CV

Niels Trusbak Haumann
Engskovvej 58A, 8541 Skødstrup
Phone: 0045 51 51 96 64
E-mail: niels.haumann@clin.au.dk
Born: 1981-01-02

Profile

Postdoctoral researcher with extensive knowledge about the cognitive neuroscience of music and interdisciplinary bridging between the humanities and health sciences. I have authored more than 25 international, peer-reviewed research publications on the topic. My research contributions are among the top 3% most read and cited internationally on Research Gate within the PhD thesis area of musicology. Experience in teaching: from High-School-, Bachelor-, Master-, and PhD student levels, to visiting professors, and I have often achieved good exam results and positive feedback (documentation can be obtained). With 15 years of collaboration with Danish and international academic staff and students, I am specialized in designing innovative computational algorithms for applied music and health research, including audio-, music-, EEG-, and MEG-brain-signal analysis, quantitative experimental procedures, and statistics. I previously built a team nominated for the Startup Weekend Health Aarhus prize, and I recently won the first prize for the best team collaboration at a music research meeting in Gothenburg. As a person, I am a creative, open-minded, critically thinking, and planning team player who works independently on specialized tasks.

Qualifications

- **Neuroaesthetics, music theory and analysis.**
- **Professional presentation and illustration with PowerPoint and Inkscape**.
- **Scientific English publishing:** Writing of academic papers on interdisciplinary topics.
- **Applied Research:** Use of scientific knowledge for developing novel signal processing techniques and innovating (optimizing, testing, and benchmarking), e.g., for improving MEG/EEG-based hearing diagnostics, or measuring brain responses to real/live music.
- **Cochlear implant (CI) hearing diagnostics** by analyzing EEG responses in CI users.
- **Matlab programming:** advanced processing of large data sets, analysis, statistics, generation of databases, data visualization, user interfaces, and optimization.
- **Statistics with SPSS, Excel (and R)**: graphs, parametric- and nonparametric statistics.
- **Nvivo**: Course in qualitative data analysis using Nvivo.
- **Control of scientific experiments with E-Prime and Presentation**.
- **Online questionnaires, stimuli, and data collection.**
- **MEG and EEG data analysis and statistics.**
- **fMRI:** Course in statistical parametric analysis of MRI data with SPM toolbox.

Experience

2021-: **Postdoctoral researcher in a special consultant position** at the Danish National Research Foundation's Center for Music in the Brain. Including **onsite oral presentation at the international MMN 2022 conference in Japan**, and assistance in **guidance of 8 PhD students and 3 Master's students**.

2015-21: **Postdoctoral researcher in a technician position** at Danish National Research Foundation's Center for Music in the Brain, partial funding by Neurelec (**Oticon** Medical CI), and freelance job for **Interacting Minds Centre** (2019-20).

2011-15: **PhD project** at Faculty of Arts (Musicology) / CFIN/MINDLab, Aarhus University, Denmark. **2 months research visit abroad** at CIDICS in Monterrey, **Mexico**. **1 month course abroad at Helsinki Summer School** Cognitive Neuroscience course, **Finland**. **Development of new seminar**, **teaching and examination** at the seminar **Neuroaesthetics**, and the **bachelor-students**' average exam result is 10 on the 7-point-scale, corresponding to A. Also, **guest editor** and responsible for publishing a special edition at the journal **Danish Musicology Online**.

2008-2010: **Research assistant** at Music In the Brain, CFIN/MINDLab, Aarhus University.

2008-2009: **Independent behavioral research**.

2006: **Choir singer** at Sankt Johannes Church, Aarhus.

2005-2006: **Library assistant** at the Main Public Library, Aarhus.

1997: **Trainee as sound engineer** at Danish Broadcasting Corporation (DR), Aarhus.

Education

2011-15: **PhD in Cognitive Neuroscience of Music, interdisciplinary scientific research program in the humanities and life sciences,** Department of Musiology at Faculty of Arts and CFIN/MINDLab at Faculty of Health, Aarhus University.

2007-2009: **MA in Musicology, theoretical research program in the humanities; Master's Thesis introduces one of the first empirical quantitative research studies in the humanities in Denmark**; awarded ECTS grade A, Aarhus University.

2002-2007: **BA Musicology and Psychology, interdisciplinary theoretical studies in the humanities and social sciences**, Aarhus University and Aalborg University.

1998-2001: **High School with a focus on mathematics and music**.

1997: **Primary school paper on human brain development, physiology, and function.**

Languages

Danish as primary language and English as secondary language. Limited experience with German and French and a small vocabulary in Spanish, Polish and Russian.