

Proposal of a half-day workshop on

Systems Biology

Organizer: Xingming Zhao, Fudan University, China

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The workshop of systems biology is organized by the technical committee on systems biology of IEEE SMC society, and aims to present the recent progress on the systems biology. With the accumulating of huge amount of biomedical data, it is becoming a big challenge to understand those data. The objective of this half-day workshop is to show the recent progress of new machine learning and artificial intelligent algorithms developed for data mining of those big data, and the mathematic models used for understanding the complex biological systems.

Abstracts of published or unpublished research works are welcome to present at the workshop. Topics of interest include all aspects of computational systems biology, but not limited to, the following areas:

- (1) Data mining of biomedical data
- (2) Application of artificial intelligence
- (3) Medical image analysis
- (4) Electronic health records
- (5) Network Biology
- (6) Disease biomarker
- (7) Drug discovery
- (8) Qualitative analysis of biological systems

Target audience:

The purpose of this workshop is to show and discuss recent progress in this field for the researchers, graduate students and practitioners. The audience who are interested in data mining of and application of artificial intelligence to big data accumulating in biomedicine will be expected. The minimum number of 15 participants are expected in the workshop.

Biography of organizers:

Xingming Zhao (Senior Member, IEEE) received the PhD degree from the University of Science and Technology of China, Hefei, China. Currently, he is a full professor at the Institute of Science and Technology for Brain Inspired Intelligence, Fudan University, China, and serves as a Vice Director of the Key Laboratory of Computational Neuroscience and Brain-Inspired Intelligence (Fudan University), Ministry of Education, China. His research interests include data mining, bioinformatics, and computational systems biology. He has published more than 90 peer-reviewed journal papers. He is a Co-Chair of IEEE SMC Technical Committee on Systems Biology. He is also the lead guest editor and the editorial member of several journals, e.g. IEEE/ACM TCBB, Neurocomputing, Journal of Theoretical Biology, IET Systems Biology, and so on.

Yufei Huang received his Ph.D. degree in electrical engineering from the State University of New York at Stony Brook in 2001. Since 2002, he has been with the Department of Electrical and Computer Engineering at the University of Texas at San Antonio (UTSA), where he is now Professor. He is also an adjunct professor at the Dept. of Epidemiology and Biostatistics at the University of Texas Health Science Center at San Antonio. Dr. Huang's expertise is in the areas of computational biology, computational neuroergonomics, brain computer interface, statistical modeling, and Bayesian methods. He is an Associate Editor of IEEE Transactions on Signal Processing, BMC Systems Biology, EURASIP Journal on Bioinformatics and Computational Biology, and International Journal Machine Learning and Cybernetics.

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