Record Nr. UNINA9910736028303321 Encyclopedia of Computational Neuroscience [[electronic resource] /] / **Titolo** edited by Dieter Jaeger, Ranu Jung Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Springer,, 2020 **ISBN** 1-4614-7320-9 Descrizione fisica 1 online resource (Approx. 3000 p. 1000 illus.) 612.8 Disciplina Soggetti Neurosciences Neurobiology Computers Computation by Abstract Devices Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia

Sommario/riassunto

The annual Computational Neuroscience Meeting (CNS) began in 1990 as a small workshop called Analysis and Modeling of Neural Systems. The goal of the workshop was to explore the boundary between neuroscience and computation. Riding on the success of several seminal papers, physicists had made "Neural Networks" fashionable, and soon the quantitative methods used in these abstract model networks started permeating the methods and ideas of experimental neuroscientists. Although experimental neurophysiological approaches provided many advances, it became increasingly evident that mathematical and computational techniques would be required to achieve a comprehensive and quantitative understanding of neural system function, "Computational Neuroscience" emerged to complement experimental neurophysiology. In 2002, the non-profit organization, Organization for Computational Neuroscience (OCNS) was formed. OCNS has now become the first professional society serving the global computational neuroscience community. OCNS as a society lives at the interface where experimental neuroscience meets theoretical, statistical and computer-simulation analyses, with the hope of turning large collections of experimental results into a principled

understanding of nervous systems. It also supports the development of new engineering, computational and informatics techniques for data collection, analyses and management. The Encyclopedia of Computational Neuroscience will be consultable by both researchers and graduate level students. It will be a dynamic, living reference, continually updatable and containing linkouts and multimedia content whenever relevant.