Résumé: Dr. Matthias Mittner (born Ihrke)

Contact Information

Matthias Mittner (born Ihrke)

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Personal Information

Date of birth: September 1, 1982
Place of birth: Eberswalde, Germany
Nationality: german, norwegian
Marital Status: Married to Lilli Mittner
Children: Kuno, Josefine & Klara Mittner
Home address: Ersfjordvegen 98, 9107 Kvaløya, Norge

Education

Dr. phil. (summa cum laude) — 21.12.2011
University of Frankfurt, Germany
Thesis: "Binding and Retrieval of Stimulus-Response Episodes in the Negative Priming Paradigm"

B. Sc. in Computer Science — 2005/07 – 2008/04
Institute of Computer Science, University of Göttingen, Germany
Thesis: "Single Trial Estimation and Timewarped Averaging of Event-Related Potentials"

Diploma in Psychology — 2005/07 – 2007/11
Department of Psychology, University of Göttingen, Germany
Thesis: "Negative Priming and Response-Relation: Behavioural and Electroencephalographic Correlates"

Student at the University of Oslo — 2004/08 – 2005/06
Oslo, Norway
Erasmus-Scholarship; studies of computer science and psychology

B. Sc. in Psychology (equivalent) — 2002/09 – 2004/07
Department of Psychology, University of Göttingen, Germany
Thesis: "An Adaptive Approach to Memory-Span Tasks"

High-School Diploma — 2002/06
Alexander von Humboldt Gymnasium, Eberswalde, Germany
main subjects physics and mathematics

Employments

Professor II — 2021/03 – present
Department of Psychology, Norwegian University of Science and Technology, Trondheim, Norway

Professor — 2020/09 – present
Institute of Psychology, University of Tromsø, Tromsø, Norway
Cognitive Neuroscience

Associate Professor 2014/04 – 2020/09
Institute of Psychology, University of Tromsø, Tromsø, Norway
Cognitive Neuroscience

Post-Doctoral Researcher 2013/04 – 03/2014
Cognitive Science Center Amsterdam, Universiteit van Amsterdam, The Netherlands
Cognitive Neuroscience (Birte Forstmann)

Post-Doctoral Researcher 2012/09 – 2013/03
Max-Planck Institute for Experimental Medicine, Göttingen, Germany
Theoretical Neuroscience (Robert Gütig)

PhD-Student 2008/10 – 2012/01
Max-Planck Institute for Dynamics and Self-Organization, Göttingen, Germany
Göttingen Graduate School for Neurosciences and Molecular Biosciences (GGNB)
Doctoral Program: Theoretical and Computational Neuroscience (PTCN)

Guest Researcher 2008/03 – 2008/09
Max-Planck Institute for Dynamics and Self-Organization, Göttingen, Germany
cognitive modelling and data-mining (EEG)

Guest Researcher 2007/11 – 2008/02
Max-Planck Institute for Informatics, Saarbrücken, Germany
section for computer graphics; optical modelling and psychophysics

Research Assistant 2005/09 – 2007/10
Bernstein Center for Computational Neuroscience, Göttingen, Germany
cognitive modelling; psychophysical experiments

Student Assistant 2003/09 – 2004/08
Departement for Developmental Psychology, University of Göttingen, Germany
computer administration and development of experimental software

Scientific Activities

Leadership
Head of research, Institute for Psychology, University of Tromsø (Jan 2022–Aug 2024)
`http://www.uit.no/enhet/ips`
Leader of research group "Cognitive Neuroscience" at the Institute for psychology, University of Tromsø (2018–)
`http://www.uit.no/research/cognitive-neuroscience`

Professional Memberships
Member of the Norwegian Neuroscience Society (NNS)
Member of the Society for Neuroscience
Program Committee Member "International Conference on Intelligent Data Engineering and Automated Learning" 2010 and 2011
Member of the Research Priority Program Brain and Cognition at the Cognitive Science Center Amsterdam (CSCA)
Review Editor for "Frontiers in Psychology"

PhD Evaluation/Opponencies

Committee leader for PhD defence of Patty Huijgens (2021)
Pre-examiner for thesis of Aaron Kortteenniemi (University of Helsinki, 2020)
Opponent for thesis of Alexandra Vik (University of Bergen, 2019)
Committee leader for PhD defence of Bjørn Eivind Kirsebom (2019)
Committee leader for PhD defence of Sara Vambheim (2018)

Committee
Selection committee for Associate professor in quantitative methods (NTNU, 2022)
Evaluation committee for evaluation of qualification for professorship (Eelke Snoeren, UiT, 2022)
Head of the Research Ethics Committee at the Institute for Psychology (IPS-REC, UiT, 2022–)
Head of committee IPS Research forum (UiT, 2022–)
Member of faculty-level PhD committee ("PhD opptakskomite"; Helsefak, UiT, 2022 –)
Head of selection committee for Associate professor in cognitive neuroscience (UiB, 2021)
Selection committee for PhD position (NTNU, 2021)
Evaluation committee for several PhD and post-doc positions (IPS/UiT)
Member of committee "Research forum at the faculty of health" (UiT, 2020–)
Committee for selection of research price (IPS/UiT, 2020)
Committee for selection of student price for best thesis (clinical program, 2018–)
Committee development of evaluation strategy at IPS (UiT, 2018–2020)
Vararepresentant programstyret psykologi (IPS/UiT; 2017–)
Member of "Master committee" (responsible for master studies at IPS/UiT; 2015–2016)
Member of program commitee for IDEAL conference (2010/2011)

Advisor/Grant reviewing
Review panel member, online course on "Statistical research methods", Epigum (Sage Publications)
European Research council (reviewer for ERC Consolidator Grant, ECoG)
The French National Centre for Scientific Research (CNRS) - ATIP - Avenir program
Netherlands Organisation for Scientific Research (NWO) - Vici Social Sciences and Humanities
Hertie Foundation Project: Improvement of school education by neuroscientific research

Organizing
Symposium: "Building bridges: Mapping the multifaceted architecture of the wandering mind" at the International conference of cognitive neuroscience (ICON2022), Helsinki, Finland (with Josephine Groot)
Organizer for Methods-course "Introduction to Python programming" (2012)
Organizer for Methods-course "Matlab and Python programming" (2011)

Conferences
Invited presentations:
– NRSN National Neuroscience Symposium, 2021
– fMRI 20-year Anniversary Seminar (NTNU, Trondheim, Norway), 2019
– The Role of Neural Oscillations in Human Cognition (Summer School, Uslar, Germany), 2017
– Mind-Wandering Symposium, (University of Amsterdam, The Netherlands), 2016
– 12th International Conference on Cognitive Neuroscience, Brisbane, Australia (ICON), 2014
– Various talks and posters at national and international conferences (CNS 06/07, BCCN symposia, TeaP, ICP2008, IDEAL, IJMC, NWG, SfN, MathPsych, ICON2014, ICON2017, ICON2022)

Advanced Courses

Research group leader development program at UiT (2021/2022)

Program for young research leaders 2014–2015; joint program UiO, UiB, NTNU, UiT – leadership, networking, financing, communication, strategy

DGPs Course on Recording and Analysis of Eye-Movements (Niels Galley), Cologne 2008

Course on Computational Neuroscience at the Max-Planck-Institute for Dynamics and Self-Organization 2005

Reviewing
Editorial board member "NeuroImage: Reports", "Imaging Neuroscience", "Behavioural Sciences"
Reviewer for Spring Conference on Computer Graphics 2008 (SCCG08)
Ad-hoc Reviewer for Cognitive Neuropsycholoy, NeuroImage, Journal of Cognitive Neuroscience, Social Cognitive & Affective Neuroscience, Frontiers in Psychology
IDEAL 2010/2011 (PC-member)

Publications

Books

Mehmetoglu, M. & Mittner, M. (2020). *Innføring i R for statistiske dataanalyser*. Universitetsforlaget. (`https://tinyurl.com/wx4xbfpc`)

Mehmetoglu, M. & Mittner, M. (2021). *Applied Statistics Using R*. SAGE. (`https://tinyurl.com/svddmm`)

Pre-prints (unpublished)

(71) *Mittner, M.* & Groot, J. (2024). A novel method for modeling tonic and phasic pupil dynamics in humans. `https://osf.io/preprints/psyarxiv/7ju4a_v1/`. status: submitted

(70) Alexandersen, A., Karlsen, K., Csifcsak, G. & *Mittner, M.* (2024). Unravelling the threads of thought: Probing the impact of contextual factors on mind wandering. `https://osf.io/preprints/psyarxiv/ywdv2_v1/`. status: submitted

(69) Csifcsak, G., Babiker, S., Luzzi, F. & *Mittner, M.* (2024). The interplay between experimental heat pain and non-invasive stimulation of the medial prefrontal cortex on reinforcement learning with manipulated outcome controllability. `https://osf.io/preprints/psyarxiv/zyd79_v1/`. status: unknown

(68) Mehmetoglu, M. & *Mittner, M.* (2024). rmedsem: Statistical mediation analysis for covariance-based, partial least-squares and Bayesian structural equation models. `https://osf.io/preprints/psyarxiv/zcq3y_v1/`. status: submitted

(67) Drevland, R., Aasen, S., Csifcsák, G., Alexandersen, A. & *Mittner, M.* (2024). Reducing mind wandering using continuous theta burst stimulation. `https://osf.io/preprints/psyarxiv/u5j7s_v1/`. status: submitted

(66) Schultheiss, D., Turi, Z., Marmavula, S., Reinacher, P., Demerath, T., Straehle, J., Boedecker, J., *Mittner, M.* & Vlachos, A. (2025). Efficient Prospective Electric Field-Informed Localization of Motor Cortical Targets of Transcranial Magnetic Stimulation. `https://www.biorxiv.org/content/10.1101/2025.02.20.639076v1`. status: submitted

Journal Articles

(65) Vékony, T., Farkas, B., Brezóczki, B., *Mittner, M.*, Csifcsák, G., Simor, P. & Németh, D. (2025). Mind Wandering Enhances Statistical Learning. *iScience*. 28:2. `doi:10.1016/j.isci.2024.111703`.

(64) Aasen, S., Drevland, R., Csifcsák, G. & *Mittner, M.* (2024). Increasing Mind Wandering with Accelerated Intermittent Theta Burst Stimulation over the Left Dorsolateral Prefrontal Cortex. *Neuropsychologia*. 204, pp. 109008. `doi:10.1016/j.neuropsychologia.2024.109008`.

(63) Sluppaug, K., Mehmetoglu, M. & *Mittner, M.* (2024). Modsem: An R Package for Estimating Latent Interactions and Quadratic Effects. *Structural Equation Modeling: A Multidisciplinary Journal*. 0:0, pp. 1–13. doi:10.1080/10705511.2024.2417409.

(62) Groot, J., Miletic, S., Isherwood, S., Tse, D., Habli, S., Håberg, A., Bazin, P., *Mittner, M.* & Forstmann, B. (2024). A High-Resolution 7 Tesla Resting-State fMRI Dataset Optimized for Studying the Subcortex. *Data in Brief*. . doi:.

(61) Mehmetoglu, M., Määttänen, I. & *Mittner, M.* (2024). Testing Sexual Strategy Theory in Norway. *Behavioral Sciences*. 14:6, pp. 438. doi:10.3390/bs14060438.

(60) Ørbo, M., Grønli, O., Larsen, C., Vangberg, T., Friborg, O., Turi, Z., *Mittner, M.*, Csifcsak, G. & Aslaksen, P. (2023). The Antidepressant Effect of Intermittent Theta Burst Stimulation (iTBS): Study Protocol for a Randomized Double-Blind Sham-Controlled Trial. *Trials*. 24:1, pp. 627. doi:10.1186/s13063-023-07674-6.

(59) Groot, J., Miletic, S., Isherwood, S., Tse, D., Habli, S., Håberg, A., Forstmann, B., Bazin, P. & *Mittner, M.* (2023). Echoes from Intrinsic Connectivity Networks in the Subcortex. *Journal of Neuroscience*. . doi:10.1523/JNEUROSCI.1020-23.2023.

(58) Rasmussen, I., *Mittner, M.*, Boayue, N., Csifcsák, G. & Aslaksen, P. (2023). Tracking the Current in the Alzheimer's Brain - Systematic Differences between Patients and Healthy Controls in the Electric Field Induced by tDCS. *Neuroimage: Reports*. 3:2, pp. 100172. doi:10.1016/j.ynirp.2023.100172.

(57) Sedlinska, T., Bolte, L., Melsæter, E., *Mittner, M.* & Csifcsák, G. (2023). Transcranial Direct-Current Stimulation Enhances Pavlovian Tendencies during Intermittent Loss of Control. *Frontiers in Psychiatry*. 14. doi:10.3389/fpsyt.2023.1164208.

(56) Kreis, I., Zhang, L., *Mittner, M.*, Syla, L., Lamm, C. & Pfuhl, G. (2023). Aberrant Uncertainty Processing Is Linked to Psychotic-like Experiences, Autistic Traits, and Is Reflected in Pupil Dilation during Probabilistic Learning. *Cognitive, Affective, & Behavioral Neuroscience*. . doi:10.3758/s13415-023-01088-2.

(55) Nawani, H., *Mittner, M.* & Csifcsák, G. (2023). Modulation of Mind Wandering Using Transcranial Direct Current Stimulation: A Meta-Analysis Based on Electric Field Modeling. *NeuroImage*. , pp. 120051. doi:10.1016/j.neuroimage.2023.120051.

(54) Alexandersen, A., Csifcsák, G., Groot, J. & *Mittner, M.* (2022). The Effect of Transcranial Direct Current Stimulation on the Interplay between Executive Control, Behavioral Variability and Mind Wandering: A Registered Report. *Neuroimage: Reports*. 2:3, pp. 100109. doi:10.1016/j.ynirp.2022.100109.

(53) Hawkins, G., *Mittner, M.*, Forstmann, B. & Heathcote, A. (2022). Self-Reported Mind Wandering Reflects Executive Control and Selective Attention. *Psychonomic Bulletin & Review*. . doi:10.3758/s13423-022-02110-3.

(52) Kam, J., *Mittner, M.* & Knight, R. (2022). Mind-Wandering: Mechanistic Insights from Lesion, tDCS, and iEEG. *Trends in Cognitive Sciences*. 0:0. doi:10.1016/j.tics.2021.12.005.

(51) Groot, J., Csifcsák, G., Wientjes, S., Forstmann, B. & *Mittner, M.* (2022). Catching Wandering Minds with Tapping Fingers: Neural and Behavioral Insights into Task-unrelated Cognition. *Cerebral Cortex*. , pp. bhab494. doi:10.1093/cercor/bhab494.

(50) Rasmussen, I., Boayue, N., *Mittner, M.*, Bystad, M., Grønli, O., Vangberg, T., Csifcsák, G. & Aslaksen, P. (2021). High-Definition Transcranial Direct Current Stimulation Improves Delayed Memory in Alzheimer's Disease Patients: A Pilot Study Using Computational Modeling to Optimize Electrode Position. *Journal of Alzheimer's Disease*. 83:2. doi:10.3233/JAD-210378.

(49) Csifcsák, G., Bjørkøy, J., Kuyateh, S., Reithe, H. & *Mittner, M.* (2021). Transcranial Direct Current Stimulation above the Medial Prefrontal Cortex Facilitates Decision-Making Following Periods of Low Outcome Controllability. *eNeuro*. . doi:10.1523/ENEURO.0041-21.2021.

(48) Zmeykina, E., *Mittner, M.*, Paulus, W. & Turi, Z. (2021). Short-Lived Alpha Power Suppression Induced by Low-intensity Arrhythmic rTMS. *Neuroscience*. 466, pp. 1–9. doi:10.1016/j.neuroscience.2021.04.027.

(47) Turi, Z., Lenz, M., Paulus, W., *Mittner, M.* & Vlachos, A. (2021). Selecting Stimulation Intensity in Repetitive Transcranial Magnetic Stimulation Studies: A Systematic Review between 1991 and 2020. *European Journal of Neuroscience*. n/a:n/a. doi:10.1111/ejn.15195.

(46) Groot, J., Boayue, N., Csifcsák, G., Boekel, W., Huster, R., Forstmann, B. & *Mittner, M.* (2021). Probing the Neural Signature of Mind Wandering with Simultaneous fMRI-EEG and Pupillometry. *NeuroImage*. 224, pp. 117412. doi:10.1016/j.neuroimage.2020.117412.

(45) Kreis, I., Biegler, R., Tjelmeland, H., *Mittner, M.*, Reitan, S. & Pfuhl, G. (2021). Overestimation of Volatility in Schizophrenia and Autism? A Comparative Study Using a Probabilistic Reasoning Task. *PLOS ONE*. 16:1, pp. e0244975. doi:10.1371/journal.pone.0244975.

(44) Turi, Z., *Mittner, M.*, Lehr, A., Bürger, H., Antal, A. & Paulus, W. (2020). Theta-Gamma Cross-Frequency Transcranial Alternating Current Stimulation over the Trough Impairs Cognitive Control. *eNeuro*. . doi:10.1523/ENEURO.0126-20.2020.

(43) *Mittner, M.* (2020). Pypillometry: A Python Package for Pupillometric Analyses. *Journal of Open Source Software*. 5:51, pp. 2348. doi:10.21105/joss.02348.

(42) Zmeykina, E., *Mittner, M.*, Paulus, W. & Turi, Z. (2020). Weak rTMS-induced Electric Fields Produce Neural Entrainment in Humans. *Scientific Reports*. 10:1, pp. 11994. doi:10.1038/s41598-020-68687-8.

(41) Boayue, N., Csifcsák, G., Kreis, I., Schmidt, C., Finn, I., Vollsund, A. & *Mittner, M.* (2020). The Interplay between Executive Control, Behavioral Variability and Mind Wandering: Insights from a High-Definition Transcranial Direct-Current Stimulation Study. *European Journal of Neuroscience*. n/a:n/a. doi:10.1111/ejn.15049.

(40) Csifcsák, G., Melsæter, E. & *Mittner, M.* (2019). Intermittent Absence of Control during Reinforcement Learning Interferes with Pavlovian Bias in Action Selection. *Journal of Cognitive Neuroscience*. , pp. 1–18. doi:10.1162/jocn_a_01515.

(39) Hawkins, G., *Mittner, M.*, Forstmann, B. & Heathcote, A. (2019). Modeling Distracted Performance. *Cognitive Psychology*. 112, pp. 48–80. doi:10.1016/j.cogpsych.2019.05.002.

(38) Turi, Z., Csifcsák, G., Boayue, N., Aslaksen, P., Antal, A., Paulus, W., Groot, J., Hawkins, G., Forstmann, B., Opitz, A., Thielscher, A. & *Mittner, M.* (2019). Blinding Is Compromised for Transcranial Direct Current Stimulation at 1 mA for 20 Min in Young Healthy Adults. *European Journal of Neuroscience*. 0:0. doi:10.1111/ejn.14403.

(37) Boayue, N., Csifcsák, G., Aslaksen, P., Turi, Z., Antal, A., Groot, J., Hawkins, G., Forstmann, B., Opitz, A., Thielscher, A. & *Mittner, M.* (2019). Increasing Propensity to Mind-Wander by Transcranial Direct Current Stimulation? A Registered Report. *The European Journal of Neuroscience*. . doi:10.1111/ejn.14347.

(36) Csifcsák, G., Boayue, N., Aslaksen, P., Turi, Z., Antal, A., Groot, J., Hawkins, G., Forstmann, B., Opitz, A., Thielscher, A. & *Mittner, M.* (2019). Commentary: "Transcranial Stimulation of the Frontal Lobes Increases Propensity of Mind-Wandering without Changing Meta-Awareness". *Frontiers in Psychology*. 10. doi:10.3389/fpsyg.2019.00130.

(35) Hetland, A., Kjelstrup, E., *Mittner, M.* & Vitterso, J. (2019). The Thrill of Speedy Descents: A Pilot Study on Differences in Facially Expressed Online Emotions and Retrospective Measures of Emotions During a Downhill Mountain-Bike Descent. *Frontiers in Psychology*. 10. doi:10.3389/fpsyg.2019.00566.

(34) Turi, Z., Bjørkedal, E., Gunkel, L., Antal, A., Paulus, W. & *Mittner, M.* (2018). Evidence for Cognitive Placebo and Nocebo Effects in Healthy Individuals. *Scientific Reports*. 8:1, pp. 17443. doi:10.1038/s41598-018-35124-w.

(33) Csifcsák, G., Boayue, N., Puonti, O., Thielscher, A. & *Mittner, M.* (2018). Effects of Transcranial Direct Current Stimulation for Treating Depression: A Modeling Study. *Journal of Affective Disorders*. 234, pp. 164–173. doi:10.1016/j.jad.2018.02.077.

(32) Turi, Z., Schäfer, S., Antal, A., Paulus, W. & *Mittner, M.* (2018). Data from 'Placebo Enhances Reward Learning in Healthy Individuals'. *Journal of Open Psychology Data*. 6:1, pp. 2. doi:10.5334/jopd.34.

(31) Boayue, N., Csifcsák, G., Puonti, O., Thielscher, A. & *Mittner, M.* (2018). Head Models of Healthy and Depressed Adults for Simulating the Electric Fields of Non-Invasive Electric Brain Stimulation. *F1000Research*. 7, pp. 704. doi:10.12688/f1000research.15125.2.

(30) Hetland, A., Vittersø, J., Wie, S., Kjelstrup, E., *Mittner, M.* & Dahl, T. (2018). Skiing and Thinking About It: Moment-to-Moment and Retrospective Analysis of Emotions in an Extreme Sport. *Frontiers in Psychology*. 9:971. doi:10.3389/fpsyg.2018.00971.

(29) Csifcsák, G. & *Mittner, M.* (2017). Linking Brain Networks and Behavioral Variability to Different Types of Mind-Wandering. *Proceedings of the National Academy of Sciences of the United States of America*. 114:30. doi:10.1073/pnas.1705108114.

(28) Hawkins, G., *Mittner, M.*, Forstmann, B. & Heathcote, A. (2017). On the Efficiency of Neurally-Informed Cognitive Models to Identify Latent Cognitive States. *Journal of Mathematical Psychology*. 76, pp. 142–155. doi:10.1016/j.jmp.2016.06.007.

(27) Turi, Z., *Mittner, M.*, Paulus, W. & Antal, A. (2017). Placebo Intervention Enhances Reward Learning in Healthy Individuals. *Scientific Reports*. 7, pp. 41028. doi:10.1038/srep41028.

(26) *Mittner, M.*, Hawkins, G., Boekel, W. & Forstmann, B. (2016). A Neural Model of Mind Wandering. *Trends in Cognitive Sciences*. 20:8, pp. 570–578. doi:10.1016/j.tics.2016.06.004.

(25) Rodríguez-Aranda, C., *Mittner, M.* & Vasylenko, O. (2016). Association Between Executive Functions, Working Memory, and Manual Dexterity in Young and Healthy Older Adults: An Exploratory Study. *Perceptual and Motor Skills*. 122:1, pp. 165–192. doi:10.1177/0031512516628370.

(24) Hawkins, G., *Mittner, M.*, Boekel, W., Heathcote, A. & Forstmann, B. (2015). Toward a Model-Based Cognitive Neuroscience of Mind Wandering. *Neuroscience*. 310, pp. 290–305. doi:10.1016/j.neuroscience.2015.09.053.

(23) Høifødt, R., *Mittner, M.*, Lillevoll, K., Katla, S., Kolstrup, N., Eisemann, M., Friborg, O. & Waterloo, K. (2015). Predictors of Response to Web-Based Cognitive Behavioral Therapy With High-Intensity Face-to-Face Therapist Guidance for Depression: A Bayesian Analysis. *Journal of Medical Internet Research*. 17:9, pp. e197. doi:10.2196/jmir.4351.

(22) Turi, Z., *Mittner, M.*, Opitz, A., Popkes, M., Paulus, W. & Antal, A. (2015). Transcranial Direct Current Stimulation over the Left Prefrontal Cortex Increases Randomness of Choice in Instrumental Learning. *Cortex*. 63, pp. 145–154. doi:10.1016/j.cortex.2014.08.026.

(21) *Mittner, M.*, Boekel, W., Tucker, A., Turner, B., Heathcote, A. & Forstmann, B. (2014). When the Brain Takes a Break: A Model-Based Analysis of Mind Wandering. *Journal of Neuroscience*. 34:49, pp. 16286–16295. doi:10.1523/JNEUROSCI.2062-14.2014.

(20) *Mittner, M.*, Behrendt, J., Menge, U., Titz, C. & Hasselhorn, M. (2014). Response-Retrieval in Identity Negative Priming Is Modulated by Temporal Discriminability. *Frontiers in Psychology*. 5, pp. 621. doi:10.3389/fpsyg.2014.00621.

(19) *Mittner, M.* (2013). Functional Integration of Large-Scale Brain Networks. *Journal of Neuroscience*. 33:48, pp. 18710–18711. doi:10.1523/JNEUROSCI.4084-13.2013.

(18) *Ihrke, M.*, Behrendt, J., Schrobsdorff, H., Visser, I. & Hasselhorn, M. (2013). Negative Priming Persists in the Absence of Response-Retrieval. *Experimental Psychology*. 60:1, pp. 12–21. doi:10.1027/1618-3169/a000169.

(17) Schrobsdorff, H., *Ihrke, M.*, Behrendt, J., Herrmann, J. & Hasselhorn, M. (2012). Identity Negative Priming: A Phenomenon of Perception, Recognition or Selection?. *PloS One*. 7:3, pp. e32946. doi:10.1371/journal.pone.0032946.

(16) Schrobsdorff, H., *Ihrke, M.*, Behrendt, J., Hasselhorn, M. & Herrmann, J. (2012). Inhibition in the Dynamics of Selective Attention: An Integrative Model for Negative Priming. *Frontiers in Psychology*. 3, pp. 491. doi:10.3389/fpsyg.2012.00491.

(15) *Ihrke, M.*, Schrobsdorff, H. & Herrmann, J. (2011). Recurrence-Based Estimation of Time-Distortion Functions for ERP Waveform Reconstruction. *International Journal of Neural Systems*. 21:1, pp. 65–78. doi:10.1142/S0129065711002651.

(14) *Ihrke, M.* & Behrendt, J. (2011). Automatic Generation of Randomized Trial Sequences for Priming Experiments. *Frontiers in Psychology*. 2, pp. 225. doi:10.3389/fpsyg.2011.00225.

(13) *Ihrke, M.*, Behrendt, J., Schrobsdorff, H., Herrmann, J. & Hasselhorn, M. (2011). Response-Retrieval and Negative Priming: Encoding- and Retrieval-Specific Effects.. *Experimental Psychology*. 58:2, pp. 154–161. doi:10.1027/1618-3169/a000081.

(12) *Ihrke, M.* & Brennen, T. (2011). Sharing One Biographical Detail Elicits Priming between Famous Names: Empirical and Computational Approaches. *Frontiers in Psychology*. 2:75. doi:10.3389/fpsyg.2011.00075.

(11) Behrendt, J., Gibbons, H., Schrobsdorff, H., *Ihrke, M.*, Herrmann, J. & Hasselhorn, M. (2010). Event-Related Brain Potential Correlates of Identity Negative Priming from Overlapping Pictures. *Psychophysiology*. 47:5, pp. 921–930. doi:10.1111/j.1469-8986.2010.00989.x.

(10) Ritschel, T., *Ihrke, M.*, Frisvad, J., Coppens, J., Myszkowski, K. & Seidel, H. (2009). Temporal Glare: Real-Time Dynamic Simulation of the Scattering in the Human Eye. *Computer Graphics Forum*. 28:2, pp. 183–192. doi:10.1111/j.1467-8659.2009.01357.x.

(9) Ritschel, T., Smith, K., *Ihrke, M.*, Grosch, T., Myszkowski, K. & Seidel, H. (2008). 3D Unsharp Masking for Scene Coherent Enhancement. *ACM Transactions on Graphics*. 27:3, pp. 90:1–90:8. doi:10.1145/1399504.1360689.

(8) Schrobsdorff, H., *Ihrke, M.*, Kabisch, B., Behrendt, J., Hasselhorn, M. & Herrmann, J. (2007). A Computational Approach to Negative Priming. *Connection Science*. 19:3, pp. 203–221. doi:10.1080/09540090701507823.

Book Chapters

(7) Csifcsák, G., Forstmann, B. & *Mittner, M.* (2021). Transcranial stimulation and decision-making. In Wassermann, E., Peterchev, A., Ziemann, U., Lisanby, S., Siebner, H. & Walsh, V. (Eds.), *The Oxford Handbook of Transcranial Stimulation*. . doi:.

(6) *Ihrke, M.*, Schrobsdorff, H. & Herrmann, J. (2009). Denoising and Averaging Techniques for Electrophysiological Data. In Velazquez, J. & Wennberg, R. (Eds.), *Coordinated Activity in the Brain: Measurements and Relevance to Brain Function and Behavior*. Springer New York. doi:10.1007/978-0-387-93797-7_9.

Peer-Reviewed Conference Proceedings

(5) Schrobsdorff, H., *Ihrke, M.* & Herrmann, J. (2013). Modeling Structure and Dynamics of Selective Attention. *Advances in Intelligent Systems and Computing*, Biologically Inspired Cognitive Architectures 2012, pp. 287–295. doi:10.1007/978-3-642-34274-5_50.

(4) *Ihrke, M.*, Ritschel, T., Smith, K., Grosch, T., Myszkowski, K. & Seidel, H. (2009). A perceptual evaluation of 3D unsharp masking. , Human Vision and Electronic Imaging XIV, pp. 72400R. doi:10.1117/12.809026.

(3) *Ihrke, M.*, Schrobsdorff, H. & Herrmann, J. (2009). Recurrence-Based Synchronization of Single Trials for EEG-Data Analysis. *Lecture Notes in Computer Science*, Intelligent Data Engineering and Automated Learning - IDEAL 2009, pp. 118–125. doi:10.1007/978-3-642-04394-9_15.

(2) *Ihrke, M.*, Schrobsdorff, H. & Herrmann, J. (2008). Compensation for Speed-of-Processing Effects in EEG-Data Analysis. *Lecture Notes in Computer Science*, Intelligent Data Engineering and Automated Learning – IDEAL 2008, pp. 354–361. doi:10.1007/978-3-540-88906-9_45.

(1) Yoshida, A., *Ihrke, M.*, Mantiuk, R. & Seidel, H. (2008). Brightness of the Glare Illusion. *APGV '08*, Proceedings of the 5th Symposium on Applied Perception in Graphics and Visualization, pp. 83–90. doi:10.1145/1394281.1394297.

Teaching

Lectures and supervision (University of Tromsø) — from 2014

Undergraduate Level
- Methods and Statistics III (PSY-1513)
- Methods and Statistics I (PSY-1511)
- Open Science (PSY-2901)
- Cognitive Neuroscience (PSY-2547, PSY-2553)
- Affective Neuroscience (PSY-2549)
- Biological Psychology (PSY-1004)
- Psychometrics (PSY-1504)
- Practical Course: Gerontopsychology (PSY-2543)
- Research Practical (PSY-1509/1510)
- Research skills for Master students (PSY-3900)
- Research communication (PSY-1702)

PhD Courses
- Quantitative Research Methods (HEL-8024)
- Applied Linear Regression (HEL-8030)
- Research Design and Statistics (PSY-8002)
- Quantitative Method in Clinical Health Research (HEL-8017)
- Informal reading club for PhD students and faculty: Bayesian statistics

Lectures and supervision (NTNU, Norwegian University of Science and Technology) — from 2021

Continuing Education and Professional Development
- Learning R for research and reporting: From basics to advanced applications (PSY6016)

PhD courses
- Multivariate quantitative research methods (PSY8003)

Undergraduate Level
- Research Methods (PSY3100)
- Statistics and quantitative research methods (PSY2017)
- Research Design (PSY2022)

Introduction to Neuroscientific Methods and Brain Anatomy — summer 2013

Master-level course (University of Amsterdam)
lecture and practical on electroencephalography

Linear Regression (PSY-8012) — from spring 2015
PhD course (10 credit points)

Introduction to Python Programming (A123) — winter term, 2011/2012
GGNB methods course (introductory level), University of Göttingen

Gestaltung von Lehr-Lernprozessen — summer term, 2010
Introductory seminar to the psychology of learning and teaching for students pursuing teaching certification; University of Göttingen

Matlab and Python Programming (A109) winter term, 2010/2011
GGNB methods course (introductory level); University of Göttingen

Supervision

Post-Doc supervision

Sam Verschooren (2025–)	"Controlling the flow of attention: Transition dynamics of attention and distraction across external and internal domains"
Josephine Groot (2024–)	"Neural mechanisms of off-focus cognition"
Gábor Csifcsák (2016–2019)	"Optimizing transcranial direct current stimulation for treatment of chronic pain and depression" (HelseNord, PFP1237_15)
Hema Nawani (2020–2023)	"ADHD and mind-wandering" (co-supervisor, main supervisor: Gábor Csifcsák)

PhD students

Andreas Alexandersen (2023–)	"Unraveling the cognitive and neural mechanisms of mind wandering using transcranial electric stimulation" (co-supervisor: Gábor Csifcsák)
Maren Angel Christensen (2022–)	"Structural differences in brain structure after trauma: An analysis based on the HUNT study and the Tromsø Study" (co-supervisor: Mehmet Mehmetoglu)
Josephine Groot (2018–2023)	"Neural mechanisms of off-focus cognition" (co-supervisor: Birte Forstmann)
Nya Mehnwolo Boayue (2016–2020)	"Neural and computational correlates of mind wandering" (co-supervisor: Gábor Csifcsák)
Steffen Rygg Aasen (2024–)	"Executive functions and mind wandering" (co-supervisor, main supervisor: Gábor Csifcsák)
Malin Gullsvåg (2020–)	"The relation between respiratory mechanisms and cognitive abilities in adolescence and adulthood" (co-supervisor, main supervisor: Claudia Rodríguez-Aranda)
Isabel Viola Kreis (2017–2021)	"Too precise or too imprecise: which parameter is gone awry in autism and psychosis" (co-supervisor, main supervisor: Gerit Pfuhl)
Wouter Boekel (2013–2017)	"When the brain takes a break: Neural correlates of mind-wandering", University of Amsterdam, The Netherlands (co-supervisor, main supervisor: Birte Forstmann)
Zsolt Turi (2011–2015)	"Methodological and cognitive aspects of transcranial electrical stimulation", University of Göttingen, Germany (co-supervisor, main supervisor: Andrea Antal)

Research line students (Forskerlinje)

Ragnhild Drevland (2021–2024)	"The effect of cTBS over the left AG on mind wandering"
Steffen Rygg Aasen (2021–2024)	"The effect of iTBS over the left DLPFC on mind wandering"
Andreas Alexandersen (2020–2022)	"Investigating the relationship between executive control and mind-wandering using transcranial direct current stimulation"
Samy Babiker (2021–2024)	"Modulating loss of control using rTMS during chronic pain" (co-supervisor, main supervisor: Gábor Csifcsák)

Master students

Tim Cools (2023–2024)	"Does mind wandering modulate the relationship between gaze and stimulus value?" (co-supervisor: Lars Hausfeld)
Ceylin Karayel (2023–2024)	"Exploring the Link Between Mind-Wandering and Reinforcement Learning" (co-supervisor: Gábor Csifcsák)
Krister Karlsen (2021–2022)	"Mind wandering and online experimentation"
Maren Christensen (2021–2022)	"Volumetric changes in brain structures due to trauma"
Tarjej Hotvedt (2016–)	"Mindfulness and Psoriasis: A pilot study" (co-supervisor: Svein Bergvik) `https://munin.uit.no/handle/10037/15507`
Ida Marie Opdahl (2014–2015)	"Wandering body, wandering mind? The relationship between bodily movement, creativity and mind-wandering" `https://munin.uit.no/handle/10037/9143`
Kjell Slupphaug (2023–2024)	"Moderation and interaction effects in structural equation modeling"(co-supervisor, main supervisor: Mehmet Mehmetoglu)
Caroline Angen Ina Klakegg Anastasija Kuprejeva (2020–2021)	"The effect of chronic pain and loss of control on value-based decision making"(co-supervisor, main supervisor: Gábor Csifcsák)
Are Svendsen (2014–2015)	"Eksistensiell dynamisk terapi på inneliggende pasienter - en eksplorerende studie av utfall og relasjonelle virkningsmekanismer"(co-supervisor, main supervisor: NA)
Ira Beckmann (2010–)	"Negatives Priming als Identifikations- oder Selektionsphänomen"(co-supervisor, main supervisor: Jörg Behrendt)

Professional students (Hovedoppgave)

Ida Jespersen Rønningsen Marcus Buvik (2023)	"The effect of excitatory and inhibitory TBS over the left AG on mind wandering" (co-supervisor: Gábor Csifcsák)
Jostein Ilvær Andreas Thommesen (2022)	"The effect of transcranial temporal interference stimulation (tTIS) on value-based decision making in healthy adults" (co-supervisor: Gábor Csifcsák)
Emilia Judeth Olsen Nora Nasrollahzadeh Holmboe (2022)	"Parafilia og selvregulering: En normeringsstudie" (co-supervisor: Thomas Eilertsen (SIFER NORD))
Pål Ovanger Stensland (2021)	"The role of eye-movements and pupillometry in the representation of value in a reinforcement-learning context"
Celina Jakobsen Joakim (2021)	"Klinikers vurdering mtp kjønn og ADHD utredninger"(co-supervisor, main supervisor: Jørgen Sundby)
Robert Taknes Tim Lockertsen (2020)	"Psykologi i rettens tjeneste: Hvilke faktorer påvirker årsaksattribusjon i erstatningssaker for psykisk helseskade?"(co-supervisor, main supervisor: Jørgen Sundby) `https://munin.uit.no/handle/10037/21126`

Bachelor students

Emily Haga August Lullau (2021)	"Transcranial Magnetic Stimulation Efficacy in Depression - A Systematic Review and Meta-Analysis" (co-supervisor: Zsolt Turi, Gábor Csifcsák)
Kristian Østhagen Haukås (2019)	"The wandering mind of the long-distance runner"
Anna Elfrida Vollsund Iselin Finn (2018)	"Effectiveness of HD-tDCS on influencing executive control during mind wandering" (co-supervisor: Gábor Csifcsák) `https://osf.io/nm2sz/`
Ingrid Marie Skjerstad (2017)	"The wandering mind of the long-distance runner"
Christian Fossheim (2015)	"Moment-to-moment fluctuations in emotional valence and mind-wandering"
Aurora Vangen Samy Babiker Sanna Sandell Silje Haugan Steffen Rygg Aasen (2021)	"The effect of sleep-deprivation on mind-wandering: an EEG study" (co-supervisor, main supervisor: Gábor Csifcsák)
Caroline Angen Marlene Holdt (2020)	"Employment of mental effort and representation of environmental volatility during intermittent absence of control over rewards and losses under different feedback schedules" (co-supervisor, main supervisor: Gábor Csifcsák) `https://osf.io/7wcej/`
Jorunn Bjørkøy Sarjo Kuyateh Håkon Reithe (2018)	"Transcranial direct current stimulation above the medial prefrontal cortex facilitates decision-making following periods of low outcome controllability" (co-supervisor, main supervisor: Gábor Csifcsák) `https://psyarxiv.com/rbeuz/`

Exchange students

Federica Luzzi (2022)	"The effect of transcranial temporal interference stimulation (tTIS) on value-based decision making"
Tabea Brödel (2021)	"Methods for blink detection in pupillometric data" (co-supervisor: Josephine Groot)
Sven Wientjes (2020)	"Hidden Markov Models for estimating attentional focus"
Terezie Sedlinska (2019)	"The impact of loss-of-control on system arbitration" (co-supervisor: Gabor Csifcsak)
Carole Schmidt (2017)	"The role of executive functions in mind wandering" `https://doi.org/10.1111/ejn.15049`
Isabel Kreis (2016)	"The role of executive functions in mind wandering" `https://doi.org/10.1111/ejn.15049`
Divyaratan Popli (2013)	"Eye-tracking and pupillometric correlates of mind wandering" (co-supervisor: Birte Forstmann)

Grants

MSCA-PF (host) 2024/25-2026/27
2.4 million NOK (≈ 210,000 EUR)
Controlling the flow of attention: Transition dynamics of attention and distraction across external and internal domains (MIND-FLOW)
(2 year post-doc project)

UiT High Score/UiT Talent 2024–2027
3 million NOK (≈ 350.000 EUR)
Neural mechanisms of off-focus cognition
(3 year full-time post-doc project)

HelseNord project PFP1237_15 2015–2018
3 million NOK (≈ 350.000 EUR)
Optimizing transcranial direct current stimulation for treatment of chronic pain and depression
(3 year full-time post-doc project)

PhD candidate from Health faculty, UiT 2016–2020
Neural and computational correlates of mind wandering
(4 year PhD project)

Personal Scholarships & Awards

Incentive grant 2017
Grant awarded by the Faculty of Health for excellent grades in external applications (200k NOK), University of Tromsø

Incentive grant 2016
Grant awarded by the Faculty of Health for excellent grades in external applications (200k NOK), University of Tromsø

Research Prize 2015
Research prize from the Institute for psychology, University of Tromsø

GGNB Fellowship 2009/05–2012/01
Full–Time PhD Scholarship offered by Göttingen Graduate School for Neurosciences and Molecular Biosciences (GGNB)

GGNB Bridging Fund Scholarship 2008/10–2008/12
Scholarship offered by Göttingen Graduate School for Neurosciences and Molecular Biosciences (GGNB)

DFG Scholarship 2009/01–2009/04
Full–Time Scholarship "Passungsverhältnisse schulischen Lernens: Verstehen und Optimieren"

Erasmus Scholarship 2004/07–2005/08
Scholarship for studies abroad, Oslo (UiO), Norway

Skills

Experimental Methods
fMRI, EEG/ERP, EOG, tDCS, TMS, eye-tracking, pupillometry

Programming Languages
Very Good: Python, R, C, C++, Matlab/Octave
Good: Perl, Java, SQL, PHP, Presentation
Moderate: F77, Assembler, Objective C, Bash, Javascript

Computing
Parallel Programming (MPI), GPU Programming (OpenGL), Unix/Linux Administration, LaTeX, HTML/CSS

Languages

German (native)
English (fluently written, read and spoken)
Norwegian (fluently written, read and spoken)

French (basic skills)
Dutch (basic skills)

Sports	running, skiing, judo, rock-climbing, hiking, table-tennis, football