergaard and M. Kouider. Even [a,b]-factors in graphs. *Discussiones Mathematicae. Graph Theory*, 24:431–441, 2004. MR2120067.

[123] M. Ros, D. Sorensen, R. Waagepetersen, M. Dupont-Nivet, M. SanCristobal, J.-C. Bonnet, and J. Mallard. Evidence for genetic control of adult weight plasticity in the snail helix aspersa. *Genetics*, 168(4):2089–2097, 2004.

[124] G. Döge, K. Mecke, J. Møller, D. Stoyan, and R. Waagepetersen. Grand canonical simulations of hard-disk systems by simulated tempering. *International Journal of Modern Physics C: Physics and Computers*, 15(1):129–147, 2004.

[125] R. Gribonval and M. Nielsen. Letter to the editor. *Journal of Fourier Analysis and Applications*, 10(4):433–437, 2004. MR2078266.

[126] A. Jensen, A. Galtbayar, and K. Yajima. Local time-decay of solutions to schrodinger equations with time-periodic potentials. *Journal of Statistical Physics*, 116(1-4):231–282, 2004. MR2083143.

[127] R. Gribonval and M. Nielsen. Nonlinear approximation with dictionaries i. direct estimates. *Journal of Fourier Analysis and Applications*, 10(1):51–71, 2004. MR2045524.

[128] M. Nielsen. Nonseparable walsh-type functions on R^d. *Glasnik Matematicki Series III*, 39(59):111–138, 2004. MR2055390.

[129] K. Knudsen, J. Mueller, and S. Siltanen. Numerical solution method for the dbar-equation in the plane. *Journal of Computational Physics*, 198(2):500–517, 2004. MR2062911.

[130] I. Beltita and H. Cornean. On a theorem of arne persson. *Cubo*, 6(2):1–14, 2004. MR2092040.

[131] R. Gribonval and M. Nielsen. On approximation with spline generated framelets. *Constructive Approximation*, 20(2):207–232, 2004. MR2036641.

[132] H. Cornean, P. Duclos, and T. Pedersen. One-dimensional models of excitons in carbon nanotubes. *Few-Body Systems*, 34(1-3):155–161, 2004.

[133] B. Højgaard and M. Taksar. Optimal dynamic portfolio selection for a corporation with controllable risk and dividend distribution policy. *Quantitative Finance*, 4(3):315–327, 2004. MR2071840.

[134] L. Borup. Pseudodifferential operators on alpha-modulation spaces. *Journal of Function Spaces and Applications*, 2(2):107–123, 2004. MR2035296.

[135] K. Knudsen and A. Tamasan. Reconstruction of less regular conductivities in the plane. *Communications in Partial Differential Equations*, 29(3-4):361–381, 2004. MR2041600.

[136] T. Fischer, S. Lundbye-Christensen, S. Johnsen, H. Schønheyder, and H. Sørensen. Secular trends and seasonality in first-time hospitalization for acute myocardial infarction. *International Journal of Cardiology*, 97(3):425–431, 2004.

[137] A. Galtbayar, A. Jensen, and K. Yajima. Some recent results on schrödinger equations with time-periodic potentials. *Surikaisekikenkyusho Kokyuroku*, (1364):81–88, 2004.

[138] F. Tøgersen and R. Waagepetersen. Statistical modelling and deconvolution of yield meter data. *Scandinavian Journal of Statistics*, 31(2):247–264, 2004. MR2066252.

[139] L. Borup, R. Gribonval, and M. Nielsen. Tight wavelet frames in lebesque and sobolev spaces. *Journal of Function Spaces and Applications*, 2(3):227–252, 2004. MR2094588.

[140] B. Flyvbjerg, M. Holm, and S. Buhl. What causes cost overrun in transport infrastructure projects? *Transport Reviews*, 24(1):3–18, 2004.

[141] M. Bökstedt and I. Ottosen. A splitting result for the free loop space of spheres and projective spaces. *Q. J. Math.*, 56(4):443–472, 2005. MR2182460.

[142] M. Bökstedt and I. Ottosen. A spectral sequence for string cohomology. *Topology*, 44(6):1181–1212, 2005. MR2168574.

[143] J. Møller, R. Waagepetersen, V. Benes, and K. Bodlák. A case study on point process modelling in disease mapping. *Image Analysis and Stereology*, 24:1–10, 2005.

[144] H. Cornean, A. Jensen, and V. Moldoveanu. A rigorous proof of the landauer-buttiker formula. *Journal of Mathematical Physics*, 46(4):1–28, 2005. MR2131222.

[145] L. Borup and M. Nielsen. Approximation with wave packets generated by a refinable function. *American Mathematical Society. Proceedings*, 133(8):2409–2418, 2005. MR2138884.

[146] L. Borup. Brushlet characterization of the hardy space h-1(r) and the space bmo. *Collectanea Mathematica*, 56(2):157–179, 2005. MR2154302.

[147] P. Vestergaard and M. Kouider. Connected factors in graphs - a survey. *Graphs and Combinatorics*, 21(1):1–26, 2005. MR2136707.

[148] L. Fajstrup. Dipaths and dihomotopies in a cubical complex. *Advances in Applied Mathematics*, 35(2):188–206, 2005. MR2152887.

[149] J. Johnsen. Domains of pseudo-differential operators. *Journal of Function Spaces and Applications*, 3(3):263–286, 2005. MR2163627.

[150] P. Vestergaard and B. Hartnell. Dominating sets with at most k components. *Ars Combinatoria*, 74:223–229, 2005. MR2119004.

[151] J. Møller and G. Torrisi. Generalised shot noise cox processes. *Advances in Applied Probability*, 37(1):48–74, 2005. MR2135153.

[152] H. Cornean, P. Briet, and D. Louis. Generalized susceptibilities for a perfect quantum gas. *Markov Processes and Related Fields*, 11:177–188, 2005. MR2150137.

[153] L. Jørgensen. Girth 5 graphs from relative difference sets. *Discrete Mathematics*, 293(1-3):177–184, 2005. MR2136061.

[154] B. Flyvbjerg, M. Skamris, and S. Buhl. How (in)accurate are demand forecasts in public works projects? *American Planning Association. Journal*, 71(2):131–146, 2005.

[155] A. Jensen and M. Krishna. New criteria to identify spectrum. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 115(2):217–226, 2005. MR2142467.

[156] L. Borup and M. Nielsen. Nonlinear approximation with general wave packets. *Analysis in Theory and Applications*, 21(3):201–215, 2005. MR2319189.

[157] M. Nielsen and L. Borup. On the equivalence of brushlet and wavelet bases. *Journal of Mathematical Analysis and Applications*, 309(1):117–135, 2005. MR2154031.

[158] J. Møller and J. Rasmussen. Perfect simulation of hawkes processes. *Advances in Applied Probability*, 37(3):629–646, 2005. MR2156552.

[159] J. Møller. Properties of spatial cox process models. *Journal of Statistical Research of Iran*, 2(1):1–18, 2005.

[160] L. Jørgensen. Rank of adjacency matrices of directed (strongly) regular graphs. *Linear Algebra and Its Applications*, 407:233–241, 2005. MR2161928.

[161] A. Baddeley, R. Turner, J. Møller, and M. Hazelton. Residual analysis for spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 67(5):617–651, 2005. MR2210685.

[162] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Sharp regularity results for coulombic many-electron wave functions. *Communications in Mathematical Physics*, 255:183–227, 2005. MR2123381.

[163] B. Flyvbjerg, M. Holm, and S. Buhl. Sottostima dei costi dei progetti di opere repubblich. *Archivio di Studi Urbani e Regionali*, (82):87–114, 2005.

[164] T. Pedersen, K. Pedersen, H. Cornean, and P. Duclos. Stability and signatures of biexcitons in carbon nanotubes. *Nano Letters*, 5(2):291–294, 2005.

[165] A. Drewes, H. Reddy, C. Staahl, P. Funch-Jensen, L. Arendt-Nielsen, H. Gregersen, and S. Lundbye-Christensen. Statistical modeling of the response characteristics of mechanosensitive stimuli in the human esophagus. *Journal of Pain*, 6(7):455–462, 2005.

[166] T. Sørensen. The large-z behavior of pseudorelastivistic atoms. *Journal of Mathematical Physics*, 46, 2005. MR2142995.

[167] P. Vestergaard and A. Pedersen. The number of independent sets in unicyclic graphs. *Discrete Applied Mathematics*, 152(1-3):246–256, 2005. MR2174205.

[168] R. Waagepetersen. A simulation-based goodness-of-fit test for random effects in generalized linear mixed models. *Scandinavian Journal of Statistics*, 33(4):721–731, 2006. MR2300912.

[169] L. Fajstrup, M. Raussen, and E. Goubault. Algebraic topology and concurrency. *Theoretical Computer Science*, 357(1-3):241–278, 2006. MR2242768.

[170] I. Ottosen and M. Bökstedt. An alternative approach to homotopy operations. *American Mathematical Society. Transactions*, 358(9):3985–3995, 2006. MR2219006.

[171] J. Møller, A. Pettitt, R. Reeves, and K. Berthelsen. An efficient markov chain monte carlo method for distributions with intractable normalising constants. *Biometrika*, 93(2):451–458, 2006. MR2278096.

[172] J. Møller and J. Rasmussen. Approximate simulation of hawkes processes. *Methodology and Computing in Applied Probability*, 8(1):53–64, 2006. MR2253076.

[173] L. Borup and M. Nielsen. Banach frames for multivariate alpha-modulation spaces. *Journal of Mathematical Analysis and Applications*, 321(2):880–895, 2006. MR2241162.

[174] L. Borup and M. Nielsen. Boundedness for pseudo differential operators on multivariate a-modulation spaces. *Arkiv foer Matematik*, 44(2):241–259, 2006. MR2292720.

[175] P. Vestergaard and A. Pedersen. Bounds on the number of vertex independent sets in a graph. *Taiwanese Journal of Mathematics*, 10(6):1575–1587, 2006. MR2275147.

[176] L. Fajstrup. Cubical local partial orders on cubically subdivided spaces - existence and construction. *Theoretical Computer Science*, 365(3):199–205, 2006. MR2269452.

[177] K. Knudsen, M. Lassas, J. Mueller, and S. Siltanen. D-bar method for electrical impedance tomography with discontinuous conductivities. *S I A M Journal on Applied Mathematics*, 67(3):893–913, 2006. MR2300316.

[178] M. Raussen. Deadlocks and dihomotopy in mutual exclusion models. *Theoretical Computer Science*, 365(3):247–257, 2006. MR2269456.

[179] P. Briet, H. Cornean, and D. Louis. Diamagnetic expansions for perfect quantum gases. *Journal of Mathematical Physics*, 47(8), 2006. MR2258610.

[180] J. Møller. Discussion on the paper by beskos, papaspiliopoulos, roberts and fearnhead. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 68(3):373, 2006.

[181] C. Fu and P. Vestergaard. Distance domination in partitioned graphs. *Congressus Numerantium*, 182:155–159, 2006. MR2311297.

[182] P. Næss, B. Flyvbjerg, and S. Buhl. Do road planners produce more 'honest numbers' than rail planners? *Transport Reviews*, 26(5):537–555, 2006.

[183] P. Vestergaard and B. Hartnell. Equipackable graphs. *Bulletin of the Institute of Combinatorics and its Applications*, 46:35–48, 2006. MR2196653.

[184] C. Dethlefsen and S. Lundbye-Christensen. Formulating state space models in r with focus on longitudinal regression models. *Journal of Statistical Software*, 16(1), 2006.

[185] M. Kouider and P. Vestergaard. Generalized connected domination in graphs. *Discrete Mathematics and Theoretical Computer Science (Online Edition)*, 8(1):57–64, 2006. MR2220137.

[186] B. Flyvbjerg, M. Holm, and S. Buhl. ¿imprecisión de las previsiones de los proyectos de obras públicas? ámbito del transporte. *Estudios de Construccion y Transportes*, (105):195–214, 2006.

[187] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts. *Transport Reviews*, 26(1):1–24, 2006.

[188] C. Draghici. Inequalities for integral means over symmetric sets. *Journal of Mathematical Analysis and Applications*, 324(1):543–554, 2006. MR2262490.

[189] P. Lass, J. Lilholt, L. Thomsen, S. Lundbye-Christensen, H. Enevoldsen, and O. Simonsen. Kvaliteten af diagnose- og procedurekodning i ortopædkirurgi nordjylland. *Ugeskrift for Laeger*, 168(48):4212–4215, 2006.

[190] L. Andersen, P. Vestergaard, and T. Tuza. Largest non-unique subgraphs. *Graphs and Combinatorics*, 22(4):453–470, 2006. MR2270367.

[191] R. Waagepetersen and T. Schweder. Likelihood-based inference for clustered line transect data. *Journal of Agricultural, Biological, and Environmental Statistics*, 11(3):264–279, 2006.

[192] L. Borup and M. Nielsen. Nonlinear approximation in alpha-modulation spaces. *Mathematische Nachrichten*, 279(1-2):101–120, 2006. MR2193610.

[193] R. Gribonval and M. Nielsen. Nonlinear approximation with dictionaries. ii. inverse estimates. *Constructive Approximation*, 24(2):157–173, 2006. MR2239118.

[194] M. Hansen and S. Pitts. Nonparametric inference from the m/g/1 workload. *Bernoulli*, 12(4):737–759, 2006. MR2248235.

[195] H. Cornean, P. Duclos, and B. Ricaud. On critical stability of three quantum charges interacting through delta potentials. *Few-Body Systems*, 38(2-4):125–131, 2006.

[196] H. Cornean and K. Knudsen. Reconstruction from one boundary measurement of a potential homogeneous of degree zero. *Journal of Inverse and Ill-Posed Problems*, 13(5):413–423, 2006. MR2188622.

[197] A. Jensen and G. Nenciu. Schrodinger operators on the half line. *Indian Academy of Sciences. Proceedings. Mathematical Sciences*, 116(4):375–392, 2006. MR2346876.

[198] J. Frøkjær, S. Andersen, S. Lundbye-Christensen, P. Funch-Jensen, A. Drewes, and H. Gregersen. Sensation and distribution of stress and deformation in the human oesophagus. *Neurogastroenterology and Motility*, 18(2):104–114, 2006.

[199] K. Knudsen. The calderon problem with partial data for less smooth conductivities. *Communications in Partial Differential Equations*, 31(1):57–71, 2006. MR2209749.

[200] H. Cornean, G. Nenciu, and T. Pedersen. The faraday effect revisited: General theory. *Journal of Mathematical Physics*, 47(1), 2006. MR2202529.

[201] A. Jensen and G. Nenciu. The fermi golden rule and its form at thresholds in odd dimensions. *Communications in Mathematical Physics*, 261(3):693–727, 2006. MR2197544.

[202] L. Knudsen, H.-H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs): population characteristics. *British Journal of Ophthalmology*, 90(11):1404–1409, 2006.

[203] P. McCullagh and J. Møller. The permanental process. *Advances in Applied Probability*, 38(4):873–888, 2006. MR2285685.

[204] B. Randerath and P. Vestergaard. Well-covered graphs and factors. *Discrete Applied Mathematics*, 154(9):1416–1428, 2006. MR2221561.

[205] D. Ruano. On the parameters of r-dimensional toric codes. *Finite Fields Appl.*, 13(4):962–976, 2007. MR2360532.

[206] D. Ruano. Computing the Feng-Rao distances for codes from order domains. *J. Algebra*, 309(2):672–682, 2007. MR2303200.

[207] J. Johnsen and W. Sickel. A direct proof of sobolev embeddings for quasi-homogeneous lizorkin-triebel spaces with mixed norms. *Journal of Function Spaces and Applications*, 5(2):183–198, 2007. MR2319603.

[208] R. Waagepetersen. An estimating function approach to inference for inhomogeneous neyman-scott processes. *Biometrics*, 63(1):252–258, 2007. MR2345595.

[209] M. Nielsen. An example of an almost greedy uniformly bounded orthonormal basis for $L_p(0,1)$. *Journal of Approximation Theory*, 149(2):188–192, 2007. MR2374604.

[210] P. Vestergaard and A. Pedersen. An upper bound on the number of independent sets in a tree. *Ars Combinatoria*, 84:85–96, 2007. MR2332890.

[211] Ø. Skare, J. Møller, and E. Jensen. Bayesian analysis of spatial point processes in the neighbourhood of voronoi networks. *Statistics and Computing*, 17(4):369–379, 2007. MR2409801.

[212] G. Nielsen, C. Dethlefsen, H. Sørensen, J. Pedersen, and L. Molsted-Pedersen. Cognitive function and army rejection rate in young adult male offspring of women with diabetes. *Diabetes Care*, 30:2827–2831, 2007.

[213] J. G. Rasmussen, J. Møller, B. H. Aukema, K. F. Raffa, and J. Zhu. Continuous time modelling of dynamical spatial lattice data observed at sparsely distributed times. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 69(4):701–713, 2007. MR2370076.

[214] K. Knudsen and M. Salo. Determining nonsmooth first order terms from partial boundary measurements. *Inverse Problems and Imaging*, 1(2):349–369, 2007. MR2282273.

[215] J. Møller, R. Waagepetersen, E. Jensen, and A. Penttinen. Discussion of "modern statistics for spatial point processes". *Scandinavian Journal of Statistics*, 34(4):685–711, 2007. MR2396935.

[216] A. Jensen, A. Olesen, C. Dethlefsen, and H. Sørensen. Do incident and new subsequent cases of non-melanoma skin cancer registered in a danish prospective cohort study have different 10-year mortality? *Cancer Detection and Prevention*, 31:352–358, 2007.

[217] M. Henning and P. Vestergaard. Domination in partitioned graphs with minimum degree two. *Discrete Mathematics*, 307(9-10):1115–1135, 2007. MR2292540.

[218] H. Cornean, P. Duclos, and B. Ricaud. Effective models for excitons in carbon nanotubes. *Annales Henri Poincare*, 8(1):135–163, 2007. MR2299196.

[219] J. Møller and K. Mengersen. Ergodic averages for monotone functions using upper and lower dominating processes. *Bayesian Analysis*, 2(4):761–782, 2007. MR2361974.

[220] L. Jørgensen and K.-i. Kawarabayashi. Extremal results for rooted minor problems. *Journal of Graph Theory*, 55(3):191–207, 2007. MR2327958.

[221] L. Borup and M. Nielsen. Frame decomposition of decomposition spaces. *Journal of Fourier Analysis and Applications*, 13(1):39–70, 2007. MR2296727.

[222] R. Wisniewski and M. Raussen. Geometric analysis of nondeterminacy in dynamical systems. *Acta Informatica*, 43(7):501–519, 2007. MR2292663.

[223] H. Cornean, T. Pedersen, and B. Ricaud. Ground and excited states in semiconductor carbon nanotubes. *Contemporary Mathematics*, 447:45–55, 2007. MR2423570.

[224] M. Stender, T. Nielsen, J. Frøkjær, T. Larsen, S. Lundbye-Christensen, and O. Thorlacius-Ussing. High preoperative prevalence of deep venous thrombosis in patients with colorectal cancer. *British Journal of Surgery*, 94(9):1100–1103, 2007.

[225] R. Gribonval and M. Nielsen. Highly sparse representations from dictionaries are unique and independent of the sparseness measure. *Applied and Computational Harmonic Analysis*, 22(3):335–355, 2007. MR2311858.

[226] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts: Part 1. *Expressways and Motorways*, 50(10):56–65, 2007.

[227] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts: Part 2. *Expressways and Motorways*, 50(11):56–64, 2007.

[228] M. Raussen. Invariants of directed spaces. *Applied Categorical Structures*, 15(4):355–386, 2007. MR2350212.

[229] G. Nielsen, C. Dethlefsen, M. Møller, and H. Sørensen. Maternal glycated haemoglobin, pre-gestational weight, pregnancy weight gain and risk of large-for-gestational-age babies: a danish cohort study of 209 singleton type 1 diabetic pregnacies. *Diabetic Medicine*, 24(4):384–387, 2007.

[230] J. Møller and R. Waagepetersen. Modern statistics for spatial point processes. *Scandinavian Journal of Statistics*, 34(4):643–684, 2007. MR2392447.

[231] A. Gorst-Rasmussen, D. Spiegelhalter, and C. Bull. Monitoring the introduction of a surgical intervention with long-term consequences. *Statistics in Medicine*, 26(3):512–531, 2007. MR2339111.

[232] S. Fournais, T. Sørensen, M. Hoffmann-Ostenhof, and T. Hoffmann-Ostenhof. Non-isotropic cusp conditions and regularity of the electron density of molecules at the nuclei. *Annales Henri Poincare*, 8(4):731–748, 2007. MR2333780.

[233] M. Nielsen. On polynomial symbols for subdivision schemes. *Advances in Computational Mathematics*, 27(2):195–209, 2007. MR2317775.

[234] H. Andersen. On puncturing of codes from norm-trace curves. *Finite Fields and Their Applications*, 13(1):136–157, 2007. MR2287392.

[235] T. Pedersen and H. Cornean. Optical second harmonic generation from wannier excitons. *Europhysics Letters*, 78(2):27005, 2007.

[236] B. Rasmussen, H. Laugesen, J. Sollid, J. Grønlund, S. Rees, E. Toft, J. Gjedsted, C. Dethlefsen, and E. Tønnesen. Oxygenation and release of inflammatory mediators after off-pump compared with after on-pump coronary artery bypass surgery. *Acta Anaesthesiologica Scandinavica*, 51(9):1202–1210, 2007.

[237] U. Fahrenberg and M. Raussen. Reparametrizations of continuous paths. *Journal of Homotopy and Related Structures*, 2(2):93–117, 2007. MR2369163.

[238] E. Munk, A. Drewes, A. Gorst-Rasmussen, P. Funch-Jensen, H. Gregersen, and B. Nørgård. Risk of gastrointestinal cancer in patients with unexplained chest/epigastric pain and normal upper endoscopy: A danish 10-year follow-up study. *Digestive Diseases and Sciences*, 52(7):1730–1737, 2007.

[239] E. Munk, A. Drewes, A. Gorst-Rasmussen, H. Gregersen, P. Funch-Jensen, and B. Nørgaard. Risk of peptic ulcer, oesophagitis, pancreatitis or gallstone in patients with unexplained chest/epigastric pain and normal upper endoscopy. *Alimentary Pharmacology and Therapeutics*, 25(10):1203–1210, 2007.

[240] M. Nielsen and H. Sikic. Schauder bases of integer translates. *Applied and Computational Harmonic Analysis*, 23(2):259–262, 2007. MR2344615.

[241] K. Gradel, C. Dethlefsen, H. Schønheyder, T. Ejlertsen, H. Sørensen, R. Thomsen, and H. Nielsen. Severity of infection and seasonal variation

of non-typhoid salmonelle occurence in humans. *Epidemiology and Infection*, 135(1):93–99, 2007.

[242] H. Cornean, I. Herbst, and E. Skibsted. Spiraling attractors and quantum dynamics for a class of long-range magnetic fields. *Journal of Functional Analysis*, 247(1):1–94, 2007. MR2319754.

[243] I. Ottosen and M. Bökstedt. String cohomology groups of complex projective spaces. *Algebraic & Geometric Topology*, 7:2165–2238, 2007. MR2366191.

[244] L. Knudsen, H.-H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs) 2. non-ophthalmic parameters and clinically significant macular oedema. *British Journal of Ophthalmology*, 91(12):1593–1595, 2007.

[245] J. Møller and G. Torrisi. The pair correlation function of spatial hawkes processes. *Statistics & Probability Letters*, 77(10):995–1003, 2007. MR2370426.

[246] J. Andreasen, M. Westen, P. Pallesen, S. Jensen, A. Gorst-Rasmussen, and S. Johnsen. Transfusion practice in coronary artery bypass surgeri in denmark: a multicenter audit. *Interactive Cardiovascular and Thoracic Surgery*, (6):623–627, 2007.

[247] M. Henning and P. Vestergaard. Trees with paired-domination number twice their domination number. *Utilitas Mathematica*, 74:187–197, 2007. MR2364000.

[248] R. Waagepetersen, N. Ibanez-Escriche, and D. Sorensen. A comparison of strategies for markov chain monte carlo computation in quantitative genetics. *Genetics Selection Evolution*, 40(2):161–176, 2008.

[249] L. Fajstrup and J. Rosický. A convenient category for directed homotopy. *Theory and Applications of Categories*, 21(1):7–20, 2008. MR2425555.

[250] H. Cornean, K. Hoke, H. Neidhardt, P. Racec, and J. Rehberg. A kohn-sham system at zero temperature. *Journal of Physics A: Mathematical and Theoretical*, 41(38), 2008. MR2438486.

[251] P. Wogelius, G. Dahllöf, A. Gorst-Rasmussen, H. Sørensen, S. Rosthøj, and S. Poulsen. A population-based observational study of dental caries among survivors of childhood cancer. *Pediatric Blood & Cancer*, 50(6):1221–1226, 2008.

[252] H. Cornean, P. Duclos, G. Nenciu, and R. Purice. Adiabatically switched-on electrical bias and the landauer-buttiker formula. *Journal of Mathematical Physics*, 49(10), 2008. MR2464602.

[253] L. Borup, R. Gribonval, and M. Nielsen. Beyond coherence: Recovering structured time-frequency representations. *Applied and Computational Harmonic Analysis*, 24(1):120–128, 2008. MR2379118.

[254] R. Gribonval and M. Nielsen. Beyond sparsity. *Advances in Computational Mathematics*, 28(1):23–41, 2008. MR2358040.

[255] C. Cornou and S. Lundbye-Christensen. Classifying sows' activity types from acceleration patterns. *Applied Animal Behaviour Science*, 111(3-4):262–273, 2008.

[256] M. Stender, J. Frøkjær, T. Nielsen, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. Combined use of clinical pre-test probability and d-dimer test in the diagnosis of preoperative deep venous thrombosis in colorectal cancer patients. *Thrombosis and Haemostasis*, 99(2):396–400, 2008.

[257] P. Briet, H. Cornean, and D. Louis. Diamagnetic expansions for perfect quantum gases ii: Uniform bounds. *Asymptotic Analysis*, 59(1-2):109–123, 2008. MR2435675.

[258] R. Waagepetersen. Estimating functions for inhomogeneous spatial point processes with incomplete covariate data. *Biometrika*, 95(2):351–363, 2008. MR2422695.

[259] H. Andersen and O. Geil. Evaluation codes from order domain theory. *Finite Fields and Their Applications*, 14(1):92–123, 2008. MR2381480.

[260] A. Dall'Acqua, T. Sørensen, and E. Stockmeyer. Hartree-fock theory for pseudorelativistic atoms. *Annales Henri Poincare*, 9(4):711–742, 2008. MR2413201.

[261] K. Berthelsen and J. Møller. Non-parametric bayesian inference for inhomogeneous markov point processes. *Australian & New Zealand Journal of Statistics*, 50(3):257–272, 2008. MR2455432.

[262] L. Borup and M. Nielsen. On anisotropic triebel-lizorkin type spaces, with applications to the study of pseudo-diffibrential operators. *Journal of Function Spaces and Applications*, 6(2):107–154, 2008. MR2423282.

[263] A. Jensen and K. Yajima. On l-p boundedness of wave operators for 4-dimensional schrodinger operators with threshold singularities. *London Mathematical Society. Proceedings*, 96(1):136–162, 2008. MR2392318.

[264] T. Sørensen and E. Stockmeyer. On the convergence of eigenfunctions to threshold energy states. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 138(1):169–187, 2008. MR2388942.

[265] O. Geil. On the second weight of generalized reed-muller codes. *Designs, Codes and Cryptography*, 48(3):323–330, 2008. MR2411119.

[266] J. Johnsen and W. Sickel. On the trace problem for lizorkin-triebel spaces with mixed norms. *Mathematische Nachrichten*, 281(5):669–696, 2008. MR2401510.

[267] H. Cornean, A. Nenciu, and G. Nenciu. Optimally localized wannier functions for quasi one-dimensional nonperiodic insulators. *Journal of Physics A: Mathematical and Theoretical*, 41(12):125202–, 2008. MR2450481.

[268] J. Johnsen. Parametrices and exact paralinearization of semi-linear boundary problems. *Communications in Partial Differential Equations*, 33(10):1729–1787, 2008. MR2475318.

[269] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Positivity of the spherically averaged atomic one-electron density. *Mathematische Zeitschrift*, 259(1):123–130, 2008. MR2375619.

[270] J. Møller and K. Helisova. Power diagrams and interaction processes for unions of discs. *Advances in Applied Probability*, 40(2):321–347, 2008. MR2431299.

[271] N. Agerholm, R. Waagepetersen, N. Tradisauskas, L. Harms, and H. Lahrmann. Preliminary results from the danish intelligent speed adaptation project pay as you speed. *I E T Intelligent Transport Systems*, 2(2):143–153, 2008.

[272] A. Baddeley, J. Møller, and A. Pakes. Properties of residuals for spatial point processes. *Institute of Statistical Mathematics. Annals*, 60(3):627–649, 2008. MR2434415.

[273] M. Nielsen and H. Sikic. Quasi-greedy systems of integer translates. *Journal of Approximation Theory*, 155(1):43–51, 2008. MR2474705.

[274] T. Tvedebrink, S. Lundbye-Christensen, R. Thomsen, C. Dethlefsen, and H. Schønheyder. Seasonal changes in climatic parameters and their relationship with the incidence of pneumococcal bacteraemia in denmark. *Clinical Microbiology and Infection*, 14(12):1183–1186, 2008.

[275] Y. Guan, R. Waagepetersen, and C. Beale. Second-order analysis of inhomogeneous spatial point processes with proportional intensity functions. *American Statistical Association. Journal*, 103(482):769–777, 2008. MR2524008.

[276] N. Ibanez-Escriche, D. Sørensen, R. Waagepetersen, and A. Blasco. Selection for environmental variation. *Genetics*, 180(4):2209–2226, 2008.

[277] J. Zhu, J. Rasmussen, J. Møller, B. Aukema, and K. Raffa. Spatial-temporal modeling of forest gaps generated by colonization from below- and above-ground bark beetle species. *American Statistical Association. Journal*, 103(481):162–177, 2008. MR2420224.

[278] S. Fournais, M. Hoffmann-Ostenhof, and T. Sørensen. Third derivative of the one-electron density at the nucleus. *Annales Henri Poincare*, 9(7):1387–1412, 2008. MR2453253.

[279] A. Frendrup, M. Henning, and P. Vestergaard. Total domination in partitioned trees and partitioned graphs with minimum degree two. *Journal of Global Optimization*, 41(3):385–399, 2008. MR2424474.

[280] A. Jensen and G. Nenciu. Uniqueness results for transient dynamics of quantum systems. *Contemporary Mathematics*, pages 165–174, 2008. MR2423579.

[281] A. Frendrup, M. Henning, B. Randerath, and P. Vestergaard. An upper bound on the domination number of a graph with minimum degree 2. *Discrete Mathematics*, 309(4):639–646, 2009. MR2502174.

[282] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Analytic structure of many-body coulombic wave functions. *Communications in Mathematical Physics*, 289(1):291–310, 2009. MR2504851.

[283] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Analytic structure of solutions to multiconfiguration equations. *Journal of Physics A: Mathematical and Theoretical*, 42(31), 2009. MR2521310.

[284] A. Gorst-Rasmussen and M. Hansen. Asymptotic inference for waiting times and patiences in queues with abandonment. *Communications in Statistics: Simulation and Computation*, 38(2):318–334, 2009. MR2518349.

[285] O. Geil and R. Matsumoto. Bounding the number of F_q-rational places in algebraic function fields using weierstrass semigroups. *Journal of Pure and Applied Algebra*, 213(6):1152–1156, 2009. MR2498805.

[286] P. Beelen and D. Ruano. The order bound for toric codes. In *Applied algebra, algebraic algorithms, and error-correcting codes*, volume 5527 of *Lecture Notes in Comput. Sci.*, pages 1–10. Springer, Berlin, 2009. MR2580848.

[287] F. Hernando, K. Lally, and D. Ruano. Construction and decoding of matrix-product codes from nested codes. *Appl. Algebra Engrg. Comm. Comput.*, 20(5-6):497–507, 2009. MR2564415.

[288] D. Ruano. On the structure of generalized toric codes. *J. Symbolic Comput.*, 44(5):499–506, 2009. MR2499927.

[289] T. Tvedebrink, P. Eriksen, H. Mogensen, and N. Morling. Estimating the probability of allelic drop-out of str alleles in forensic genetics. *Forensic Science International: Genetics*, 3(4):222–226, 2009.

[290] S. Lundbye-Christensen, C. Dethlefsen, A. Gorst-Rasmussen, T. Fischer, H. Schønheyder, K. Rothman, and H. Sørensen. Examining secular trends and seasonality in count data using dynamic generalized linear modelling: a new methodological approach illustrated with hospital discharge data on myocardial infarction. *European Journal of Epidemiology*, 24(5):225–230, 2009.

[291] J. Illian, J. Møller, and R. Waagepetersen. Hierarchical spatial point process analysis for a plant community with high biodiversity. *Environmental and Ecological Statistics*, 16(3):389–405, 2009. MR2749847.

[292] V. Dinu, A. Jensen, and G. Nenciu. Nonexponential decay laws in perturbation theory of near threshold eigenvalues. *Journal of Mathematical Physics*, 50(1), 2009. MR2492626.

[293] M. Svensson, A. Gorst-Rasmussen, E. Schmidt, A. Jorgensen, and J. Christensen. Nt-pro-bnp is an independent predictor of mortality in patients with end-stage renal disease. *Clinical Nephrology*, 71:380–386, 2009.

[294] C. Delorme, L. Jørgensen, M. Miller, and G. Pineda-Villavicencio. On bipartite graphs of defect 2. *European Journal of Combinatorics*, 30(4):798–808, 2009. MR2504638.

[295] C. Delorme, L. Jørgensen, M. Miller, and G. Pineda-Villavicencio. On bipartite graphs of diameter 3 and defect 2. *Journal of Graph Theory*, 61(4):271–288, 2009. MR2536883.

[296] H. Cornean, J. Derezinski, and P. Zin. On the infimum of the energy-momentum spectrum of a homogeneous bose gas. *Journal of Mathematical Physics*, 50(6), 2009. MR2541168.

[297] T. Tvedebrink. Overdispersion in allelic counts and θ-correction in forensic genetics. *Forensic Science International*, 2(1):455–457, 2009.

[298] M. Raussen. Reparametrizations with given stop data. *Journal of Homotopy and Related Structures*, 4(1):1–5, 2009. MR2481616.

[299] T. Rønnow, T. Pedersen, and H. Cornean. Stability of singlet and triplet trions in carbon nanotubes. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 373:1478–1481, 2009.

[300] H. Cornean, H. Neidhardt, and V. Zagrebnov. The effect of time-dependent coupling on non-equilibrium steady states. *Annales Henri Poincare*, 10(1):61–93, 2009. MR2496303.

[301] H. Cornean and G. Nenciu. The faraday effect revisited. *Journal of Functional Analysis*, 257(7):2024–2066, 2009. MR2548029.

[302] O. Simonsen, M. Vuust, B. Understrup, M. Højbjerre, S. Bøttcher, and M. Voigt. The transverse forefoot arch demonstrated by a novel x-ray projection. *Foot and Ankle Surgery*, 15(1):7–13, 2009.

[303] A. Frendrup, P. Vestergaard, and A. Yeo. Total domination in partitioned graphs. *Graphs and Combinatorics*, 25(2):181–196, 2009. MR2511877.

[304] M. Raussen. Trace spaces in a pre-cubical complex. *Topology and Its Applications*, 156(9):1718–1728, 2009. MR2521708.

[305] M. Nielsen. Trigonometric quasi-greedy bases for $L_p(T; w)$. *Rocky Mountain Journal of Mathematics*, 39(4):1267–1278, 2009. MR2524713.

[306] R. Waagepetersen and Y. Guan. Two-step estimation for inhomogeneous spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 71(3):685–702, 2009. MR2749914.

[307] C. Draghici and H. Hajaiej. Uniqueness and characterization of the maximizers of integral functionals with constraints. *Advanced Nonlinear Studies*, 9(1), 2009. MR2473157.

[308] J. Møller and E. Rubak. A model for positively correlated count variables. *International Statistical Review*, 78(1):65–80, 2010.

[309] A. Frendrup, B. Hartnell, and P. Vestergaard. A note on equimatchable graphs. *Australasian Journal of Combinatorics*, 46:185–190, 2010. MR2598703.

[310] H. Cornean, C. Gianesello, and V. Zagrebnov. A partition-free approach to transient and steady-state charge currents. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738106.

[311] R. Waagepetersen. A statistical modeling approach to build expert credit risk rating systems. *Journal of Credit Risk*, 6(2):81–94, 2010.

[312] B. Randerath and P. Vestergaard. All P_3-equipackable graphs. *Discrete Mathematics*, 310:355–359, 2010. MR2563051.

[313] P. Wogelius, D. Haubek, A. Nechifor, M. Nørgaard, T. Tvedebrink, and S. Poulsen. Association between use of asthma drugs and prevalence of demarcated opacities in permanenet first molars in 6-to-8-year old danish children. *Community Dentistry and Oral Epidemiology*, 38(2):145–151, 2010.

[314] L. Fajstrup. Classification of dicoverings. *Topology and Its Applications*, 157(15):2402–2412, 2010. MR2674038.

[315] T. Rønnow, T. Pedersen, and H. Cornean. Correlation and dimensional effects of trions in carbon nanotubes. *Physical Review B (Condensed Matter and Materials Physics)*, 81(20):205446, 2010.

[316] P. Briet, H. Cornean, and B. Savoie. Diamagnetism of quantum gases with singular potentials. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738103.

[317] T. Rønnow, T. Pedersen, and H. Cornean. Dimensional and correlation effects of charged excitons in low-dimensional semiconductors. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738126.

[318] T. Tvedebrink, P. Eriksen, H. Mogensen, and N. Morling. Evaluating the weight of evidence by using quantitative short tandem repeat data in dna mixtures. *Royal Statistical Society. Journal. Series C: Applied Statistics*, 59(5):855–874, 2010. MR2756924.

[319] H. Cornean and G. Nenciu. Faraday effect revisited: sum rules and convergence issues. *Journal of Physics A: Mathematical and Theoretical*, 43, 2010. MR2738107.

[320] T. Aabo, E. Høg, and J. Kuhn. Integrated foreign exchange risk management. *Journal of Multinational Financial Management*, 20(4-5):235–250, 2010.

[321] J. Møller and K. Helisova. Likelihood inference for unions of interacting discs. *Scandinavian Journal of Statistics*, 37(3):365–381, 2010. MR2724503.

[322] F. Hernando and D. Ruano. New linear codes from matrix-product codes with polynomial units. *Advances in Mathematics of Communication*, 4(3):363–367, 2010.

[323] A. Frendrup, M. Henning, B. Randerath, and P. Vestergaard. On a conjecture about inverse domination in graphs. *Ars Combinatoria*, 97A:129–143, 2010. MR2683740.

[324] P. Duclos and A. Jensen. On self-adjointness of singular floquet hamiltonians. *Journal of Physics A: Mathematical and Theoretical*, 43(47), 2010. MR2738114.

[325] M. Nielsen. On stability of finitely generated shift-invariant systems. *Journal of Fourier Analysis and Applications*, 16(6):901–920, 2010. MR2737763.

[326] H. Cornean. On the lipschitz continuity of spectral bands of harper-like and magnetic schrödinger operators. *Annales Henri Poincare*, 11(5):973–990, 2010. MR2736529.

[327] M. Nielsen. Orthonormal bases for α-modulation spaces. *Collectanea Mathematica*, 61(2):173–190, 2010. MR2666229.

[328] T. Tvedebrink. Overdispersion in allelic counts and θ-correction in forensic genetics. *Theoretical Population Biology*, 78(3):200–210, 2010.

[329] K. Berthelsen, L. Breyer, and G. Roberts. Perfect posterior simulation for mixture and hidden marko models. *London Mathematical Society. Journal of Computation and Mathematics*, 13:246–259, 2010. MR2678951.

[330] J. Møller, M. Huber, and R. Wolpert. Perfect simulation and moment properties for the matérn type iii process. *Stochastic Processes and Their Applications*, 120(11):2142–2158, 2010. MR2684739.

[331] B. Aukema, J. Zhu, J. Møller, J. Rasmussen, and K. Raffa. Predisposition to bark beetle attack by root herbivores and associated pathogens: Roles in forest decline, gap formation, and persistence of endemic bark beetle populations. *Forest Ecology and Management*, 259(3):374–382, 2010.

[332] J. Solovej, T. Sørensen, and W. Spitzer. Relativistic scott correction for atoms and molecules. *Communications on Pure and Applied Mathematics*, 63(1):39–118, 2010. MR2588386.

[333] L. Jørgensen. Schur rings and non-symmetric association schemes on 64 vertices. *Discrete Mathematics*, 310(22):3259–3266, 2010. MR2684099.

[334] J. Johnsen. Simple proofs of nowhere-differentiability for weierstrass' function and cases of slow growth. *Journal of Fourier Analysis and Applications*, 16(1):17–33, 2010. MR2587578.

[335] M. Raussen. Simplicial models of trace spaces. *Algebraic & Geometric Topology*, 10(3):1683–1714, 2010. MR2683749.

[336] A. Jensen and K. Yajima. Spatial growth of fundamental solutions for certain perturbations of the harmonic oscillator. *Reviews in Mathematical Physics*, 22(2):193–206, 2010. MR2655204.

[337] J. Møller and C. Diaz-Avalos. Structured spatio-temporal shot-noise cox point process models, with a view to modelling forest fires. *Scandinavian Journal of Statistics*, 37(1):2–25, 2010. MR2675937.

[338] L. Knudsen, H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study (ncdrs). *Acta Ophthalmologica*, 88(4):443–448, 2010.

[339] J. Møller and F. Schoenberg. Thinning spatial point processes into poisson processes. *Advances in Applied Probability*, 42(2):347–358, 2010. MR2675106.

[340] J. Stamhus, S. Scheuer, and S. Christensen. Tre strejker i det offentlige - en komparativ lønmodtager-investeringsanalyse. *Nationaloekonomisk Tidsskrift*, 147(3):360–374, 2010.

[341] M. Nielsen. Trigonometric bases for matrix weighted L_p-spaces. *Journal of Mathematical Analysis and Applications*, 371(2):784–792, 2010. MR2670156.

5.3 Symmetric difference of bibliographies #1 and #2

[1] J. Møller and R. P. Waagepetersen. Contribution to the discussion of J. Besag and D. Higdon (1999): Bayesian analysis of agricultural field experiments. *Journal of the Royal Statistical Society Series B*, 61:735, 1999.

[2] B. Jørgensen and S. Lundbye-Christensen. Discussion of the paper by durbin and koopman. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 62(3):3–56, 2000.

[3] L. Fajstrup and S. Solokowski. Infinitely running concurrent processes with loops from a geometric viewpoint. *Electronic Notes in Theoretical Computer Science*, 39(2), 2000.

[4] L. Fajstrup. Loops, ditopology and deadlocks. *Mathematical Structures in Computer Science*, 10:459–480, 2000. MR1786471.

[5] M. Raussen. On the classification of dipaths in geometric models for concurrency. *Mathematical Structures in Computer Science*, 10:427–457, 2000. MR1786470.

[6] H. Cornean. On the magnetization of a charged bose gas in the canonical ensemble. *Communications in Mathematical Physics*, 212(1):1–27, 2000. MR1764361.

[7] S. Asmussen, B. Højgaard, and M. Taksar. Optimal risk control and dividend distribution policies. *Finance and Stochastics*, 4(3):299–324, 2000. MR1779581.

[8] H. Cordes, A. Jensen, S. Kuroda, G. Ponce, B. Simon, and M. Taylor. Tosio kato (1917-1999). *American Mathematical Society. Abstracts of Papers Presented*, 47(6):650–657, 2000. MR1764260.

[9] W. Farkas, J. Johnsen, and W. Sickel. Traces of anisotropic besov-lizorkin-triebel spaces - a complete treatment of the borderline cases. *Mathematica Bohemica*, 125:1–37, 2000. MR1752077.

[10] H. Cornean and G. Nenciu. Two dimensional magnetic schrödinger operators. *Annales Henri Poincare*, 1(2):203–222, 2000. MR1770797.

[11] S. Mase, J. Møller, D. Stoyan, R. Waagepetersen, and G. Döge. Packing densities and simulated tempering for hard core gibbs point processes. *Annals of the Institute of Statistical Mathematics.*, 53(4):661–680, 2001. MR1879603.

[12] A. Mira, J. Møller, and G. Roberts. Perfect slice samplers. *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, 63(Part 3):593–606, 2001. MR1858405.

[13] A. Brix and J. Møller. Space-time multi type log gaussian cox processes with a view to modelling weeds. *Scandinavian Journal of Statistics*, 28(3):471–488, 2001. MR1858412.

[14] J. Møller and Ø. Skare. Coloured voronoi tessellations for bayesian image analysis and reservoir modelling. *Statistical Modelling*, 1:213–232, 2001.

[15] M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Electron wavefunctions and densities for atoms. *Annales Henri Poincare*, 2(1):77–100, 2001. MR1823834.

[16] O. Christensen, J. Møller, and R. Waagepetersen. Geometric ergodicity of metropolis-hastings algorithms for conditional simulation in generalized linear mixed models. *Methodology and Computing in Applied Probability*, 3:309–327, 2001. MR1891114.

[17] B. Højgaard and M. Taksar. Optimal risk control for a large corporation in the presence of returns on investments. *Finance and Stochastics*, 5(4):527–547, 2001. MR1862000.

[18] A. Brix and J. Møller. Space-time multi type log gaussian cox processes. *Scandinavian Journal of Statistics*, 28(3):471–488, 2001. MR1858412.

[19] O. Bennedbæk, K. Carlsen, H. Roed, H. Vinding, and S. Lundbye-Christensen. Spædbørn med skrigeture. *Ugeskrift for Laeger*, årg. 163(27):3773–3778, 2001.

[20] M. G. Bertelsen, D. Tustin, and R. Waagepetersen. Effects of ga3 and ga4+7 on early bud development of "pacific rose". *Journal of Horticultural Science and Biotechnology*, 77:83–90, 2002.

[21] O. Geil. A class of Gröbner basis theoretically based evaluation codes. *I E E E Signal Processing Society*, 2002.

[22] É. Goubault and M. Raussen. *Dihomotopy as a tool in state space analysis*, pages 16–37. IEEE Computer Society Press, 2286 edition, 2002. MR1966113.

[23] M. Raussen. Symmetries on manifolds, deformations and rational homotopy: a survey. In *Current trends in transformation groups*, volume 7 of *K-Monogr. Math.*, pages 167–179. Kluwer Acad. Publ., Dordrecht, 2002. MR1941642.

[24] G. Artbazar, A. Jensen, and K. Yajima. The Nelson model with few photons. *Sūrikaisekikenkyūsho Kōkyūroku*, (1255):124–142, 2002. Spectral and scattering theory and related topics (Japanese) (Kyoto, 2001). MR1927170.

[25] M. Hansen, J. Møller, and F. Tøgersen. Bayesian contour detection in a time series of ultrasound images through dynamic deformable template models. *Biostatistics*, 3(2):213–228, 2002.

[26] S. Lauritzen and J. Mortera. Bounding the number of contributors to mixed dna stains. *Forensic Science International*, 130:125–126, 2002.

[27] Z. Tuza and P. Vestergaard. Domination in pertitioned graphs. *Discussiones Mathematicae. Graph Theory*, 22:199–210, 2002. MR1936237.

[28] M. Berthelsen, D. Tustin, and R. Waagepetersen. Effects of ga_3 and ga_{4+7} on early bud development of apple. *Journal of Horticultural Science and Biotechnology*, 77(1):83–90, 2002.

[29] S. Berntsen and S. Møller. Generalized fourier transforms classes. *Integral Transforms and Special Functions*, 13:447–459, 2002. MR1918335.

[30] S. Lauritzen. Graphical models in r. *R News*, 2(3):39, 2002.

[31] S. Berntsen. Inverse acoustic problem of n homogeneous scatterers. *Inverse Problems*, (18):1–7, 2002. MR1910199.

[32] P. Briet and H. Cornean. Locating the spectrum for magnetic schrödinger and dirac operators. *Communications in Partial Differential Equations*, 27(5 & 6):1079–1101, 2002. MR1916557.

[33] M. Hansen and S. Lauritzen. Nonparametric bayes inference for concave distribution functions. *Statistica Neerlandica*, 56(1):110–127, 2002. MR1894231.

[34] M. Nielsen. On convergence of wavelet packet expansions. *Analysis in Theory and Applications*, 18(1):34–50, 2002. MR1911151.

[35] B. Randerath and P. Vestergaard. On well-covered graphs of odd girth 7 or greater. *Discussiones Mathematicae. Graph Theory*, 22:159–172, 2002. MR1936233.

[36] B. Højgaard. Optimal dynamic premium control in non-life insurance. maximizing dividend pay-outs. *Scandinavian Actuarial Journal*, 4:225–245, 2002. MR1934242.

[37] A. Jensen and M. Melgaard. Perturbation of eigenvalues embedded at a threshold. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 132A:163–179, 2002. MR1884476.

[38] C. Dethlefsen. *Markov random field extensions using state space models*, pages 493–501. Oxford University Press, 2003. MR2003193.

[39] O. Geil and T. Høholdt. *On hyperbolic type codes*, page 331. IEEE Signal Processing Society, 2003.

[40] S. Lauritzen. *Rasch models with exchangeable rows and columns*, pages 215–232. Oxford University Press, 2003. MR2003175.

[41] J. Johnsen. *Regularity results and parametrices of semi-linear boundary problems of product type*, pages 353–360. 2003. MR1984183.

[42] L. Jørgensen and M. Klin. Switching of edges in strongly regular graphs. i. a family of partial difference sets on 100 vertices. *Electron. J. Combin.*, 10(1), 2003. MR1975767.

[43] M. Raussen. A second look at normal curvature. *Normat*, 51(2):59–62, 2003.

[44] A. Mira, J. Møller, and G. O. Roberts. Corrigendum: "Perfect slice samplers". *Journal of the Royal Statistical Society. Series B: Statistical Methodology*, 64:581, 2003.

[45] S. Bøttcher and C. Dethlefsen. deal: A package for learning bayesian networks. *Journal of Statistical Software*, 8(20):1–40, 2003.

[46] L. Fajstrup. Dicovering spaces. *Homology, Homotopy and Applications*, 5(2):1–17, 2003. MR1994938.

[47] C. Dethlefsen. gr 2003. *R News*, 3(2):27–28, 2003.

[48] B. Flyvbjerg, M. Holm, and S. Buhl. Kostenunterschätzung bei öffentlichen bauprojekten. *Planungsrundschau : Theorie, Forschung, Praxis*, (8):15–34, 2003.

[49] H. Cornean. Magnetic response in ideal quantum gases: the thermodynamic limit. *Markov Processes and Related Fields*, 9:547–566, 2003. MR2072242.

[50] M. Kouider and P. Vestergaard. On even [2,b]-factors in graphs. *Australasian Journal of Combinatorics*, 27:139–147, 2003. MR1955394.

[51] B. Hartnell and P. Vestergaard. Partitions and domination in a graph. *J C M C C*, 46:113–128, 2003. MR2004843.

[52] S. Lauritzen. Rundt på gulvet med komplekse tal. *Discrete Mathematics*, (14):16–17, 2003.

[53] M. Raussen. State spaces and dipaths up to dihomotopy. *Homology, Homotopy and Applications*, 5(2):257–280, 2003. MR1994946.

[54] M. Bladt, A. Gonzalez, and S. Lauritzen. The estimation of phase-type related functionals using markov chain monte carlo methods. *Scandinavian Actuarial Journal*, (4):280–300, 2003. MR2025352.

[55] B. Flyvbjerg, M. Holm, and S. Buhl. What causes cost overrun in transport infrastructure projects? *Engineering World*, 13(4):33–40, 2003.

[56] R. Gribonval and M. Nielsen. *On the strong uniqueness of highly sparse representations from redundant dictionaries*, pages 201–208. Lecture Notes in Artificial Intelligence. 2004.

[57] H. Andersen and O. Geil. *The missing evaluation codes from order domain theory*, page 78. IEEE Signal Processing Society, 2004.

[58] B. Flyvbjerg, M. Holm, and S. Buhl. *What Causes Cost Overrun in Transport Infrastructure Projects?* Aalborg Universitetsforlag, 2004.

[59] A. Jensen. A fermi golden rule at thresholds. *Oberwolfach Reports*, 1(4):2843–2844, 2004.

[60] P. Vestergaard and M. Kouider. Even [a,b]-factors in graphs. *Discussiones Mathematicae. Graph Theory*, 24:431–441, 2004. MR2120067.

[61] M. Nielsen. Nonseparable walsh-type functions on R^d. *Glasnik Matematicki Series III*, 39(59):111–138, 2004. MR2055390.

[62] I. Beltita and H. Cornean. On a theorem of arne persson. *Cubo*, 6(2):1–14, 2004. MR2092040.

[63] L. Borup. Pseudodifferential operators on alpha-modulation spaces. *Journal of Function Spaces and Applications*, 2(2):107–123, 2004. MR2035296.

[64] A. Galtbayar, A. Jensen, and K. Yajima. Some recent results on schrödinger equations with time-periodic potentials. *Surikaisekikenkyusho Kokyuroku*, (1364):81–88, 2004.

[65] L. Borup, R. Gribonval, and M. Nielsen. Tight wavelet frames in lebesque and sobolev spaces. *Journal of Function Spaces and Applications*, 2(3):227–252, 2004. MR2094588.

[66] U. Fahrenberg. *A category of higher-dimensional automata*, pages 187–201. Lecture Notes in Computer Science. 2005. MR2179116.

[67] K. Andersen and M. Højbjerre. A population-based bayesian approach to the minimal model of glucose and insulin homeostasis. *Statistics in Medicine*, 24(15):2381–2400, 2005. MR2151712.

[68] B. Flyvbjerg, M. Holm, and S. Buhl. Credibility problem for transit. *American Planning Association. Journal*, 71(4):452–452, 2005.

[69] L. Borup, M. Nielsen, and R. Gribonval. Nonlinear approximation with redundant dictionaries. *I E E E International Conference on Acoustics, Speech and Signal Processing. Proceedings*, 1-5:261–264, 2005.

[70] M. Hansen. *Nonparametric estimation of the stationary M/G/1 workload distribution function*, pages 869–877. IEEE Signal Processing Society, 2005.

[71] R. Waagepetersen. Residual analysis for spatial point processes. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 67:662, 2005. MR2210685.

[72] S. Lundbye-Christensen, T. Fischer, S. Johnsen, H. Schoenheyder, and H. Sørensen. *Secular changes in case-fatality and its seasonality in Danish patients with acute myocardial infarction from 1980 to 2002*. 2005.

[73] J. Møller, R. Waagepetersen, V. Benes, and K. Bodlák. A case study on point process modelling in disease mapping. *Image Analysis and Stereology*, 24:1–10, 2005.

[74] J. Johnsen. Domains of pseudo-differential operators. *Journal of Function Spaces and Applications*, 3(3):263–286, 2005. MR2163627.

[75] H. Cornean, P. Briet, and D. Louis. Generalized susceptibilities for a perfect quantum gas. *Markov Processes and Related Fields*, 11:177–188, 2005. MR2150137.

[76] L. Borup and M. Nielsen. Nonlinear approximation with general wave packets. *Analysis in Theory and Applications*, 21(3):201–215, 2005. MR2319189.

[77] J. Møller. Properties of spatial cox process models. *Journal of Statistical Research of Iran*, 2(1):1–18, 2005.

[78] B. Flyvbjerg, M. Holm, and S. Buhl. Sottostima dei costi dei progetti di opere repubblich. *Archivio di Studi Urbani e Regionali*, (82):87–114, 2005.

[79] L. Bjerregaard, I. Aardestrup, R. Bülow, O. Frøbert, C. Dethlefsen, J. Rasmussen, and E. Schmidt. Fish consumption and serum levels of eicosapentaenoic and docosahexaenoic acid are not related to flow-mediated vasolidation, 2006.

[80] O. Geil and C. Thommesen. *On the Feng-Rao bound for generalized hamming weights*, volume 3857, pages 295–306. IEEE Computer Society Press, 2006. MR2243518.

[81] R. Gribonval and M. Nielsen. Sparse approximations in signal and image processing. *Signal Processing*, 86(3):415–416, 2006.

[82] H. Cornean, A. Jensen, and V. Moldoveanu. *The Landauer-Büttiker formula and resonant quantum transport*, volume 690, pages 45–53. Springer, 2006. MR2234902.

[83] L. Knudsen, H. Lervang, S. Lundbye-Christensen, and A. Gorst-Rasmussen. The north jutland county diabetic retinopathy study. population characteristics, 2006.

[84] C. Fu and P. Vestergaard. Distance domination in partitioned graphs. *Congressus Numerantium*, 182:155–159, 2006. MR2311297.

[85] P. Vestergaard and B. Hartnell. Equipackable graphs. *Bulletin of the Institute of Combinatorics and its Applications*, 46:35–48, 2006. MR2196653.

[86] B. Flyvbjerg, M. Holm, and S. Buhl. ¿imprecisión de las previsiones de los proyectos de obras públicas? ámbito del transporte. *Estudios de Construccion y Transportes*, (105):195–214, 2006.

[87] P. Lass, J. Lilholt, L. Thomsen, S. Lundbye-Christensen, H. Enevoldsen, and O. Simonsen. Kvaliteten af diagnose- og procedurekodning i ortopædkirurgi nordjylland. *Ugeskrift for Laeger*, 168(48):4212–4215, 2006.

[88] H. Cornean and K. Knudsen. Reconstruction from one boundary measurement of a potential homogeneous of degree zero. *Journal of Inverse and Ill-Posed Problems*, 13(5):413–423, 2006. MR2188622.

[89] M. Qvist, H.-P. Schwefel, and M. Hansen. *A quantitative decision model for bottleneck link upgrades in packet switched networks*, pages 171–177. European Council for Modelling and Simulation (ECMS), 2007.

[90] H.-P. Schwefel, R. Olsen, and M. Hansen. *Adaptive Caching Strategies for Context Management Systems*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, 2007.

[91] C. Draghici. An inequality of rearrangements on the unit circle. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 137(4):757–769, 2007. MR2345779.

[92] M. Stender, J. Frøkjær, T. Nielsen, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. Combined use of clinical pretest probability and d-dimer test in the diagnosis of preoperative deep venous thrombosis in colorectal cancer patients. *Thrombosis Research*, 120(Suppl.2):S174–S175, No. PO–93, 2007.

[93] J. G. Rasmussen, J. Møller, B. H. Aukema, K. F. Raffa, and J. Zhu. Continuous time modelling of dynamical spatial lattice data observed at sparsely distributed times. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 69(4):701–713, 2007. MR2370076.

[94] O. Geil and R. Matsumoto. *Generalized Sudan's List Decoding for Order Domain Codes*, pages 50–59. Lecture Notes in Computer Science. 2007.

[95] M. Stender, T. Nielsen, J. Frøkjær, T. Larsen, S. Lundbye-Christensen, H. Elbrønd, and O. Thorlacius-Ussing. High preoperative prevalence of deep venous thrombosis in patients with colorectal cancer. *Thrombosis Research*, 120(Suppl.2):S174, No. PO–92, 2007.

[96] H. Cornean, T. Pedersen, and B. Ricaud. *Perturbative vs. variational methods in the study of carbon nanotubes*, volume 447, pages 45–55. American Mathematical Society, 2007. MR2423570.

[97] H. Cornean, T. Pedersen, and B. Ricaud. Ground and excited states in semiconductor carbon nanotubes. *Contemporary Mathematics*, 447:45–55, 2007. MR2423570.

[98] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts: Part 1. *Expressways and Motorways*, 50(10):56–65, 2007.

[99] B. Flyvbjerg, M. Holm, and S. Buhl. Inaccuracy in traffic forecasts: Part 2. *Expressways and Motorways*, 50(11):56–64, 2007.

[100] U. Fahrenberg and M. Raussen. Reparametrizations of continuous paths. *Journal of Homotopy and Related Structures*, 2(2):93–117, 2007. MR2369163.

[101] J. Andreasen, M. Westen, P. Pallesen, S. Jensen, A. Gorst-Rasmussen, and S. Johnsen. Transfusion practice in coronary artery bypass surgeri in denmark: a multicenter audit. *Interactive Cardiovascular and Thoracic Surgery*, (6):623–627, 2007.

[102] N. Agerholm, R. Waagepetersen, N. Tradisauskas, and H. Lahrmann. Intelligent speed adaptation in company vehicles. In *IEEE Intelligent Vehicles Symposium*, pages 546–553, 2008.

[103] P. Vestergaard. A short update on equipackable graphs. *Discrete Mathematics*, (2-3):161–165, 2008. MR2378011.

[104] O. Geil, R. Matsumoto, and C. Thomsen. *On Field Size and Success Probability in Network Coding*, pages 157–173. Lecture Notes in Computer Science. 2008. MR2476726.

[105] A. Jensen and G. Nenciu. *On the Fermi Golden Rule*, pages 91–103. Theta Series in Advanced Mathematics. The Theta Foundation, 2008. MR2433029.

[106] H. Cornean, P. Duclos, and B. Ricaud. *On the skeleton method and an application to a quantum scissor*, volume 77, pages 657–672. American Mathematical Society, 2008. MR2459895.

[107] A. Baddeley, J. Møller, and A. Pakes. Properties of residuals for spatial point processes. *Annals of the Institute of Statistical Mathematics.*, 60(3):627–649, 2008. MR2434415.

[108] J. Møller. Sampling bias and logistic models - discussion¡strong¿ ¡/strong¿. *Royal Statistical Society. Journal. Series B: Statistical Methodology*, 70(4):669, 2008. MR2523898.

[109] L. Fajstrup and J. Rosický. A convenient category for directed homotopy. *Theory and Applications of Categories*, 21(1):7–20, 2008. MR2425555.

[110] P. Wogelius, G. Dahllöf, A. Gorst-Rasmussen, H. Sørensen, S. Rosthøj, and S. Poulsen. A population-based observational study of dental caries among survivors of childhood cancer. *Pediatric Blood & Cancer*, 50(6):1221–1226, 2008.

[111] L. Jørgensen. Algorithmic approach to non-symmetric 3-class association schemes. In *Algorithmic Algebraic Combinatorics and Gröbner Bases*, volume XII, pages 251–268. Springer, 2009. MR2605575.

[112] A. Jensen and G. Nenciu. *Exponential decay laws in perturbation theory of threshold and embedded eigenvalues*, pages 525–538. Springer, 2009.

[113] J. Møller and J. Rasmussen. *Modelling point patterns with linear structures*, pages 273–278. The MIRIAM Project Series (Milan Research Centre for Industrial and Applied Mathematics). 2009.

[114] M. Lomholt Jakobsen, R. Olsen, and J. Rasmussen. *Online estimation of context dynamics and its impact on context sensitive applications*, pages 921–925. IEEE, 2009.

[115] L. Andersen and C. Rodger. Special issue: Graphs and designs in honour of anthony hilton preface. *Discrete Mathematics*, 309(14):4661–4662, 2009. MR2533125.

[116] M. Nielsen. Trigonometric quasi-greedy bases for $L_p(t;w)$. *Rocky Mountain Journal of Mathematics*, 39(4):1267–1278, 2009. MR2524713.

[117] J. Johnsen. *Type 1,1-operators defined by vanishing frequency modulation*, pages 201–246. Operator Theory – Advances and Applications. 2009. MR2509099.

[118] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. Analytic structure of solutions to multiconfiguration equations. *Journal of Physics A: Mathematical and Theoretical*, 42(31), 2009. MR2521310.

[119] M. Svensson, A. Gorst-Rasmussen, E. Schmidt, A. Jorgensen, and J. Christensen. Nt-pro-bnp is an independent predictor of mortality in patients with end-stage renal disease. *Clinical Nephrology*, 71:380–386, 2009.

[120] T. Tvedebrink. Overdispersion in allelic counts and θ-correction in forensic genetics. *Forensic Science International*, 2(1):455–457, 2009.

[121] M. Raussen. Reparametrizations with given stop data. *Journal of Homotopy and Related Structures*, 4(1):1–5, 2009. MR2481616.

[122] O. Simonsen, M. Vuust, B. Understrup, M. Højbjerre, S. Bøttcher, and M. Voigt. The transverse forefoot arch demonstrated by a novel x-ray projection. *Foot and Ankle Surgery*, 15(1):7–13, 2009.

[123] R. Waagepetersen. A statistical modeling approach to build expert credit risk rating systems. *Journal of Credit Risk*, 6:81–94, 2010.

[124] R. Olsen, J. Figueiras, J. Rasmussen, and H.-P. Schwefel. How precise should localization be? a quantitative analysis of the impact of the delay and mobility on reliability of location information. *Globecom. I E E E Global Telecommunications Conference*, 2010, 2010.

[125] A. Frendrup, B. Hartnell, and P. Vestergaard. A note on equimatchable graphs. *Australasian Journal of Combinatorics*, 46:185–190, 2010. MR2598703.

[126] R. Waagepetersen. A statistical modeling approach to build expert credit risk rating systems. *Journal of Credit Risk*, 6(2):81–94, 2010.

[127] T. Aabo, E. Høg, and J. Kuhn. Integrated foreign exchange risk management. *Journal of Multinational Financial Management*, 20(4-5):235–250, 2010.

[128] J. Stamhus, S. Scheuer, and S. Christensen. Tre strejker i det offentlige - en komparativ lønmodtager-investeringsanalyse. *Nationaloekonomisk Tidsskrift*, 147(3):360–374, 2010.

5.4 Other publications, 1999-2010

[1] O. Geil. Codes from order domains. *I E E E Signal Processing Society*, page 308, 2001.

[2] O. Geil and T. Høholdt. On hyperbolic codes. *Lecture Notes in Computer Science, LNCS 2227*, 2001.

[3] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. *On the regularity of the desity of electronic wavefunctions*. American Mathematical Society, 307 edition, 2002. MR1946025.

[4] M. Højbjerre. *Markov chain Monte Carlo methods in directed graphical models*. PhD thesis, 2002.

[5] O. Christensen. *Methodology and Applications in Non-linear Model-based Geostatistics*. PhD thesis, 2002.

[6] K. Knudsen. *On the inverse conductivity problem*. PhD thesis, 2002.

[7] C. Dethlefsen. *Space time problems and applications*. PhD thesis, 2002.

[8] K. Andersen. *Statistical perspectives on inverse problems*. PhD thesis, 2002.

[9] L. Borup. *Wavelet-type Expansions*. PhD thesis, 2002.

[10] F. Tøgersen. *Applications of spatial statistics in image analysis and agricultural sciences*. PhD thesis, 2003.

[11] K. Berthelsen. *Computer intensive methods and spatial statistics*. PhD thesis, 2003.

[12] S. Møller. *Reconstruction methods for inverse problems*. PhD thesis, 2003.

[13] J. Møller and R. P. Waagepetersen. *Statistical inference and simulation for spatial point processes*, volume 100 of *Monographs on Statistics and Applied Probability*. Chapman and Hall/CRC, Boca Raton, FL, 2004. MR2004226.

[14] U. Fahrenberg. *Directed homology*, pages 111–125. 2004.

[15] R. Gribonval and M. Nielsen. *On the strong uniqueness of highly sparse representations from redundant dictionaries*, pages 201–208. Lecture Notes in Artificial Intelligence. 2004.

[16] L. Borup, M. Nielsen, and R. Gribonval. Nonlinear approximation with redundant dictionaries. *I E E E International Conference on Acoustics, Speech and Signal Processing. Proceedings*, 1-5:261–264, 2005.

[17] U. Fahrenberg. *A category of higher-dimensional automata*, pages 187–201. Lecture Notes in Computer Science. 2005. MR2179116.

[18] T. Madsen, H.-P. Schwefel, R. Prasad, J. Bøgh, and M. Hansen. *On traffic modelling in GPRS networks*. 2005.

[19] H. Schiøler, M. Hansen, and H.-P. Schwefel. *Probabilistic Modelling of Information Propagation in Wireless Mobile Ad-Hoc Network*. Center for TeleInFrastruktur (CTIF), Aalborg Universitet, 2005.

[20] S. Lundbye-Christensen, T. Fischer, S. Johnsen, H. Schoenheyder, and H. Sørensen. *Secular changes in case-fatality and its seasonality in Danish patients with acute myocardial infarction from 1980 to 2002*. 2005.

[21] C. Dethlefsen and S. Højsgaard. *The gRbase package for graphical modelling in R*, pages 2468–2474. American Statistical Association, 2005.

[22] H. Andersen. *Codes from order domains*. PhD thesis, 2005.

[23] R. Wisniewski. *Flow Lines Under Perturbation within Section Cones*. PhD thesis, 2005.

[24] S. Bøttcher. *Learning Bayesian Networks with Mixed Variables*. PhD thesis, 2005.

[25] R. Waagepetersen. *Estimating functions for inhomogeneous Cox processes*, pages 149–158. Union of Czech Mathematicians and Physicsts, 2006.

[26] R. Olsen, H.-P. Schwefel, and M. Hansen. *Quantitative analysis of access strategies to remote information in network services*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, 2006.

[27] R. Olsen, H.-P. Schwefel, and M. Hansen. *Quantitative analysis of access strategies to remoteinformation in network services*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, 2006.

[28] R. Waagepetersen, N. Ibánez, and D. Sorensen. *Strategies for MCMC computation in quantitative genetics*. SBMA, Sociedade Brasileira de Melhoramento Animal, 2006.

[29] H. Schiøler, M. Hansen, and H.-P. Schwefel. *Time based node localization in multi hop wireless sensor networks*, pages 394–400. International Society of Computers and Their Applications, 2006.

[30] C. Draghici. An inequality of rearrangements on the unit circle. *Royal Society of Edinburgh. Proceedings. Section A (Mathematics)*, 137(4):757–769, 2007. MR2345779.

[31] M. Qvist, M. Hansen, and H.-P. Schwefel. *A Quantitative Decision model for Bandwidth Upgrades in IP Networks*. 2007.

[32] M. Qvist, H.-P. Schwefel, and M. Hansen. *A quantitative decision model for bottleneck link upgrades in packet switched networks*, pages 171–177. European Council for Modelling and Simulation (ECMS), 2007.

[33] H.-P. Schwefel, R. Olsen, and M. Hansen. *Adaptive Caching Strategies for Context Management Systems*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, 2007.

[34] J. Rasmussen. *Aspects of temporal and spatio-temporal processes*. PhD thesis, 2007.

[35] J.-J. Leth. *Morse-Smale Functions and the Space of Height-parameterized Flow Lines*. PhD thesis, 2007.

[36] P. Vestergaard. A short update on equipackable graphs. *Discrete Mathematics*, (2-3):161–165, 2008. MR2378011.

[37] T. Tvedebrink, P. Eriksen, H. Mogensen, and N. Morling. Amplification of dna mixtures - missing data approach. *Forensic Science International: Genetics*, (1):664–666, 2008.

[38] N. Agerholm, N. Tradisauskas, R. Waagepetersen, and H. Lahrmann. *Intelligent Speed Adaptation in Company Vehicles*, pages 936–943. IEEE, 2008.

[39] L. Skipper, A. Brauer, S. Lundbye-Christensen, H. Schønheyder, and O. Hejlesen. *LabGuard*, pages 53–57. Högskolan i Kalmar. eHälsoinstitutet, 2008.

[40] S. Fournais, M. Hoffmann-Ostenhof, T. Hoffmann-Ostenhof, and T. Sørensen. *Local and global properties of eigenfunctions and one-electron densities of Coulombic Schrödinger operators*, volume 998, pages 70–84. American Institute of Physics, 2008.

[41] A. Jensen and G. Nenciu. *On the Fermi Golden Rule*, pages 91–103. Theta Series in Advanced Mathematics. The Theta Foundation, 2008. MR2433029.

[42] H. Cornean, P. Duclos, and B. Ricaud. *On the skeleton method and an application to a quantum scissor*, volume 77, pages 657–672. American Mathematical Society, 2008. MR2459895.

[43] M. Raussen. *Trace spaces: Organization, Calculation, Applications*, volume 5, pages 1644–1645. European Mathematical Society, 3 edition, 2008.

[44] P. Chen, Z. Chen, B. Bak-Jensen, R. Waagepetersen, and S. Sörensen. *Verification of a Probabilistic Model for A Distribution System with Integration of Dispersed Generation*, page 7. University of Strathclyde, 2008.

[45] A. Frendrup. *Aspects of Domination Theory*. PhD thesis, 2008.

[46] M. Nielsen. *Aspects of nonlinear approximation with dictionaries*. Department of Mathematical Sciences, Aalborg University, 2009.

[47] O. Hamouda, M. Kaaniche, E. Møller, J. Rasmussen, and H.-P. Schwefel. *Connectivity dynamics in vehicular freeway scenario*, pages 1–8. 2009.

[48] A. Jensen and G. Nenciu. *Exponential decay laws in perturbation theory of threshold and embedded eigenvalues*, pages 525–538. Springer, 2009.

[49] E. Høg and L. Tsiaras. *Forecasting value-at-risk for crude-oil*, pages 218–227. Danmarks Statistik, 2009.

[50] P. Chen, K. Berthelsen, B. Bak-Jensen, and Z. Chen. *Markov Model of Wind Power Time Series UsingBayesian Inference of Transition Matrix*, pages 624–629. IEEE, 2009.

[51] K. Helisova and J. Møller. *Model for random union of interecting discs*, pages 437–441. The MIRIAM project series (Milan Research Centre for Industrial Applied Mathematics). Esculapio Pub. Co., Bologna, Italy, 2009.

[52] J. Møller and J. Rasmussen. *Modelling point patterns with linear structures*, pages 273–278. The MIRIAM Project Series (Milan Research Centre for Industrial and Applied Mathematics). 2009.

[53] M. Lomholt Jakobsen, R. Olsen, and J. Rasmussen. *Online estimation of context dynamics and its impact on context sensitive applications*, pages 921–925. IEEE, 2009.

[54] J. Møller and K. Helisova. *Simulation of random set models for unions of discs and the use of power tessellations*, pages 99–108. 2009.

[55] J. Johnsen. *Type 1,1-operators defined by vanishing frequency modulation*, pages 201–246. Operator Theory – Advances and Applications. 2009. MR2509099.

[56] A. Jensen and A. la Cour-Harbo. Wavelets and the lifting scheme. In R. A. Meyers and E. Aboufadel, editors, *Encyclopedia of Complexity and Systems Science*. Springer, 2009.

[57] R. Olsen, J. Figueiras, J. Rasmussen, and H.-P. Schwefel. How precise should localization be? a quantitative analysis of the impact of the delay and mobility on reliability of location information. *Globecom. I E E E Global Telecommunications Conference*, 2010, 2010.

[58] V. Rohokale, N. Kulkarni, N. Prasad, and H. Cornean. *Cooperative Opportunistic Large Array Approach for Cognitive Radio Networks*, page 513. IEEE Press, 2010.

[59] K. Patil, M. Deshmukh, and H. Cornean. *CTMC based spectrum sharing scheme for cognitive radio networks*, pages 509–512. IEEE Press, 2010.

[60] E. Høg and L. Tsiaras. *Forecasting the distribution of oil prices using option-implied and ARCH-type models*, pages 303–320. Danmarks Statistik, 2010.

[61] E. Rubak. *Likelihood Based Inference and Diagnostics for Spatial Data Models*. PhD thesis, 2010.

[62] T. Tvedebrink. *Statistical aspects of forensic genetics*. PhD thesis, 2010.