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Journal Articles

Dahl, S., Stella, A., & Bjørner, T. (2023). Tell me what you see: An exploratory investigation of visual mental imagery evoked by music. *Musicae Scientiae*, 27(3), 717–740. <https://doi.org/10.1177/10298649221124862>

Kantan, P. R., Dahl, S., Rovsing Møller Jørgensen, H., Khadye, C., & Spaich, E. G. (2023). Designing Ecological Auditory Feedback on Lower Limb Kinematics for Hemiparetic Gait Training. *Sensors*, 23(8), Article 3964. <https://doi.org/10.3390/s23083964>

Kantan, P. R., Spaich, E. G., & Dahl, S. (2022). An Embodied Sonification Model for Sit-to-Stand Transfers. *Frontiers in Psychology*, 13, Article 806861. <https://doi.org/10.3389/fpsyg.2022.806861>

Kantan, P. R., Spaich, E. G., & Dahl, S. (2022). A Technical Framework for Musical Biofeedback in Stroke Rehabilitation. *IEEE Transactions on Human-Machine Systems*, 52(2), 220-231. <https://doi.org/10.1109/THMS.2021.3137013>

González Sánchez, V. E., Dahl, S., Hatfield, J., & Godøy, R. I. (2019). Characterizing movement fluency in musical performance: Toward a generic measure for technology enhanced learning. *Frontiers in Psychology*, 10, Article 84. <https://doi.org/10.3389/fpsyg.2019.00084>

Erkut, C., & Dahl, S. (2019). Incorporating Virtual Reality with Experiential Somaesthetics in an Embodied Interaction Course. *Journal of Somaesthetics*, 4(2), 25-39. <https://doi.org/10.5278/ojs.jos.v4i2.2399>

Dahl, S., Huron, D., Brod, G., & Altenmüller, E. (2014). Preferred Dance Tempo: Does Sex or Body Morphology influence how we groove? *Journal of New Music Research*, 43(2), 214-223. <https://doi.org/10.1080/09298215.2014.884144>

Petrini, K., Pollick, F. E., Dahl, S., McAleer, P., McKay, L., Rocchesso, D., Waadeland, C. H., Love, S., Avanzini, F., & Puce, A. (2011). Action expertise reduces brain activity for audiovisual matching actions: An fMRI study with expert drummers. *NeuroImage*, 56(3), 1480-1492. <https://doi.org/10.1016/j.neuroimage.2011.03.009>

Huron, D., Dahl, S., & Johnson, R. (2009). Facial expression and vocal pitch height: Evidence of an intermodal association. *Empirical Musicology Review*, 4(3), 93-100. <http://emusicology.org/v4n3/target.html>

Petrini, K., Dahl, S., Rocchesso, D., Waadeland, C. H., Avanzini, F., Puce, A., & Pollick, F. E. (2009). Multisensory integration of drumming actions: musical expertise affects perceived audiovisual asynchrony. *Experimental Brain Research*, 198(2-3), 339-352. <https://doi.org/10.1007/s00221-009-1817-2>

Dahl, S., & Friberg, A. (2007). Visual perception of expressiveness in musicians' body movements. *Music Perception*, 24(4), 433-454.

Dahl, S., & Friberg, A. (2004). Expressiveness of musician's body movements in performances on marimba. *Lecture Notes in Computer Science*, 2915, 479-486.

Rinman, M.-L., Friberg, A., Bendiksen, B., Cirotteau, D., Dahl, S., Kjellmo, I., Mazzarino, B., & Camurri, A. (2004). Ghost in the Cave: An Interactive Collaborative Game Using Non-verbal Communication. *Lecture Notes in Computer Science*, 2915, 549-556.

Dahl, S. (2004). Playing the accent - comparing striking velocity and timing in an ostinato rhythm performed by four drummers. *Acustica United with Acta Acustica*, 90(4), 762-776.

Dahl, S., & Granqvist, S. (2003). Estimating Internal Drift and Just Noticeable Difference in perception of continuous tempo drift. *Annals of the New York Academy of Sciences*, 999, 161-165.

Dahl, S. (2000). The playing of an accent - Preliminary observations from temporal and kinematic analysis of percussionists. *Journal of New Music Research*, 29(3), 225-234.

Book chapters

The Effect of Auditory Pulse Clarity on Sensorimotor Synchronization

Kantan, P. R., Stefan Alecu, R. & Dahl, S., 10 Mar 2021, *Perception, Representations, Image, Sound, Music - 14th International Symposium, CMMR 2019, Revised Selected Papers*. Kronland-Martinet, R., Ystad, S. & Aramaki, M. (eds.). Springer, Vol. 12631. p. 379-395 17 p. (Lecture Notes in Computer Science).

Movements, timing and precision of drummers

Dahl, S., 2018, *Handbook of Human Motion*. Müller, B., Wolf, S., Brueggemann, G-P., Deng, Z., McIntosh, A., Miller, F. & Selbie, W. S. (eds.). Springer

The challenge of a lifetime

Dahl, S., 2018, *Celebrity for the Curious : Why Study Celebrity, Music, and Film Studies? : (A Guide to University Major for Students, Their Career Advisors and Teachers)*. Vaidya, K. (ed.). The Curious Academic Publishing

Gestures in performance

Dahl, S., Bevilacqua, F., Bresin, R., Clayton, M., Leante, L., Poggi, I. & Rasamimanana, N., 2009, *Musical Gestures: Sound, Movement, and Meaning*. Godøy, R. I. & Leman, M. (eds.). Routledge

Movements and analysis of drumming.

Dahl, S., 2006, *Music, Motor Control and the Brain..* Altenmüller, E., Wiesendanger, M. & Kesselring, J. (eds.). New York: Oxford University Press, p. 125 -138

Conference publications and proceedings

Developing an Integrated VR + Musical Feedback System for Stationary Biking in Endurance Training

Kantan, P. R., Rojo, A., Olmo-Fajardo, T., Matas, L. M., Spaich, E. G., Dahl, S. & Moreno, J. C., 27 Jun 2024, *Proceedings of the 9th International Conference on Movement and Computing: MOCO 2024 Beyond Control*. New York, NY, USA: Association for Computing Machinery, p. 1-6 6 p. 25

Musical Biofeedback Paradigms to Promote High-Intensity Gait Training

Kantan, P. R., Dahl, S., Rovsing Møller Jørgensen, H. & Spaich, E. G., 16 Jun 2024.

Adapting Audio Mixing Principles and Tools to Parameter Mapping Sonification Design

Kantan, P. R., Dahl, S. & Spaich, E. G., Jun 2024, *The 29th International Conference for Auditory Display (ICAD 2024)*. 8 p.

HearWalk: Co-designing and Building a Sound Feedback System for Hemiparetic Gait Training

Kantan, P. R., Dahl, S., Rovsing Møller Jørgensen, H., Lanther, M. B. & Spaich, E. G., 2 Nov 2023.

Applying Concurrent Auditory Feedback on Swing Phase Kinematics in Hemiparetic Gait Training

Kantan, P. R., Dahl, S., Rovsing Møller Jørgensen, H., Khadye, C. & Spaich, E. G., 24 Sept 2023.

User-Centered Design of Auditory Feedback for Hemiparetic Gait Rehabilitation

Kantan, P. R., Dahl, S., Roving Møller Jørgensen, H., Khadye, C. & Spaich, E. G., 24 Sept 2023.

Sonifying Gait Kinematics Using the Sound of Wading: A Study on Ecological Movement Representations

Kantan, P. R., Dahl, S., Serafin, S. & Spaich, E. G., Jun 2023, *The 28th International Conference on Auditory Display (ICAD 2023)*. 8 p. 5049

Sound-Guided 2-D Navigation: Effects of Information Concurrency and Coordinate System

Kantan, P. R., Dahl, S. & Spaich, E. G., 8 Oct 2022, *Participative Computing for Sustainable Futures - Proceedings of the 12th Nordic Conference on Human-Computer Interaction, NordiCHI 2022*. Association for Computing Machinery, 11 p. 40

Designing Sonified Feedback on Knee Kinematics in Hemiparetic Gait Based on Inertial Sensor Data

Kantan, P. R., Dahl, S., Roving Møller Jørgensen, H., Khadye, C. & Spaich, E. G., Sept 2022, *Proceedings of the SoniHED Conference on Sonification of Health and Environmental Data, 2022*. Paulett, S., Monach, S. D. & Selfridge, R. (eds.). Zenodo

Performers' Use of Space and Body in Movement Interaction with A Movement-based Digital Musical Instrument

Cavdir, D. & Dahl, S., 22 Jun 2022, *Proceedings of 2022 8th International Conference on Movement and Computing, MOCO 2022*. Association for Computing Machinery, p. 1-12 1. (ACM International Conference Proceeding Series, Vol. Par F180475).

Sonifying Walking: A Perceptual Comparison of Swing Phase Mapping Schemes

Kantan, P. R., Dahl, S., Spaich, E. G. & Bresin, R., 2022, *Proceedings of ISON 2022, 7th Interactive Sonification Workshop, BSCC, University of Bremen, Germany, September 22–23, 2022*. 8 p.

Beat precision and perceived danceability in drum grooves

Ganis, F., Dahl, S., Schmidt Câmara, G. & Danielsen, A., 24 Jun 2021.

A Metaphor-Based Technical Framework for Musical Sonification in Movement Rehabilitation

Kantan, P. R., Spaich, E. G. & Dahl, S., Jun 2021, *The 26th International Conference on Auditory Display*. 8 p.

Auditory biofeedback through real-time generated music for balance and gait training of stroke patients

Kantan, P. R., Spaich, E. G., Roving Møller Jørgensen, H. & Dahl, S., Jun 2021.

Conveying Sit-to-Stand Kinematics Through Musical Sonification for Stroke Rehabilitation

Kantan, P. R., Spaich, E. G. & Dahl, S., 2021.

Characterizing Subtle Timbre Effects of Drum Strokes Played with Different Technique

Bigoni, F., Grossbach, M. & Dahl, S., Sept 2020, *Proceedings of the 2nd International Conference on Timbre (Timbre 2020), online conference..* Thessaloniki, Greece: Aristotle University of Thessaloniki, 4 p.

Rhythm Rangers: an evaluation of beat synchronisation skills and musical confidence through multiplayer gamification influence

Kjærbo, R. E. R., Parpal, R. R., Pérez, M. G., Correia, F. M. S. D. A. R., Guruvayurappan, V., Overholt, D. & Dahl, S., 2020, *Proceedings of the 17th Sound and Music Computing Conference*. Spagnol, S. & Valle, A. (eds.). Torino: Axa sas/SMC Network, p. 220-227 8 p. (Proceedings of the Sound and Music Computing Conference).

Evaluating movement qualities with visual feedback for real-time motion capture

Hussain, A., Mødekjær, C., Austad, N. W., Dahl, S. & Erkut, C., 10 Oct 2019, *MOCO 2019 - Proceedings of the 6th International Conference on Movement and Computing*. Association for Computing Machinery, a1

ADEPT: Exploring the Design, Pedagogy, and Analysis of a Mixed Reality Application for Piano Training

Gerry, L., Dahl, S. & Serafin, S., 2019, *Proceedings of the 16th Sound & Music Computing Conference SMC 2019*. Sound and Music Computing Network, Vol. 1. p. 241-249 9 p. (Proceedings of the Sound and Music Computing Conference).

An Interactive Music Synthesizer for Gait Training in Neurorehabilitation

Kantan, P. R. & Dahl, S., 2019, *Proceedings of the 16th Sound & Music Computing Conference SMC 2019*. Sound and Music Computing Network, p. 159-166 (Proceedings of the Sound and Music Computing Conference).

Communicating Gait Performance Through Musical Energy: Towards an Intuitive Biofeedback System for Neurorehabilitation

Kantan, P. R. & Dahl, S., 2019, *Combined proceedings of the Nordic Sound and Music Computing Conference 2019 and the Interactive Sonification Workshop 2019*. Stockholm, Sweden: KTH Royal Institute of Technology, p. 107-114

Incorporating virtual reality in an embodied interaction course

Erkut, C. & Dahl, S., 28 Jun 2018, *Proceedings of the 5th International Conference on Movement and Computing, MOCO 2018*. Association for Computing Machinery, 6 p. a45

Rhythmic recurrency in dance to music with ambiguous meter

Dahl, S. & Sioros, G., 28 Jun 2018, *Proceedings of the 5th International Conference on Movement and Computing, MOCO 2018*. Association for Computing Machinery, 6 p. 38

An Expressive Multidimensional Physical Modelling Percussion Instrument

Tissieres, J. Y., Vaseileiou, A., Zabetian, S., Delgado, P., Dahl, S. & Serafin, S., 2018, *Proceedings of the 15th Sound and Music Computing Conference (SMC2018)*. Georgaki, A. & Andreopoulou, A. (eds.). Zenodo, p. 339-346 (Proceedings of the Sound and Music Computing Conference).

NordicSMC: A Nordic University Hub on Sound and Music Computing

Serafin, S., Dahl, S., Bresin, R., Jensenius, A. R., Unnþórsson, R. & Välimäki, V., 2018, *Proceedings of the 15th Sound and Music Computing Conference (SMC2018)*. Sound and Music Computing Network, p. 130-134 (Proceedings of the Sound and Music Computing Conference).

Timbre Discrimination for Brief Instrument Sounds

Bigoni, F. & Dahl, S., 2018, *Proceedings of the 19th International Society for Music Information Retrieval Conference*. dblp Computer Science Bibliography, p. 128-134

Embodied Interaction through Movement in a Course Work

Erkut, C. & Dahl, S., 28 Jun 2017, *MOCO 2017 - Proceedings of the 4th International Conference on Movement Computing*. Association for Computing Machinery, 23

Does Singing a Low-Pitch Tone Make You Look Angrier?

Ahrendt, P., Bach, C. C. & Dahl, S., 2017, *Proceedings of the 14th Sound and Music Computing Conference 2017*. Aalto University, p. 181-187 (Proceedings of the Sound and Music Computing Conference).

Exploring Sound-Motion Textures in drum set performance

Godøy, R. I., song, M. & Dahl, S., 2017, *Proceedings of the 14th Sound and Music Computing Conference*. Aalto University, 8 p. (Proceedings of the Sound and Music Computing Conference).

Extraction, Mapping, and Evaluation of Expressive Acoustic Features for Adaptive Digital Audio Effects

Holfelt, J., Csapo, G., Andersson, N. S., Zabetian, S., Castanieto, M. A., Overholt, D., Dahl, S. & Erkut, C., 2017, *Proceedings of the 14th Sound and Music Computing Conference 2017*. Lokki, T., Patynen, J. & Valimäki, V. (eds.). Aalto University, p. 328-335 8 p. (Proceedings of the Sound and Music Computing Conference).

Exploring felt qualities of embodied interaction with movement and sound

Erkut, C., Rajala-Erkut, A. & Dahl, S., 2015, *Arts and Technology: Fourth International Conference, ArtsIT 2014, Istanbul, Turkey, November 10-12, 2014, Revised Selected Papers*. Brooks, A. L., Ayiter, E. & Yazicigil, O. (eds.). Springer, p. 77-85 9 p. (Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST, Vol. 145).

Sketches in Embodied Interaction: Balancing Movement and Technological Perspectives

Erkut, C., Dahl, S. & Triantafyllidis, G., 1 Jan 2014, *HCI International 2014: International Conference, HCI International 2014, Heraklion, Crete, Greece, June 22-27, 2014. Proceedings, Part I*. Springer, p. 30-35 6 p. (Communications in Computer and Information Science, Vol. 434 PART I).

Sound and music computing at Aalborg University in Copenhagen

Serafin, S., Dahl, S., Götzen, A. D., Erkut, C., Overholt, D., Purwins, H. & Sturm, B., 1 Jan 2014, *Proceedings - 40th International Computer Music Conference, ICMC 2014 and 11th Sound and Music Computing Conference, SMC 2014 - Music Technology Meets Philosophy: From Digital Echos to Virtual Ethos*. National and Kapodistrian University of Athens, p. 1818-1821 4 p.

Good playing practice when drumming: Influence of tempo on timing and preparatory movements for healthy and dystonic players

Dahl, S., Grossbach, M. & Altenmüller, E., Aug 2011, *Proceedings of the International Symposium on Performance Science 2011*. Williamon, A., Edwards, D. & Bartel, L. (eds.). Utrecht, The Netherlands.: European Association of Conservatoires, p. 237-242

Effect of dynamic level in drumming: Measurement of striking velocity, force, and sound level

Dahl, S., Grossbach, M. & Altenmüller, E., 2011, *Proceedings of Forum Acusticum*. Danish Acoustical Society, p. 621-624 4 p.

Timing and motor control in drumming: Comparing players with and without focal dystonia.

Dahl, S., Grossbach, M. & Altenmüller, E., 2010.

Disturbed moving patterns when drumming - influence of extreme tempi on percussionists with and without focal dystonia

Dahl, S. & Altenmüller, E., 2009.

Influences of movement and grip on perceptual and measured tone quality in drumming

Dahl, S., Grossbach, M. & Altenmüller, E., 2008.

Motor control in drumming: Influence of movement pattern on contact force and sound characteristics"

Dahl, S. & Altenmüller, E., 2008. 6 p.

Sound production in healthy and diseased drummers: an acoustic and movement analysis approach.

Dahl, S. & Altenmüller, E., 2008.

High pitch - friendly face.

Dahl, S., Huron, D. & Johnson, R., 2007.

The influence of Body Morphology on Preferred Dance Tempos.

Dahl, S. & Huron, D., 2007, *International Computer Music Conference -ICMC07*. International Computer Music Association, Vol. 2. p. 1-4

Production and perception of gestures in music performance.

Dahl, S., 2006.

Motor behaviour in drumming with different striking tools: Effects of tempo on control of rebound.

Dahl, S. & Huys, R., 2005.

Activities

Movement and Timing Control in Music Performance

Sofia Dahl (Lecturer)
4 Jun 2021

Movement qualities in different time frames

Sofia Dahl (Lecturer)
5 May 2021

16th Sound and music computing conference

Sofia Dahl (Participant)
28 May 2019 → 31 May 2019

NordicSMC Winter School

Sofia Dahl (Participant)
4 Mar 2019 → 8 Mar 2019

6th International Conference on Movement and Computing

Sofia Dahl (Organizer) & Cumhur Erkut (Organizer)
2019 → ...

The Journal of Somaesthetics (Journal)

Cumhur Erkut (Editor) & Sofia Dahl (Editor)
2019

RITMO International Motion Capture Workshop

Sofia Dahl (Participant)
12 Nov 2018 → 14 Nov 2018

5th International Conference on Movement and Computing, MOCO 2018

Sofia Dahl (Organizer)
28 Jun 2018 → 30 Jun 2018

Journal of Somaesthetics (Journal)

Sofia Dahl (Editor) & Cumhur Erkut (Editor)
Mar 2018 → Jan 2019

4th International conference on movement and computing

Sofia Dahl (Participant)
28 Jun 2017 → 30 Jun 2017

4th International conference on movement and computing

Sofia Dahl (Participant)
28 Jun 2017 → 30 Jun 2017

Workshop: Training, Sharing, and Enacting: Somaesthetics of Rhythmic Interaction

Cumhur Erkut (Lecturer) & Sofia Dahl (Lecturer)
28 Jun 2017

First International Workshop on Motor Learning for Music Performance

Sofia Dahl (Participant), minho song (Participant) & Rolf Inge Godøy (Participant)
15 May 2017

New Interfaces for Musical Expression 2017

Sofia Dahl (Organizer)
2017 → ...

Frontiers in Psychology (Journal)

Guy Madison (Editor), Jessica Grahn (Editor), Sofia Dahl (Peer reviewer) & Fabien Gouyon (Editor)
2014 → ...

Research Topic Functions of musical rhythm (Journal)

Sofia Dahl (Editor)
31 Oct 2013 → 30 Jun 2014

International symposium on performance science

Sofia Dahl (Organizer)
28 Aug 2013 → 31 Aug 2013

SMAC Stockholm Music Acoustics Conference 2013 SMC Sound and Music Computing Conference 2013

Sofia Dahl (Organizer)
30 Jul 2013 → 3 Aug 2013

Expression and control in music performance: The role of musicians' movements

Sofia Dahl (Speaker)
4 Jun 2013

9th Sound and Music Computing Conference (SMC 2012)

Sofia Dahl (Organizer)
11 Jul 2012 → 14 Jul 2012

Sound and Music Computing, Understanding and Practicing in Sweden

Sofia Dahl (Organizer)
3 Apr 2012 → 4 Apr 2012

13th International Rhythm Perception and Production Workshop

Sofia Dahl (Organizer)
13 Jul 2011 → 15 Jul 2011

ASME 2011 World Conference on Innovative Virtual Reality (WINVR2011)

Sofia Dahl (Organizer)
27 Jun 2011 → 29 Jun 2011

Journal of New Music Research (Journal)

Sofia Dahl (Reviewer)
1 Jan 2011 → ...

Journal of New Music Research (Journal)

Sofia Dahl (Peer reviewer)
2011 → ...

Haptic Audio Interaction Design

Sofia Dahl (Organizer)
16 Sept 2010 → 17 Sept 2010

The striking movement:: How do percussionists control timing and dynamic level when drumming?

Sofia Dahl (Lecturer)
11 Feb 2010

The striking movement.: How do percussionists control timing and dynamic level when drumming?

Sofia Dahl (Lecturer)

11 Feb 2010

Movement and timing control in drummers.

Sofia Dahl (Lecturer)

20 Nov 2009