Additional Topics for Undergraduates, unavailable are crossed. Each topic requires study of the textbook and cited papers and presenting the findings in 25 min. presentation + 5 min questions.

1. ~~Section 4.12-13 Advanced Topic 4.B: Plotting power laws and 4.C Estimating the degree exponent~~ **u17 Daley, Peyton**
2. ~~Section 6.3: Measuring fitness of evolving networks~~ **u16 Swanke Erik**
3. ~~Section 9.4.3: Limits of modularity and optimized greedy algorithms;~~ **u9 Gibson, Alexander**
4. ~~Section 9.5.1-9.5.2, Clique and link percolation~~ **u4 Fatih Orhan**
5. ~~Section 9.12 Advanced Topic C: Fast Algorithm for Community Detection~~ **u6 Gong, Yuyang**
6. ~~Section 10.2: Epidemic modeling;~~ **u10 Lauren Mainhardt**
7. ~~Section 10.3: Epidemics on networks~~ **u5 Adotey, Jonathan**
10. ~~Section 10.4: Contact networks patches~~ **u18 sherpa tashi**
11. ~~Section 10.5: Beyond the degree distribution~~ **u12 Loshak, Angelica**
12. ~~Section 10.6: Immunization; https://arxiv.org/pdf/1908.04901.pdf~~ **u7 Orr, Alex**
13. Section 3.14-15 Advance Section 9.6 1: Testing communities; IEEE Tran Knowledge & Data Engineering, 2019.
14. Advanced Topics 3.C Giant component and 3.D Component sizes

Papers only for short undergraduate presentations

1. ~~From Data to Complex Network Control of Airline Flight Delays, Xiang Niu, Chunheng Jiang, Jianxi Gao, G. Korniss, Boleslaw K. Szymanski, *Sci Rep* **11**:18715, Sept., 2021.~~u8 Brandon MCCusker

2. ~~Social Networks through the Prism of Cognition, Radoslaw Michalski, Boleslaw K. Szymanski, Przemyslaw Kazienko, Christian Lebiere, Omar Lizardo, Marcin Kulisiewicz, *Complexity*, **2021**:4963903, Jan., 2021~~ **u15 Bowen Thomas**

3. ~~Entropy Measures of Human Communication Dynamics, Marcin Kulisiewicz, Przemyslaw Kazienko, Boleslaw K. Szymanski, Radoslaw Michalski, *Scientific Reports,* **8**:15697. Oct. 2018~~ **u14 Tan, June**

4. Balancing Speed and Coverage by Sequential Seeding in Complex Networks, Jarosław Jankowski, P. Brodka, P. Kazienko, B. K. Szymanski, R. Michalski, T. Kajdanowicz, *Scientific Reports* **7**:891, Apr., 2017.

5. Temporal Network Epistemology: on Reaching Consensus in Real World Setting, Radoslaw Michalski, Damian Serwata, Mateusz Nurek, Boleslaw K. Szymanski, Przemyslaw Kazienko, Tao Jia, *Chaos* **32**(6):063135, June 27, 2022.

g5+u3+t12