

Statistical Physics and Neural Computation

Oct 4-6, 2019
Sun Yat-sen University
Guangzhou, China



Introduction

There are active research interests in the interdisciplinary boundaries across physics, mathematics, machine learning and neural computation, which is mostly stimulated by the success of deep learning techniques in various academic and industrial applications, and also by the inquiry of how the brain works during worldwide brain projects. However, the core topic—neural networks, still being a black box lacking mechanism explanations, drives the recent efforts of the physics/math community towards understanding the inner workings of these artificial and biological neural networks. Progress along this line should provide keys to open new doors towards novel applications, predictions and even new paradigms. Here, we gather top experts in this field to discuss recent progress, and inspire collaborations.

Scope

- ▶ Analytic and numerical techniques to analyze neural networks
- ▶ Theory of deep learning
- ▶ Dynamical models of neural computation
- ▶ Biological neural networks
- ▶ Other theoretical topics of neural networks

Where: Chit Sang Hall (哲生堂)

Time: Oct 4-6, 2019

Speakers:

Adriano Barra, Università del Salento
Alexis Dubreuil, ENS, France
Pulin Gong, Sydney University
Jonathan Kadmon, Stanford University
Yoshiyuki Kabashima, Tokyo Tech
Masafumi Oizumi, Tokyo University
Jeffrey Pennington*, Google Brain
David Saad, Aston University
Taro Toyoizumi, RIKEN
K Y Michael Wong, HKUST
Si Wu, Peking University
Gang Yan, Tongji University
Riccardo Zecchina, Bocconi University
Changsong Zhou, HKBU
Pan Zhang, Chinese Academy of Science
For contributed speakers, pls visit the conference website (see below).

Information:

- ▶ No registration fee;
- ▶ Local expenses provided to invited and contributed speakers. For other participants, please write to the organizer for any help.



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