Jesper Fischer Ehmsen

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Qualifications

- Strong skills in statistics, programming, data visualizing and computational modeling in R, Python and MATLAB.
- Knowledge and understanding of perception and psychology.
- Strong communicative abilities for effective dissemination of analyses, both in analytical contexts and consulting.
- Discerning judgment in the development and enhancement of practices and methodologies.

Education.

Master of Science – Cognitive science.   2022 - 2024

Aarhus University, Denmark.

- Computational decision making
- Advanced cognitive neuroscience.
- Advanced cognitive modeling.
- Data science.
- Natural language processing

Bachelor of Science - Cognitive science with elective in physics.   2019 - 2022

Aarhus University, Denmark.

- Experimental Methods 1-4.
- Cognitive psychology / neuroscience.

Experience.

Student Assistant.

Center of Functionally Integrative Neuroscience under Francesca Fardo and Micah Allen.   2021 - 2024

- Main responsibility for the analysis and write-up of research projects, as well as co-authorship on various other articles.
- Design and conception of new methods, models, and research projects.

Work.

Research assistant.

Center of Functionally Integrative Neuroscience under Francesca Fardo and Micah Allen.   2024 - Now

- Main responsibility for the analysis and write-up of research projects, as well as co-authorship on various other articles.
- Design and conception of new methods, models, and research projects.

Diplomas.
- Winner of the abstract competition at the Scandinavian Association for the study of pain conference in 2022.

Teaching.
- Guest lecture at the advanced cognitive modeling course at the cognitive science master's degree at Aarhus university. (Main lecturer Riccardo Fusaroli).

Workshops and talks
- Invited to Heidelberg to give a talk about predictive coding and a workshop on using probabilistic programming language, Stan.
- As part of winning the abstract competition at the Scandinavian Association for the study of pain conference I gave a 15 min talk about the early analysis of the paper "Thermosensory predictive coding underpins an illusion of pain".

Peer reviewed publications.

Ehmsen, J. F., Nikolova, N., Christensen, D. E., Banellis, L., Böhme, R. A., Brændholt, M., Courtin, A. S.,

Krænge, C. E., Mitchell, A. G., Sardeto Deolindo, C., Steenkjær, C. H., Vejlø, M., Mathys, C., Allen, M. G., &

Fardo, F. (2025). Thermosensory predictive coding underpins an illusion of pain. *Science Advances*, *11*(11),

eadq0261. https://doi.org/10.1126/sciadv.adq0261

Mitchell, A. G., **Fischer Ehmsen, J**., Basińska, M., Courtin, A. S., Böhme, R. A., Sardeto Deolindo, C., Allen, M.

G., Sandberg, K., & Fardo, F. (2024). Thermal contrast enhancement predicts paradoxical heat sensation.

Communications Psychology, *2*(1), 1–8. https://doi.org/10.1038/s44271-024-00083-8

Mitchell, A. G., **Ehmsen, J. F.**, Christensen, D. E., Stuckert, A. V., Haggard, P., & Fardo, F. (2024).

Disentangling the spinal mechanisms of illusory heat and burning sensations in the thermal grill illusion.

PAIN, *165*(10), 2370. https://doi.org/10.1097/j.pain.0000000000003352

Deolindo, C. S**., Ehmsen, J. F**., Courtin, A. S., Mitchell, A. G., Kraenge, C. E., Nikolova, N., Allen, M. G., &

Fardo, F. (2025). Assessing individual sensitivity to the Thermal Grill Illusion: A two-dimensional adaptive

psychophysical approach. *The Journal of Pain*, *27*, 104732. https://doi.org/10.1016/j.jpain.2024.104732

Pre-printed articles accepted.

Nikolova, N., **Ehmsen, J. F**., Banellis, L., Brændholt, M., Vejlø, M., Fardo, F., & Allen, M. (2024).

Microstructural Brain Correlates of Inter-individual Differences in Respiratory Interoception (p.

2024.04.08.588519). bioRxiv. https://doi.org/10.1101/2024.04.08.588519

Pre-printed articles under review.

Ehmsen, J. F., Mitchell, A. G., Courtin, A. S., Krænge, C. E., Simonnet, C., & Fardo, F. (2025). *Modelling*

perceptual uncertainty in a thermosensory illusion across the lifespan (p. 2025.07.10.664158). bioRxiv.

https://doi.org/10.1101/2025.07.10.664158

Tyrer, A., **Ehmsen, J. F.**, Hoogervorst, K., Nikolova, N., Pando-Naude, V., Steenkjær, C. H., Courtin, A. S.,

Fardo, F., Hauser, T., Bavato, F., & Allen, M. (2025). *Peripheral Beta-Blockade Differentially Enhances*

Cardiac and Respiratory Interoception (p. 2025.02.28.640776). bioRxiv.

https://doi.org/10.1101/2025.02.28.640776

Banellis, L., Nikolova, N., **Ehmsen, J.**, Courtin, A., Vejlø, M., Tyrer, A., Böhme, R., Fardo, F., & Allen, M.

(2025). *Interoceptive ability is uncorrelated across respiratory and cardiac axes: A large scale psychophysical*

study. OSF. https://doi.org/10.31234/osf.io/s56v4_v1

Pre-registered articles.

Courtin, A., Krænge, C., Mitchell, A., **Ehmsen, J.**, & Fardo, F. (2025). *Thresholding*. https://osf.io/7xg2n/