



## **HIGHLIGHTS OF THE YEAR**

Since its inception, Center for Music in the Brain (MIB) has been increasingly productive, as can be seen both in its high number of interdisciplinary publications in trendsetting journals, and by the fact that these publications are cited 50 % more than the average of their respective fields. MIB is now recognised as one of the world's leading research centres in the field owing to its large, high-level international team, with complementary interdisciplinary competences, including a signature set of experimental paradigms and analysis instruments. This is reflected in the participation in four out of twelve symposia of the upcoming Neuromusic Conference, which is the most important conference in the field of neuroscience of music. As an even more encouraging fact, homebred MIB researchers, Victor Pando-Naude and David Quiroga, won two out of three young investigator awards at the International Conference on Music Perception and Cognition in August in Tokyo, Japan. 2023 saw the culmination of many novel lines of research in MIB. Worth mentioning is the discovery of the “bodily hierarchy” by PhD student Signe Hagner Mårup: that holding meter and rhythm simultaneously in two limbs is more difficult one way than the other. Also, the “encoding and decoding of music” paradigm developed by Leonardo Bonetti, which allows to track memory-related predictive coding across the different hierarchical levels in the brain, has been a major breakthrough both for an enhanced understanding of the brain but also clinically, where we are currently using it to investigate the aging brain. Finally, as a particularly important development, in collaboration with researchers at McMasters University in Canada we have developed a new mathematical modelling approach for the “inverted U-shape of groove”: that our urge to move forms an inverted U-shaped relationship with the predictability of groovy rhythms. This approach promises to unravel the mysterious relationship between the moment-to-moment surprise in groovy rhythms and the pleasure/urge to move to these rhythms. Based on our and others' research in groove there is now an international conference dedicated to this subject.

Increasingly important to MIB is the efforts to translate the fundamental research. Our influential White-paper on clinical applications of music has become the gold standard for existing research on music interventions in health care, used by health workers and policy makers alike, contributing to the integration of music as a health care supplementary tool. Our impact includes multiple consultations with the Scandinavian Ministries of Health and Culture on the potential of music to meet health challenges including an invitation to speak to the culture and health committees of the Danish Parliament in January 2024. Furthermore, we have a strong influence on music making and education including many consultations and talks at music schools, academies and music associations.

In 2023, we welcomed a new brood of PhD students, Paul Maublanc, Athanasia Kontouli and Silvia Genovese and a new assistant professor, Ana Zamorano. We were also happy to welcome back to Aarhus former postdoc, now Associate Professor, Leonardo Bonetti who had spent 2 years at University of Oxford, strengthening our collaboration with University of Oxford.

We are equally proud that many of our students and former employees thrive in new positions and job functions. Henrique Fernandes who has been with us since the very beginning of the centre, is now pursuing a career in the private sector. Also, our part time professor Andrea Ravignani, was successful in landing a full professorship in Rome. Fortunately he will be affiliated with MIB in the future as an honorary professor.

2023 was equally characterised by a number of events, which marks the final end of the Covid era.

In the beginning of the year, we had an invigorating 3-day retreat with RITMO (Centre for Interdisciplinary Studies in Rhythm, Time and Motion), Oslo University in Copenhagen where MIB and RITMO researchers worked together on creating new research projects, reinforcing the collaboration between the two centres.

In July we ran our 3-week Summer School as part of the annual Aarhus University Summer University with 25 participating students and involvement from most of the centre's employees.

Later in the summer almost the entire scientific staff and PhD students travelled to Japan for the ICMPC (International Conference on Music Perception and Cognition), chairing three symposia and presenting a symposium on XX in addition to numerous posters. At the annual Neuroscience Day at Aarhus University, Leonardo Bonetti was awarded the Marco Capogna Young Scientist Prize, and later in 2023, he received the Award for Scientific Article of the Year for 2023 by the Nordic Mensa Fund.

MIB is thankful for generous external funding from among others Carlsbergfondet and Parkinsonforeningen. Finally, we wish to thank DNRF for their continued and invaluable support and advice.