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## Employment

### Associate Professor

Associate Professor  
Department of Health Science and Technology  
The Faculty of Medicine  
Gistrup, Denmark  
15 Aug 2009 → 31 Dec 4712

### Associate Professor

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The Faculty of Medicine  
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### Respiratory and Critical Care

The Faculty of Medicine  
Gistrup, Denmark  
1 Jan 2020 → present

### Associate Professor

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### AI for the People

The Technical Faculty of IT and Design  
Aalborg, Denmark  
1 Nov 2019 → present

### Board member

Aw Technologies ApS  
Nørresundby, Denmark

## Research outputs

### Evaluation of a New Device for Clearing Secretions From Lower Airways

Vivona, L., Madotto, F., Carlesso, E., Florio, G., Rees, S. E., Karbing, D. S., Sodi, F., Zainaghi, I., Rossi, V., Panigada, M., Zanella, A. & Grasselli, G., 28 Apr 2025, (E-pub ahead of print) In: Respiratory Care.

**Metabolic cost of physical rehabilitation in mechanically ventilated patients in critical care: an observational study**  
Jenkins, T. O., Karbing, D. S., Rees, S. E., Poulsen, M. K., Patel, B. V., Polkey, M. I. & MacBean, V., 5 Apr 2025, In: *BMJ open respiratory research*. 12, 1, e002878.

**Evaluation of decision support to wean patients from mechanical ventilation in intensive care: a prospective study reporting clinical and physiological outcomes**  
Vizcaychipi, M. P., Karbing, D. S., Martins, L., Gupta, A., Moreno-Cuesta, J., Naik, M., Welters, I., Singh, S., Randell, G., Osman, L. & Rees, S. E., Apr 2025, In: *Journal of Clinical Monitoring and Computing*. 39, 2, p. 393-404 12 p., e042145.

**Accelerometer-based estimation of respiratory rate using principal component analysis and autocorrelation**  
Hostrup, M. C. F., Nielsen, A. S., Sørensen, F. E., Kragballe, J. O., Østergaard, M. U., Korsgaard, E., Schmidt, S. E. & Karbing, D. S., 31 Mar 2025, In: *Physiological Measurement*. 46, 3, 035005.

**A randomized control trial evaluating the advice of a physiological-model/digital twin-based decision support system on mechanical ventilation in patients with acute respiratory distress syndrome**  
Patel, B. V., Mumby, S., Johnson, N., Handslip, R., Patel, S., Lee, T., Andersen, M. S., Falaschetti, E., Adcock, I. M., McAuley, D. F., Takata, M., Staudinger, T., Karbing, D. S., Jabaudon, M., Schellongowski, P., Rees, S. E. & DeVENT study group, 30 Oct 2024, In: *Frontiers in Medicine*. 11, 1473629.

**Intraoperative Ventilation/Perfusion Mismatch and Postoperative Pulmonary Complications after Major non-cardiac surgery: a prospective cohort study**  
Scaramuzzo, G., Stieper Karbing, D., Ball, L., Vigolo, F., Frizziero, M., Scomparin, F., Ragazzi, R., Verri, M., Rees, S. E., Volta, C. A. & Spadaro, S., 1 Oct 2024, In: *Anesthesiology*. 141, 4, p. 693-706 14 p.

**A Prospective, Longitudinal Study Evaluating the Efficacy of an Automated Secretion Removal Technology**  
Sinnige, J. S., Karbing, D. S., Valk, C. M. A., Schultz, M. J., Rees, S. E. & Paulus, F., 1 Aug 2024, In: *Respiratory Care*. 69, 8, p. 931-936 6 p.

**Clinical practice, decision-making, and use of clinical decision support systems in invasive mechanical ventilation: a narrative review**  
Murali, M., Ni, M., Karbing, D. S., Rees, S. E., Komorowski, M., Marshall, D., Ramnarayan, P. & Patel, B. V., Jul 2024, In: *British Journal of Anaesthesia*. 133, 1, p. 164-177 14 p.

**Hypoxia in the pulmonary vein increases pulmonary vascular resistance independently of oxygen in the pulmonary artery**  
Magnusdottir, S. O., Simonsen, C., Karbing, D. S., Rasmussen, B. S. & Kjaergaard, B., Apr 2024, In: *Animal models and experimental medicine*. 7, 2, p. 156-165 10 p.

**Four Different Models for Simulation-based Training of Bronchoscopic Procedures**  
Kronborg, S. H., Arshad, A., Karbing, D. S. & Lundgaard, A. C., 20 Jan 2024.

**Four different models for simulation-based training of bronchoscopic procedures**  
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**Efficacy of an automated secretion removal technology at different inspiratory pressures**  
Nielsen, A. H., Karbing, D. S., Sølling, C. G., Winding, R. R., Rees, S. E. & Dey, N., Nov 2023, In: *Respiratory Care*. 68, 11, p. 1502-1509 8 p.

**Effect of expiratory flow limitation on ventilation/perfusion mismatch and perioperative lung function during pneumoperitoneum and Trendelenburg position**  
Fognanolo, A., Spadaro, S., Karbing, D. S., Scaramuzzo, G., Mari, M., Guirriani, S., Ragazzi, R., Al-Husinat, L., Greco, P., Rees, S. E. & Volta, C. A., Sept 2023, In: *Minerva Anestesiologica*. 89, 9, p. 733-743 11 p.

**The metabolic cost of inspiratory muscle training in mechanically ventilated patients in critical care**  
Jenkins, T. O., MacBean, V., Poulsen, M. K., Karbing, D. S., Rees, S. E., Patel, B. V. & Polkey, M. I., 7 Jul 2023, In: *Intensive Care Medicine Experimental*. 11, 1, 41.

**Inspiratory pressure waveform influences time to failure, respiratory muscle fatigue, and metabolism during resistive breathing**

Poulsen, M. K., Rees, S. E., Hansen, J., Stevenson, A. J. T., Kjærgaard, S. C., Volta, C. A., Spadaro, S. & Karbing, D. S., 5 May 2023, In: *Physiological Reports*. 11, 9, e15668.

**Heterogeneity of Ventilation/Perfusion Mismatch at Different Levels of PEEP and in Respiratory Mechanics Phenotypes of COVID-19 ARDS**

Scaramuzzo, G., Karbing, D. S., Fogagnolo, A., Mauri, T., Spinelli, E., Mari, M., Turrini, C., Montanaro, F., Volta, C. A., Rees, S. E. & Spadaro, S., 1 Feb 2023, In: *Respiratory Care*. 68, 2, p. 188-198 11 p.

**Computer clinical decision support that automates personalized clinical care: a challenging but needed healthcare delivery strategy**

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**In Vivo Evaluation of a New Endotracheal Tube Cuff Controller Promoting Tracheal Secretion Clearance: Preliminary Results**

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**Inspiratory pressure pattern affects respiratory muscle fatigue during resistive breathing**

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**What is new in respiratory monitoring?**

Karbing, D. S., Leonhardt, S., Perchiazzi, G. & Bates, J. H. T., Jun 2022, In: *Journal of Clinical Monitoring and Computing*. 36, 3, p. 599-607 9 p.

**Appropriate ventilator settings for the TrachFlush automated tracheal secretion removal technology: preliminary results**

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**Efficacy and safety of TrachFlush artificial cough maneuver for fluid removal in simulated breathing**

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**Transparent decision support for mechanical ventilation using visualization of clinical preferences**

Rees, S. E., Spadaro, S., Dalla Corte, F., Dey, N., Brohus, J. B., Scaramuzzo, G., Lodahl, D., Winding, R. R., Volta, C. A. & Karbing, D. S., 24 Jan 2022, In: *BioMedical Engineering Online*. 21, 1, 5.

**Decision support system to evaluate ventilation in the acute respiratory distress syndrome (DeVENT study)—trial protocol**

Patel, B., Mumby, S., Johnson, N., Falaschetti, E., Hansen, J., Adcock, I., McAuley, D., Takata, M., Karbing, D. S., Jabaudon, M., Schellengowski, P., Rees, S. E. & DeVENT study group, 17 Jan 2022, In: *Trials*. 23, 1, 47.

**A Chest-Mounted Accelerometer for Estimation of Cardiorespiratory Fitness**

Schmidt, S. E., Hansen, M. T., Sørensen, K., Rømer, T., Gliemann, L., Karbing, D. S., Poulsen, M. K., Helge, J. W. & Søgaard, P., 2022, In: *Cardiovascular Digital Health Journal*. 3, 4, Suppl., p. S21-S22

### **Effects of oxygen availability on microvascular responsiveness in human tibialis anterior muscle**

Franch, J., Thomsen, L. P., Rokkedal-Lausch, T., Poulsen, M. K., Karbing, D. S. & Larsen, R. G., 2022, In: Acta Physiologica. 236, Suppl. 725, p. 89-90

### **Analyse af relativ alderseffekt i dansk børnefodbold (U3-U12) Anno 2020**

Raaby, K., Karbing, D. S. & Rossing, N. N., 15 Nov 2021, 20 p.

### **Enabling a learning healthcare system with automated computer protocols that produce replicable and personalized clinician actions**

Morris, A. H., Stagg, B., Lanspa, M., Orme, J., Clemmer, T. P., Weaver, L. K., Thomas, F., Grissom, C. K., Hirshberg, E., East, T. D., Wallace, C. J., Young, M. P., Sittig, D. F., Pesenti, A., Bombino, M., Beck, E., Sward, K. A., Weir, C., Phansalkar, S. S. & Bernard, G. R. & 48 others, Taylor Thompson, B., Brower, R., Truwit, J. D., Steingrub, J., Duncan Hite, R., Willson, D. F., Zimmerman, J. J., Nadkarni, V. M., Randolph, A., Curley, M. A. Q., Newth, C. J. L., Lacroix, J., Agus, M. S. D., Lee, K. H., deBoisblanc, B. P., Scott Evans, R., Sorenson, D. K., Wong, A., Boland, M. V., Grainger, D. W., Dere, W. H., Crandall, A. S., Facelli, J. C., Huff, S. M., Haug, P. J., Pielmeier, U., Rees, S. E., Karbing, D. S., Andreassen, S., Fan, E., Goldring, R., I Berger, K., W Oppenheimer, B., Ely, E. W., Gajic, O., Pickering, B., A Schoenfeld, D., Tocino, I., S Gonnering, R., J Pronovost, P., A Savitz, L., Dreyfuss, D., S Slutsky, A., D Crapo, J., Angus, D., R Pinsky, M., James, B. & Berwick, D., 12 Jun 2021, In: Journal of the American Medical Informatics Association. 28, 6, p. 1330-1344 15 p.

### **Multiple-day high-dose beetroot juice supplementation does not improve pulmonary or muscle deoxygenation kinetics of well-trained cyclists in normoxia and hypoxia**

Rokkedal-Lausch, T., Franch, J., Poulsen, M. K., Thomsen, L. P., Weitzberg, E., Kamavuako, E. N., Karbing, D. S. & Larsen, R. G., 1 Jun 2021, In: Nitric Oxide: Biology and Chemistry. 111-112, p. 37-44 8 p.

### **Physiological effects of two driving pressure-based methods to set positive end-expiratory pressure during one lung ventilation**

Spadaro, S., Grasso, S., Karbing, D. S., Santoro, G., Cavallesco, G., Maniscalco, P., Murgolo, F., Di Mussi, R., Ragazzi, R., Rees, S. E., Volta, C. A. & Fogagnolo, A., 2021, In: Journal of Clinical Monitoring and Computing. 35, 5, p. 1149-1157

### **Intensive Care Weaning (iCareWean) protocol on weaning from mechanical ventilation: a single-blinded multicentre randomised control trial comparing an open-loop decision support system and routine care, in the general intensive care unit**

Vizcaychipi, M. P., Martins, L., White, J. R., Karbing, D. S., Gupta, A., Singh, S., Osman, L., Moreno-Cuesta, J. & Rees, S., 2 Sept 2020, In: BMJ Open. 10, 9, 9 p., e042145.

### **A Clinical Method for Estimation of VO<sub>2</sub>max Using Seismocardiography**

Sørensen, K., Poulsen, M. K., Karbing, D. S., Søgaard, P., Struijk, J. J. & Schmidt, S. E., Sept 2020, In: International Journal of Sports Medicine. 41, 10, p. 661-668 8 p.

### **Oxygen: Uptake and Transport in Blood**

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### **Journal of Clinical Monitoring and Computing 2018-2019 end of year summary: respiration**

Karbing, D. S., Perchiazzi, G., Rees, S. E. & Jaffe, M. B., Apr 2020, In: Journal of Clinical Monitoring and Computing. 34, 2, p. 197-205 9 p.

### **Changes in shunt, ventilation/perfusion mismatch, and lung aeration with PEEP in patients with ARDS: a prospective single-arm interventional study**

Karbing, D. S., Panigada, M., Bottino, N., Spinelli, E., Protti, A., Rees, S. E. & Gattinoni, L., 23 Mar 2020, In: Critical Care (Online Edition). 24, 1, 111.

### **Medicin og kunstig intelligens: Glem ikke det, vi allerede ved**

Karbing, D. S., Pielmeier, U. S., Thomsen, L. P., Andreassen, S. & Rees, S. E., Feb 2020, In: Medicoteknik. 7, p. 20-22

**A novel non-exercise method for estimation of cardiorespiratory fitness using a chest mounted accelerometer**  
Schmidt, S. E., Sørensen, K., Poulsen, M. K., Karbing, D. S., Søgaard, P. & Struijk, J. J., 2020.

**Reliability of, and Agreement Between, two Breath-by-Breath Indirect Calorimeters at Varying Levels of Inspiratory Oxygen**

Poulsen, M. K., Thomsen, L. P., Kjærgaard, S., Rees, S. E. & Karbing, D. S., Oct 2019, In: *Nutrition in Clinical Practice*. 34, 5, p. 767-774 8 p.

**Effect of intravenous morphine bolus on respiratory drive in ICU patients**

Dey, N., Thomsen, L. P., Larraza, S., Winding, R., Rees, S. E. & Karbing, D. S., 28 Sept 2019, In: *Intensive Care Medicine Experimental*. 7, Suppl. 3, p. 171 1 p., 725.

**Where do elite youth football players come from?**

Rossing, N. N., Skrubbeltang, L. S., Pedersen, M. Z. B. & Karbing, D. S., 25 Jun 2019, In: *Dansk Sportsmedicin*. 7 p.

**A Pilot Bench Study of Decision Support for Proportional Assist Ventilation**

Karbing, D. S., Lobo-Valbuena, B., Poulsen, M. K., Bredal Brohus, J., Abella, A., Gordo, F. & Rees, S. E., 23 Jun 2019, *2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*. IEEE (Institute of Electrical and Electronics Engineers), 5 p. 8856557. (I E E E Engineering in Medicine and Biology Society. Conference Proceedings).

**Chronic high-dose beetroot juice supplementation improves time trial performance of well-trained cyclists in normoxia and hypoxia**

Rokkedal-Lausch, T., Franch, J., Poulsen, M. K., Thomsen, L. P., Weitzberg, E., Kamavuako, E. N., Karbing, D. S. & Larsen, R. G., 1 Apr 2019, In: *Nitric Oxide: Biology and Chemistry*. 85, p. 44-52 9 p.

**Correlation Between Valve Event Amplitudes in the Seismocardiogram and VO<sub>2</sub>-max**

Sørensen, K., Poulsen, M. K., Karbing, D. S., Søgaard, P., Struijk, J. J. & Schmidt, S. E., 2019.

**Effekten af rødbedesaft på enkeltstartspræstationen hos veltrænede cykelryttere – når de udsættes for lav iltfraktion i indåndingsluften**

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**Metabolic measures and esophageal measured tension time index in patients successfully passing a SBT**

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**Model-based decision support for support mode mechanical ventilation**

Karbing, D. S., 2019. 1 p.

**The Beacon Caresystem: A system providing advice for mechanical ventilation**

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**An investigation of Danish male youth football – is something rotten in the state of Denmark?**

Ryom, K., Rossing, N. N., Flattum, A. & Karbing, D. S., 1 Sept 2018, In: *Journal of Physical Education and Sport*. 18, 3, p. 1439-1444 6 p.

**Relative age effect and the re-selection of Danish male handball players for national teams**

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**Journal of Clinical Monitoring and Computing 2017 end of year summary: respiration**

Karbing, D. S., Perchiuzzi, G., Rees, S. E. & Jaffe, M. B., Apr 2018, In: Journal of Clinical Monitoring and Computing. 32, 2, p. 197-205 9 p.

**Influence of population size, density, and proximity to talent clubs on the likelihood of becoming elite youth athlete**

Rossing, N. N., Stentoft, D., Flattum, A., Côté, J. & Karbing, D. S., Mar 2018, In: Scandinavian Journal of Medicine & Science in Sports. 28, 3, p. 1304–1313 10 p.

**An open-loop, physiological model based decision support system can reduce pressure support while acting to preserve respiratory muscle function**

Spadaro, S., Karbing, D. S., Dalla Corte, F., Mauri, T., Moro, F., Gioia, A., Volta, C. A. & Rees, S. E., 2018, In: Journal of Critical Care. 48, p. 407-413 7 p.

**An open-loop, physiologic model-based decision support system can provide appropriate ventilator settings**

Karbing, D. S., Spadaro, S., Dey, N., Ragazzi, R., Marangoni, E., Dalla Corte, F., Moro, F., Lodahl, D., Hansen, N. S., Winding, R., Rees, S. E. & Volta, C. A., 2018, In: Critical Care Medicine. 46, 7, p. e642–e648

**Comparison of breathing effort estimates in pressure support mechanical ventilation**

Karbing, D. S., Spadaro, S., Dalla Corte, F., Poulsen, M. K., Rees, S. E. & Volta, C. A., 2018, p. 1.

**Muscle blood oxygen level dependent (bold) responses to brief contraction and cuff occlusion: effects of hypoxia and hyperoxia**

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**Physiologic evaluation of ventilation perfusion mismatch and respiratory mechanics at different positive end-expiratory pressure in patients undergoing protective one-lung ventilation**

Spadaro, S., Grasso, S., Karbing, D. S., Fogagnolo, A., Contoli, M., Bollini, G., Ragazzi, R., Cinnella, G., Verri, M., Cavallesco, N. G., Rees, S. E. & Carlo, V. A., 2018, In: Anesthesiology. 128, 3, p. 531–538 8 p.

**Beacon Caresystem: et samarbejde mellem virksomhed og universitet**

Rees, S. E. & Karbing, D. S., 2017, In: Medicoteknik. 4, 5, p. 6-8

**Determining the appropriate model complexity for patient-specific advice on mechanical ventilation**

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**Effects of beetroot juice supplementation and hypoxia on time trial performance in well-trained cyclists**

Lausch, T. R., Larsen, R. G., Poulsen, M. K., Karbing, D. S., Thomsen, L. P. & Franch, J., 2017, In: Medicine and Science in Sports and Exercise. 49, 5S, p. 566 2062.

**Identification of dynamic hyperinflation using a combination of expiratory flow and respiratory carbon dioxide signals**

Rees, S. E. (Inventor), Larraza Rico, S. (Inventor) & Karbing, D. S. (Inventor), 2017, IPC No. A61B 5/083 (2006.01), A61B 5/087 (2006.01), A61B 5/00 (2006.01), A61M 16/00 (2006.01), Patent No. WO/2017/000961, 5 Jan 2017

**Journal of Clinical Monitoring and Computing 2016 end of year summary: respiration**

Karbing, D. S., Rees, S. E. & Jaffe, M. B., 2017, In: Journal of Clinical Monitoring and Computing. 31, 2, p. 247-252

**Simulation training for residents focused on mechanical ventilation: A randomized trial using mannequin-based versus computer-based simulation**

Spadaro, S., Karbing, D. S., Fogagnolo, A., Ragazzi, R., Mojoli, F., Astolfi, L., Gioia, A., Marangoni, E., Rees, S. E. & Carlo, V. A., 2017, In: Simulation in Healthcare. 12, 6, p. 349-355

**The relation between proximity to talent clubs and talent development in Danish handball and football**

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**Typical patterns of expiratory flow and carbon dioxide in mechanically ventilated patients with spontaneous breathing**  
Rees, S. E., Larraza Rico, S., Dey, N., Spadaro, S., Brohus, J. B., Winding, R. W., Volta, C. A. & Karbing, D. S., 2017, In: *Journal of Clinical Monitoring and Computing*. 31, 4, p. 773-781

**Variation of pulmonary shunt at different levels of positive end-expiratory pressure in patients undergoing one-lung ventilation**

Savino, S., Fogagnolo, A., Fanni, A., Karbing, D. S., Rees, S. E. & Volta, C. A., 2017, In: *European Journal of Anaesthesiology*. 34, e-Suppl. 55, p. 191 07AP07-1.

**A mechanical ventilation system for respiration with decision support**

Karbing, D. S. (Inventor), Rees, S. E. (Inventor) & Jensen, J. B. (Inventor), 2016, IPC No. G06F 19/00 (2011.01) , A61B 5/08 (2006.01), A61M 16/00 (2006.01), Patent No. WO2016037627 (A1), 17 Mar 2016, Priority date 11 Sept 2015, Priority No. PCT/DK2015/050271

**Comparison of two indirect calorimetry devices at varying levels of inspired oxygen**

Poulsen, M. K., Thomsen, L. P., Kjærgaard, S., Rees, S. E. & Karbing, D. S., 2016, In: *Intensive Care Medicine Experimental*. 4, Suppl. 1, Part Two, p. 258-259 A497.

**Effect of positive end-expiratory pressure on pulmonary shunt and dynamic compliance during abdominal surgery**

Spadaro, S., Karbing, D. S., Mauri, T., Marangoni, E., Mojoli, F., Valpiani, G., Carrieri, C., Ragazzi, R., Verri, M., Rees, S. E. & Volta, C. A., 2016, In: *British Journal of Anaesthesia*. 116, 6, p. 855-861

**Inspiratory muscle function following pressure support advice by a decision support system from states of over- and under-support**

Spadaro, S., Karbing, D. S., Gioia, A., Moro, F., Dalla Corte, F., Mauri, T., Volta, C. A. & Rees, S. E., 2016, In: *Intensive Care Medicine Experimental*. 4, Suppl. 1, Part Three, p. 598 A1170.

**Intelligent medical monitoring of a patient**

Rees, S. E. (Inventor) & Karbing, D. S. (Inventor), 2016, IPC No. G06F 19/00, A61B 5/00, A61B 5/08, A61B 5/145, Patent No. US2016/0357926, 8 Dec 2016, Priority date 5 Dec 2014, Priority No. PCTDK2014050414

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Karbing, D. S., Rees, S. E. & Jaffe, M. B., 2016, In: *Journal of Clinical Monitoring and Computing*. 30, 1, p. 7-12

**Systems and method for identifying the need for measurement of cardiac output**

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**The role of community in the development of elite handball and football players in Denmark**

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**A mathematical model approach quantifying patients' response to changes in mechanical ventilation: evaluation in pressure support**

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**It is your teammates not your schoolmates that matters: the importance of risk population in talent development studies**

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**The effect of arteriolar resistance on perfusion distribution in a model of the pulmonary perfusion**

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**Variability of preference toward mechanical ventilator settings: A model-based behavioral analysis**

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**Tidal breathing model describing end-tidal, alveolar, arterial and mixed venous CO<sub>2</sub> and O<sub>2</sub>**

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**A decision support system for suggesting ventilator settings: retrospective evaluation in cardiac surgery patients ventilated in the ICU**

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**Authors' response to Mohamad F El-Khatib's and Gassan W Jamaledine's letter: Clinical relevance of the PaO<sub>2</sub>/FiO<sub>2</sub> ratio**

Karbing, D. S. & Rees, S. E., 2008, In: Critical Care. 12, 1, 2 p.

**Decision support of inspired oxygen fraction using a model of oxygen transport**

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**Kan et beslutningsstøttesystem indstille en respirator?**

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**Retrospective evaluation of a decision support system for advising on ventilator settings in patients with ARDS/ALI**

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**Variation in the  $\text{PaO}_2/\text{FiO}_2$  ratio with  $\text{FiO}_2$ : is it relevant?**

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**Changes in PEEP and pulmonary gas exchange: bedside evaluation**

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**Changes in PEEP and pulmonary gas exchange: bedside evaluation**

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**Evaluation of the intelligent ventilator (INVENT) system for optimizing inspired oxygen fraction in intensive care**

Karbing, D. S., Kjærgaard, S., Smith, B. W., Allerød, C., Espersen, K., Reiter, N., Christensen, M., Andreassen, S. & Rees, S. E., 2007, In: Intensive Care Medicine. 33, Suppl. 2, p. S233, No. 0905

**Examining the effect of positive end-expiratory pressure on gas exchange and lung mechanics**

Karbing, D. S., Smith, B. W., Kjærgaard, S., Allerød, C., Andreassen, S. & Rees, S. E., 2007, In: Journal of Clinical Monitoring and Computing. 21, 3, p. 187-188

**Modelling the relationship between gas exchange and lung mechanics**

Karbing, D. S., Smith, B. W., Rees, S. E. & Andreassen, S., 2007, In: Journal of Clinical Monitoring and Computing. 21, 3, p. 188-189

**Quantitative assessment of pulmonary shunt and ventilation-perfusion mismatch without a blood sample**

Smith, B. W., Rees, S. E., Karbing, D. S., Kjærgaard, S. & Andreassen, S., 2007, *Sciences and Technologies for Health, Proceedings of the 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, in conjunction with the Biennial Conference of the French Society of Biological and Medical Engineering (SFGMB), 23-26 August 2007, Lyon, France [CD-ROM]*. Electrical Engineering/Electronics, Computer, Communications and Information Technology Association, p. 4255-4258 4 p.

**Variation in the  $\text{PaO}_2/\text{FiO}_2$  ratio with  $\text{FiO}_2$ : mathematical and experimental description, and clinical relevance**

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**Variation in the  $\text{PaO}_2/\text{FiO}_2$  ratio with  $\text{FiO}_2$ : is it relevant?**

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**Getting the most from clinical data through physiological modelling and medical decision support**

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## Activities

## **Dansk Medicoteknisk Landsmøde**

Karbing, D. S. (Speaker)

19 Sept 2007 → 20 Sept 2007

## **Press/Media**

### **Børn født sent på året har dårligere chancer for at få succes i fodbold**

Rossing, N. N., Lilholt, R. M. & Karbing, D. S.

02/02/2022

1 item of Media coverage

### **Computerprogram skal holde liv i intensivpatienter**

Karbing, D. S.

26/06/2009

1 item of Media coverage

### **Computerprogram skal holde liv i intensivpatienter**

Karbing, D. S.

01/06/2009

1 item of Media coverage

### **Kunstig intelligens ind på sygestuen**

Rees, S. E. & Karbing, D. S.

04/09/2018

2 items of Media coverage

### **Mediko: Software kan hjælpe patienter hurtigere ud af respiratoren**

Karbing, D. S.

19/06/2009

1 item of Media coverage

### **Nødrespirator klar til verden**

Thomsen, L. P., Hansen, J., Karbing, D. S., Rees, S. E. & Poulsen, M. K.

16/04/2020

1 item of Media coverage

### **Patienter får skræddersyet respiratorbehandling**

Rees, S. E. & Karbing, D. S.

16/01/2015

1 item of Media coverage

### **Software kan hjælpe patienter hurtigere ud af respiratoren**

Karbing, D. S.

19/06/2009

1 item of Media coverage

## **Projects**

### **CoRESCUE AAU Pandemic Ventilator**

Rees, S. E. (Project Manager), Thomsen, L. P. (Project Participant), Poulsen, M. K. (Project Participant), Hansen, J. (Project Participant) & Karbing, D. S. (Project Participant)

Uddannelses- og forskningsministeriet, Poul Due Jensen Foundation

01/04/2020 → ...

### **Relativ alderseffekt i dansk børne- og ungdomsfodbold**

Rossing, N. N. (PI), Lilholt, R. M. (PI) & Karbing, D. S. (PI)

19/12/2014 → 27/08/2015

**Relativ alderseffekt i dansk børne- og ungdomshåndbold**

Rossing, N. N. (PI), Lilholt, R. M. (PI) & Karbing, D. S. (PI)

19/12/2014 → 27/08/2015

**The Beacon Caresystem - AI for mechanical ventilation decision support**

Rees, S. E. (PI) & Karbing, D. S. (PI)

01/07/2013 → ...