1145-62-918 **Ramchandra Rimal***, 4393 Andromeda Loop N, Orlando, FL 32826, and **Marianna Pensky**.
Estimation in Popularity Adjusted Stochastic Block Model.

In the present talk, we consider the Popularity Adjusted Stochastic Block Model (PABM) which has been recently introduced by Sengupta and Chen (2018). In the PABM, the probability of a connection between nodes is a product of popularity parameters that depend on the communities to which the nodes belong as well as on the pair of nodes themselves. The authors showed that PABM generalizes both the Stochastic Block Model (SBM) and the Degree-Corrected Block Model (DCBM) and suggested the quasi-maximum likelihood type procedure for estimation and clustering. However, the authors considered only the case of a small finite number of communities which is completely known. In addition, they did not provide any explicit expression for the error. In the present talk, we suggest an estimation procedure of the matrix of the connection probabilities between nodes when the number of classes is unknown and can grow with the number of nodes. (Received September 17, 2018)