

HIGHLIGHTS OF THE YEAR

For Center for Music in the Brain (MIB) - as for most other institutions - the year 2020 was to a great extent shaped by Covid-19. Luckily, the pandemic arrived in between the two funding periods of the center where most of our PhD students were in the later phase of their studies and had already collected their data. But with more than half the year away from the offices, we all had to adjust. We managed to move our lab meetings, research club, one-on-one meetings, and guest talks to online platforms. Getting used to such new ways of collaborating has in many ways been a positive learning experience, which may help us towards more efficient working practices in the future. Most importantly, it has fertilized the ground for several new international collaborations and paved the way for future research stays for our PhD students and postdocs. However, our core activity - carrying out research on human beings – was greatly challenged with the country in lock-down and the scanners closed. Therefore, we turned to other data sources, for instance our Spotify project that allows for correlating people’s music choices with their daily behavior. Another consequence of Covid-19 was that we sadly had to postpone the Music and Neurosciences Conference VII and the preceding summer school to June 2021 where they will take place as partly online events.



Overall, the productivity of MIB was not influenced by the pandemic, and we published many important experimental and theoretical papers in 2020. Some of these papers concern musical interaction, which will be the focus of our second funding period, such as assistant professor Ole Heggli’s SCAN paper on brain networks involved in musical interaction and postdoc Jan Stupacher’s paper in Scientific Reports about how our cultural upbringing and personal taste affect how we bond with each other when we move to music. Other papers constitute novel theoretical developments and methods, such as prof. Morten Kringelbach’s PNAS paper on dynamic coupling of whole-brain and neurotransmitter systems, postdoc David Quiroga’s NeuroImage paper on the hierarchical brain processing of melodic surprise and assistant professor Massimo Lumaca’s Human Brain Mapping paper which uses a predictive coding-based analysis of the effective connectivity in a melodic oddball fMRI paradigm. Many of the 2020 papers illustrate the extensive international network which MIB is nested in, such as Finnish professor Petri Toiviainen’s seminal NeuroImage paper on the brain networks underlying the musical beat—the result of a longtime collaboration with MIB professor Elvira Brattico— and the paper in NeuroImage on musical groove by Canadian PhD student Tomas Matthews’ and associate professor Maria Witek at Birmingham University.

This year saw no less than five successful PhD defenses. Marianne Tiihonen defended her thesis before the pandemic reached Denmark, and it turned out to be the year’s only in-real-life-defense. Marianne has continued her research career at Heinrich-Heine-Universität Düsseldorf. In the spring, Patricia da Mota and Leonardo Bonetti were the first to test the Zoom format for their PhD defenses. Even though it is less lively than a real defense, it turned out to be enlightening and festive experiences for both graduates and audiences. They were both subsequently employed as postdocs at Department of Food Science, AU and MIB, respectively. In the last part of the year, when we were all in the habit of everything happening on Zoom, Pauline Cantou and Stine Derdau defended their theses. Pauline is now working at CFIN, AU and Stine has landed a job in The Health & Happiness Research Foundation.

As the result of a deliberate effort for upskilling the MIB researchers’ qualifications for applying for funding, the junior staff managed to attract generous funding in 2020. Postdoc Kira Vibe Jespersen received a DKK 350,000 grant from Helsefonden for her study on music listening as a means to improve sleep quality in adults with sleep-onset insomnia. Postdoc Leonardo Bonetti was awarded a DKK 700,000 Carlsberg Foundation Visiting Fellowship for the project “Using Music to Model the Brain’s Realisation of Time”, which enables him to spend two year at University of Oxford. Postdoc David Quiroga received DKK 1,310,000 from Independent Research Fund Denmark to go to University of California, Berkely for two years with his project “The neural basis of musical imagination”. Finally, assistant professor Henrique Fernandes received EUR 45,000 from the Bial Foundation for the project “Brain routes to Creativity: uncovering creative flow in Jazz with neuromodulation.”

Finally, in 2020 MIB professor Morten Kringelbach finalized an extraordinary initiative. The Carlsberg Foundation and the American Pettit Foundation each donated £ 1 million for the creation of the “Erel Shalit Carlsberg Foundation Research Fellowship” in “Behavioural Neuroscience” at The Linacre College in Oxford. As the chair of this programme. Kringelbach will lead the new interdisciplinary “Center for Eudaimonia and Human Flourishing”.