School of PHYSICS
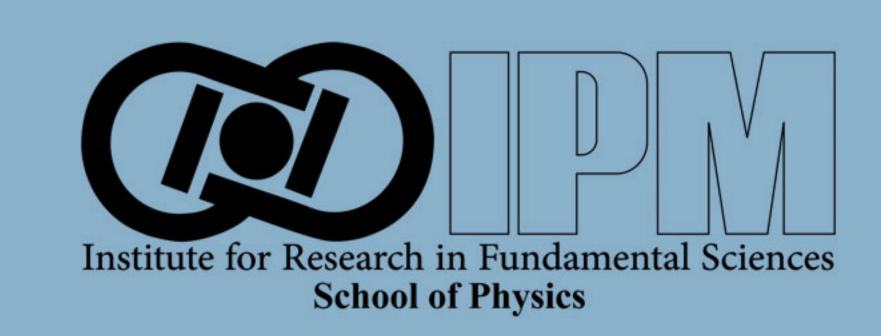
Workshop on Complex Networks

School of Physics, IPM
19 February 2020 (30 Bahman 1398)

Complex networks emerge as a common motif in many disciplines including physics, biology, social and computer sciences. Being a skeleton to a multitude of complex systems, the system-level characterization of complex networks implies the mapping of interactions among a large number of components. These systems are often conceived to have characteristic features such as fat-tail degree distribution, high clustering coefficient, and small-word property. Examples include statistical mechanical models (such as spin models) defined over heterogeneous topologies, network of the brain in neuroscience, network of protein interactions in biology, social networks, scientific collaboration networks, correlation networks in the context of economy and finance, mobility network in epidemiology and civil traffic, food web in ecology, multilayer networks in infrastructures and engineering, etc. The study of these systems has required a multidisciplinary approach within which complex networks emerge as the central unifying paradigm, shedding light on intriguing properties of these systems, including universalities found in their global cooperative behaviors and dynamics. The aim of this workshop is to give advanced graduate students, postdocs and other researchers a brief introduction to some of the problems and approaches discussed at the frontiers of complexity research.

Speakers:

- N. Azimi, IASBS
- F. Ghanbarnejad, SUT
- A. Ghazizadeh*, IPM
- Gh.R. Jafari, SBU
- F. Safaei, SBU
- M. Sabokrou, IPM
- A.R. Vafaei Sadr, IPM

* Jointly with monthly colloquium at School of Nano Science (IPM)

Organizers:

- Gh.R. Jafari, SBU
- A. Naji, IPM
- M. Saeedian, IPM (*Chair*)

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School of Physics, Farmanieh Conference Hall, Institute for Research in Fundamental Sciences (IPM), No. 70, Lavasani St., Tehran

Regsitration Deadline

09 February 2020

http://physics.ipm.ac.ir/conferences/wcn/