

COMM 616-600 Topics in Communication Methods-Social Network Analytics
(1:30-4pm Thursday)

Contact Information

Instructor: Dr. Lu Tang

Email: ltang@tamu.edu

Location: Online (Zoom link for online lecture will be provided on eCampus for security reasons.)

Office hours: 10-11:30 am Tuesday and 3:00-4:30 pm Wednesday on Zoom

If you need to meet outside the regular office hours, please email me to set up an appointment.

Course Description

Social network analysis allows us to discover the hidden patterns, relationships, and meanings in big data such as Twitter, YouTube, as well as the content of traditional media. It can be applied in many areas of communication: health communication, media, political communication, popular culture, etc. This course is an introduction to the theory, methods, and procedures of network analysis.

Learning Objectives:

By the end of this course, students will

- Have a working knowledge of the concepts and methods used to describe and analyze social networks
- Be able to understand research using the social network analysis.
- Learn to conduct basic network analysis research projects.

Required books

- Valente, T. W. (2010). *Social networks and health: Models, Methods, and Applications*. New York: Oxford University Press.
- Caldarelli, G., & Catanzaro, M. (2012). *Networks: A very short introduction*. Oxford University Press.
- Mayer-Schonberger, V. & Cukier, K. (2013) *Big Data*. Houghton Mifflin Harcourt Publishing Company.
- Additional journal articles and book chapters will be available on eCampus.

Course Format

This course is a doctoral seminar. This means that you will be expected to perform accordingly on this level, which includes reading all the assigned readings before class, and reflecting on them carefully; attending all classes and participating actively in the class discussion; turning in your assignments that are of high quality, well proofed, well documented, and in APA 7th edition style.

Assignments

1. Discussion leadership (10%)

Each student (or a team of two) is required to lead class discussion on a specified topic in the semester. (A sign-up sheet will be handed out on the first day). You will organize the materials and lead the discussion around 1 hour to cover theory, methodologies, limitations, gaps in current research, etc. If you are working in a team, then I would expect your discussion to be more thorough. You can do a combination of lecture, discussion questions, extensions, exercises, videos, etc. BUT, you must make it interesting and relevant. A regurgitation of the materials will bring a C at most.

2. Take-away messages (2% each, 16% total).

We will cover 8 topics this semester (including two topics on research methods.) At the beginning of the first session of each topic, you will turn in no more than one page, where you are going to list three take-away messages from the readings assigned for that topic. These take-away messages could be information that you find to be most important, most interesting, or most unexpected. Please don't turn in three quotes. Instead, I am more interested in how you describe and assess the information. I will organize the discussion in the second session of each topic considering your take-away messages. (You don't need to turn in take away messages on Jan 21, Feb 25, March 25, and April 15)

3. Final research paper and final presentation

- Final research paper. As the final product of this seminar, you will write an individually authored research article that will be submitted to a conference and hopefully to a journal. Hence, this should be a completed research project, including introduction, literature review, method, result, and discussion. You can collect your own data or you can also use existing dataset for your study. I will grade your paper and give you my feedback. I would expect and hope you revise the paper based on my comments and submit it to ICA or NCA conference.
- To facilitate the success of this final project, you will turn in the assignments in three segments:
 - Topic and outline 10% (a one-page outline of your research paper + a bibliography) - Due March 25
 - Final paper 40% - Due May 3.
- Final Presentation 10%: you will present your final project as if you are presenting it at an academic conference. Each student will have 12 -15 minutes and will answer questions from the audience. (April 22 and 29)

4. Attendance, participation, and charisma (14%)

As graduate students, you have made a commitment to furthering your education. That commitment affects the culture of each class that you are in, and thus, I expect that you will always choose to come to class. By attending, I will presume that you have done your reading, completed your assignments, and will be prepared to contribute positively to our class culture. Missing 2 can result in a full-letter grade deduction. After 3 absences, I reserve the right to assign you an "F" regardless of your numerical grade. If you have extenuating circumstances for

attendance (true illness, death in the family, sick children, please let me know in advance of class.).

Charisma points are designed to evaluate not only participation, but appropriate and helpful participation. On days when you are not the discussion leader, I still expect you to have done all of the required readings prior to class, note questions/issues for discussion, and to take an active role in the discussion. Your class contribution should go beyond “I liked this reading but didn’t like that one” (though these reactions are important to note and keep track of).

More importantly, our class culture is created, sustained and destroyed through our thoughtful, courteous and supportive interaction with our classmates. Certainly we can challenge one another’s ideas, and we should! However, at all times, we will uphold high standards of respect, non-domination, and work to foster a climate of intellectual curiosity.

Grading Scales

A: 90-100 points

B: 80-89

C: 70-79

D: 60-69

F: <60

Course Policies

eCampus

eCampus will be used in this course. All written course documentation (i.e. course syllabus, assignments, grade book, etc.) will be available on <http://ecampus.tamu.edu>. Thus, you should check the eCampus website regularly for class announcements and information.

Academic Integrity Statement and Policy

Plagiarism, the intentional or unintentional misrepresentation of work as your own, will not be tolerated. **Anyone convicted of plagiarizing all or part of an assignment will earn an F in this course.** Be warned: plagiarism is not just copying someone else’s work word for word. There are different types of plagiarism including but not limited to passing off someone else’s work as your own (whether that someone else is a classmate, friend, online source, or published author), source misrepresentation (failure to cite a paraphrased source, use quotation marks around exact quotations, or turn in a list of sources cited), and using work of your own which has already been used in another class. If you are unsure what constitutes plagiarism, see me, check a writing handbook, or consult the Texas A&M University Honor Code.

“An Aggie does not lie, cheat or steal, or tolerate those who do.” See the Aggie Honor Code at link <http://aggiehonor.tamu.edu>

Policy on Attendance and missed work

See <http://student-rules.tamu.edu/rule07> for university policy on excused and unexcused absences. All assignments are due at the beginning of the class on the due date. Late assignments are strongly discouraged. There is a 5% penalty for each day the assignment is late (including weekends and holidays).

Makeups can only be arranged for legitimate and verifiable absences. If the absence is known ahead of time, you must make arrangements with the instructor before the day the assignment is due.

Policy on disabilities

Americans with Disabilities Act (ADA) Policy Statement - The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information visit <http://disability.tamu.edu/> - Use current ADA statement with White Creek location and Disability Services (does not show Koldus, Cain Hall or Department of Student Life). Programs not on main campus should use the appropriate location at their site.

Tentative Course Schedule (Subject to change)

1/21	<p>Course Introduction</p> <p>Readings</p> <ul style="list-style-type: none">• Caldarelli, G., & Catanzaro, M. (2012). <i>Networks: A very short introduction</i>. Oxford University Press.• Maille, M., & Saint-Charles, J. (2014). Fueling an environmental conflict through information diffusion strategies. <i>Environmental communication</i>, 8, 305-325.
1/28	<p>Big Data and Social science Research</p> <p>Readings</p> <ul style="list-style-type: none">• Mayer-Schonberger, V. & Cukier, K. (2013) <i>Big Data</i>. Houghton Mifflin Harcourt Publishing Company.• Colleoni et al. (2014). Echo chamber or public sphere? Predicting political orientation and measuring political homophily in Twitter using big data. <i>Journal of Communication</i>, 63, 317-332. <p>TedTalk: Nicholas Christakis: How social networks predict epidemics</p> <p>https://www.ted.com/talks/nicholas_christakis_how_social_networks_predict_epidemics#t-672503</p>
2/4	<p>Introduction and History of social network analysis</p> <p>Readings:</p> <ul style="list-style-type: none">• Valente (2010). Chapter 1 and 2• Paxton, S.J. et al. (1999). Friendship clique and peer influence on body image concerns, dietary restraint, extreme weight-loss behaviors and binge eating in adolescent girls. <i>Journal of Abnormal Psychology</i>, 108(2): 255-266.• Valente et al (1997). Social network associations with contraceptive use among Cameroonian women in voluntary associations. <i>Social Science and Medicine</i>, 45(5): 677-687. <p>Diffusion of Innovation and Social Network Analysis (3 parts)</p> <p>https://www.youtube.com/watch?v=ZG9dAIBd4xQ</p> <p>https://www.youtube.com/watch?v=mVVGgTe2bJM</p> <p>https://www.youtube.com/watch?v=gfaEV3QN1YY</p>

2/11	<p>Data collection and Egocentric network</p> <p>Readings:</p> <ul style="list-style-type: none"> • Valente (2010). Chapter 3 and 4 • Aley, M.R.& Levine, K. (2020). From whom do young adults actively seek career information? An ego-network analysis of vocational anticipatory socialization. <i>Communication Studies</i>, 71:2, 351-367. • Tang, L., Fujimoto, K., Amith, M., Cunningham, R., Costantini, R.A., York, F., Xiang, G., Boom, J., & Tao, C. (2021). “Down the Rabbit Hole” of Vaccine Misinformation on YouTube: Network Exposure Study. <i>Journal of Medical Internet Research</i>, 23(1): e23262. doi: 10.2196/23262
2/18	<p>Measures: Centrality</p> <p>Readings:</p> <ul style="list-style-type: none"> • Valente (2010). Chapters 5 • Barnett et al. (2010). Measuring quality in communication doctoral education using network analysis of faculty-hiring patterns. <i>Journal of Communication</i>, 60, 388-411. • Wells B.F. & Jackson S.J. (2019). The Battle for #Baltimore: Networked counter publics and the contested framing of urban unrest. <i>International Journal of Communication</i> 13, 169-1719. • Weeks, et al. (2014). Partisan enclaves or shared media experiences? A network approach to understanding citizen’s political news environment. <i>Journal of Broadcasting & Electronic Media</i>, 60(2), 248-268.
2/25	<p>UCINET</p> <p>Software download: http://www.analytictech.com/archive/ucinet.htm (free for 60 days)</p> <p>Hanneman, R.A. & Riddle, M. (2005). Introduction to social network methods.</p> <p>http://faculty.ucr.edu/~hanneman/nettext/</p>
3/4	<p>Measures: Network level measures</p> <p>Readings:</p> <ul style="list-style-type: none"> • Valente (2010) Chapter 8 • Shapiro, M.A. & Park, H.W. (2018). Climate change and YouTube: Deliberation potential in post-video discussions. <i>Environmental Communication</i>, 12(1); 115-131.

	<ul style="list-style-type: none"> Pan et al. (2017). You get what you give: Understanding reply reciprocity and social capital in online health support forums. <i>Journal of Health Communication</i>, 22, 45-52.
3/11	<p>Semantic Network Analysis. Guest Speaker: Dr. Wenlin Liu, University of Houston.</p> <p>Install Leximancer trial version on your computer before class.</p> <p>Readings:</p> <ul style="list-style-type: none"> Doerfel, M.L. (1998). What constitutes semantic network analysis? A comparison of research and methodologies. <i>Connections</i>, 21(2): 16-26. Liu. W., Lai, C-H., & X. W. (2018). Tweeting about emergency: A semantic network analysis of government organizations' social media messaging during Hurricane Harvey. <i>Public Relations Review</i>, 44(5): 807-819. Eddington (2020). Alt-resilience: A semantic network analysis of identity (re)construction in an online men's rights community. <i>Journal of Applied Communication Research</i>, 48(1): 114-135.
3/18	No class-Students attending Friday classes
3/25	<p>Gephi -Guest speaker: Dr. Tuan Amith (UT Health)</p> <p>Free download: https://gephi.org/users/download/</p> <p>Readings: TBD</p> <p>Topic and outline of final paper due</p>
4/1	<p>Exponential Random Graph Models. Guest speaker: Dr. Ye Sun (Utah)</p> <p>Reading:</p> <ul style="list-style-type: none"> Valente (2010) Chapter 9 Sun (2020). How conversational ties are formed in an online community: A social network analysis of a tweet chat group. <i>Information, Communication & Society</i>, 23(10): 1463-1480.
4/8	<p>Network Interventions</p> <p>Reading:</p> <ul style="list-style-type: none"> Valente (2010) Chapter 11 Amirkhanian et al. (2005). A randomized social network HIV prevention trial with young men who have sex with men in Russia and Bulgaria. <i>AIDS</i>, 19: 1897-1905. Granovetter, M. (1973). The strength of weak ties. <i>American Journal of Sociology</i>, 78, 1360-1380.

4/15	Artificial intelligence and social science studies. Guest speaker: Dr. Degui Zhi, UT Health. Readings: TBD
4/22	Student Presentations (conference style; 12-15 minute presentation followed by Q&A)
4/29	Student Presentations (conference style; 12-15 minute presentation followed by Q&A)
5/3	Final paper due