Introduction to Social Network Analysis: July 2018

Deadline:
Mar 30, 2018

Course Summary: This 5-day short course, which will take place from **July 16-20, 2018,** will serve as an introduction to the theory and practice of social network analysis (SNA). Where standard statistical analysis assumes that observations on different entities (people, organizations, animals, etc.) are independent, SNA looks to the relationships among these observations to try to explain why this configuration of relationships might exist, or how this network structure explains other attributes of the network. While network science has a long tradition, this field has recently exploded with new data resources in social media and new computational methods, particularly in the application to socio-environmental systems. This course will begin with an introduction to networks, and then move into a variety of descriptive methods with examples of how these have been used in social and environmental literatures.

The focus of the last two days will be how to develop questions about social networks in the socio-environmental context and appropriately test them. Participants are encouraged to bring their own data to the course. We will have some independent time each day to try to apply the concepts learned to each dataset. For those without data on hand, the instructor will be able to help you find (an) interesting dataset(s) that you can play with during the course.

Target Audience: This course is intended as a foundational course for anyone interested in adding SNA to their analytical toolkit, regardless of prior experience. Applicants whose research or teaching focus on such the social or biophysical aspects of environmental problems will be given preference, but applicants with other areas of interest are also welcome. The course material will be structured for students who have heard of SNA and want to apply it in their own work, but lack the necessary hands-on training in methodology. Some preliminary readings will be made available to participants with no exposure to SNA. Target class size is 12-15, so space is limited. Some experience with the R programming language, or at least comfort with programming languages in general is expected, as well as an understanding of basic statistics (distributions, hypothesis testing, and regression).

Topics:

Network Theory

- What is network data? What are the problems in collecting it? What kinds of questions can we use it to answer? How is it different from other data?

Network Measures

- structural & locational properties of actors/locations/resources (centrality, prestige, & prominence to determine popular resources, organizations, etc.), structural cohesion (subgroups & cliques), equivalence of actors (structural equivalence & block models to determine niche differentiation or

social isomorphism), local analyses (dyadic & triadic analysis, brokerage to determine structural hierarchies and key resources or actors)

Hypothesis Testing

- matrix permutation tests, conditional uniform random graphs, network autocorrelation models, introduction to statistical global analyses (p1, p*, ERGMs, & their relatives), temporal models

Costs: Registration fees are $100 for graduate students and postdocs and $250 for faculty and all others*. Financial assistance for the registration fee and/or flights and hotel costs for non-local participants is available in accordance with our travel policies [1], but requires a formal application demonstrating a clear need for assistance (see below). Applicants from developing countries or smaller academic institutions will be prioritized for assistance.

To Apply: Applicants should submit an application online [2]. The online application includes questions about the applicant's interests and expectations for the course, their background, and a resume or CV. Response to application questions should explain how the course relates to the applicant's work, a brief description of the system or problem they would like to model, and how this course's content and intensive structure will benefit their work. Participants will be selected based on likelihood to benefit from the course, and how well background, interests, expectations, and ideas for a simple model fit with the course material. Additional factors such as career stage, research field, ethnicity, and gender will also be considered to ensure diversity.

If travel assistance is requested, space will be provided in the online application form to describe the applicant's circumstances that clearly demonstrate the need for financial assistance.

For questions, please contact Dr. Lorien Jasny at L.Jasny@exeter.ac.uk [3].

Apply Online [2]

* Cancellation with full refund of registration fee is possible until May 8, 2017.

The University of Maryland is an Equal Opportunity Employer.

Minorities and Women Are Encouraged to Apply.

Source URL: https://www.sesync.org/opportunities/short-courses/introduction-to-social-network-analysis-july-2018

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[1] http://www.sesync.org/visitor-resources/travel
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[3] mailto:L.Jasny@exeter.ac.uk