EDITORIAL

Introduction to the proceedings of the CNS*2021 meeting

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1 Welcome from the president

As president of the Organization for Computational Neurosciences and someone who has attended almost every CNS meeting since I was a PhD student, I am particularly pleased to introduce the publication of abstracts in the Journal of Computational Neuroscience. The Journal of Computational Neuroscience has a long-standing association with OCNS, having been co-founded by Jim Bower who also played a seminal role in establishing our annual CNS meeting. The status of the Journal of Computational Neuroscience as official OCNS publication is reflected by reduced personal journal subscription rates for OCNS members. Like the CNS meeting, the Journal of Computational Neuroscience encourages approaches that combine theoretical, computational, and experimental work in the neurosciences, and it provides a natural home for the publication of our meeting abstracts. I very much look forward to a long-lasting continued collaboration between the Journal of Computational Neurosciences and OCNS.

Volker Steuber, OCNS President.

2 Foreword from the editors

We are delighted to introduce the Proceedings of the 2021 CNS meeting, which was held online this year due to the ongoing Covid-19 pandemic. While the meeting would not

have been possible without the contributions of many people working tirelessly, we would like to thank here particularly the members of the Program Committee for their help in selecting the speakers and presenters. The abstracts corresponding to their talks and posters are what you find collected here.

We hosted four keynote speakers: Wolf Singer, Bill Bialek, Danielle Bassett, and Sonja Gruen. They enlightened us about computations in the cerebral cortex, the reduction of high-dimensional data, the emerging field of computational psychiatry, and the significance of spike patterns in motor cortex. From the submissions, we also selected four featured orals as particularly noteworthy. They discussed a new role for cortical oscillations as a tempering mechanism, branch-specific computations in Purkinje cells, low frequency entrainment in processing sign language, and decreasing neural heterogeneity as a unifying sign of epilepsy.

An additional 16 submissions were selected for shorter oral presentation in the plenary sessions, touching subjects such a spike and population coding, neural computation and interaction, astrocytic and dopaminergic modulation of plasticity, several kinds of sensory processing, reward learning, respiratory and motor control, neural activity propagation and synchronization, and brain organization in epilepsy and schizophrenia. We were also very pleased by the quality of the 213 presented posters, which drew a strong attendance, and the resulting online interactions between presenters and attendees. The full breadth of computational neuroscience was represented, from theory and method development over data analysis to applications.

We are looking forward to seeing everyone at the meeting in 2022 with an equally exciting program, and hopefully then in person!

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