

Introduction

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Computational Neuroscience (CNS*2009)

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The international *Computational Neuroscience* meeting (CNS) has been a premier forum for presenting experimental and theoretical results exploring the biology of computation in the nervous system for the last eighteen years. The meeting is organized by the *Organization for Computational Neurosciences*, a US based non-profit organization governed by an international executive committee and board of directors. A separate program committee is responsible for the scientific program of the meeting. Participants at the meeting come from academia and industry. The meeting not only provides a venue for research presentation and discussion by senior scientists but actively offers a forum for promoting and supporting young scientists and students from around the world.

The papers in this supplement were presented at the 18th annual Computational Neuroscience Meeting (CNS*2009) held in Berlin, Germany from Saturday July 18 to Thursday July 23, 2009. CNS*2009 consisted of three days of oral and poster sessions at the main meeting, preceded by a day of ten "Bernstein Tutorials", and followed by two days covering fifteen workshops and a Neuroinformatics symposium. A welcome reception, banquet cruise, and a Jazz party offered attendees informal forums for scientific and social exchange. The main meeting was held at the Hilton Berlin and workshops were held at the Berlin-Brandenburg Academy of Sciences. This year the meeting included several invited talks concerning neuroinformatics. These talks, highlighted by the "Frontiers in

Computational Neuroscience Lecture" given by Dr. Sten Grillner entitled *Networks in motion – intrinsic function and control*, illustrated how both massive computation and modern computer science can play roles in understanding how the brain computes. Abstracts for the meeting were submitted in early February. Those authors wanting an oral presentation also submitted an extended summary of their work. Abstracts were reviewed by the Program Committee and each extended summary was additionally reviewed and scored by three independent reviewers. In the end, 391 papers were accepted for the meeting, making this year's edition the largest. The review comments and scores for the extended summaries were used by the Program Committee to construct the final oral and poster programs.

In what follows, abstracts for invited talks are given first, followed by abstracts of oral presentations in order of presentation at the meeting and abstracts for posters. Abstracts for poster presentations are loosely grouped by topic according to keywords chosen by the authors in their initial submissions. These abstracts represent a sampling of some of the exciting work being done today, often by young researchers, in the field of Computational Neuroscience.

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