

UNCHITTA KANJANASARATOO

Department of Computational and Data Sciences
George Mason University

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RESEARCH INTERESTS

Computational Social Science; Network Science; Social & Political Networks; Mobility and Urban Sociology/Economics; Data Science & Machine Learning; Quantitative Approaches to Social Justice

EDUCATION

- PhD** George Mason University *Aug 2020 – Present*
Computational Social Science
Areas of study: Network Science, Complexity Theory, Agent-based Modeling, Modeling & Simulation, Sociology, Economics
Advisor: Eduardo Lopez
- BS** University of California, Los Angeles (UCLA) *Sep 2018 – Jun 2020*
Applied Mathematics, GPA: 3.46
Coursework: Modeling, Network Science, Machine Learning, Probability Theory & Mathematical Statistics, Stochastic Processes, Optimization
Mentors: Mason Porter & Michelle Feng
- AS** Foothill College *Sep 2016 – Jun 2018*
Mathematics & Computer Science, GPA: 3.88
Dean's List

ACADEMIC APPOINTMENTS & INDUSTRIAL POSITIONS

- George Mason University Fairfax, VA
Presidential Scholar & Graduate Research Assistant, *Aug 2020 – Present*
Department of Computational and Data Sciences
- Institute for the Quantitative Study of Inclusion, Diversity, and Equity (QSIDE Institute) Williamstown, MA
Research Intern *Jun 2020 – Aug 2020*
- University of California, Los Angeles Los Angeles, CA
Undergraduate Student Researcher *Sep 2019 – Jun 2020*

Clover Network, Inc
Data Science Intern

Sunnyvale, CA
Jun 2019 – Aug 2019

Clover Network, Inc
Data Analyst Intern

Sunnyvale, CA
Jul 2018 – Sep 2018

RESEARCH

U. Kanjanasaratool, M. H. Feng, M. A. Porter. A homophily-driven co-evolving bounded confidence model for opinion dynamics on networks, **in prep.**

C. M. Topaz, H. Z. Brooks, U. Kanjanasaratool, B. Sandstede, C. M. Smith. Network Models of Diversity and Shared Identity, **in prep.**

(Course Project) U. Kanjanasaratool. A Diversity-Theory-Motivated Hybrid Computational Model of Team Productivity.

(Course Project) H. Gupta, U. Kanjanasaratool. Innovating Preferential Attachment Models to Study Innovation Networks (Joint with H. Gupta).

PUBLICATIONS

Expository Publications in Journal and Magazines

Brooks H, Kanjanasaratool U, Kureh Y and Porter M (2021) Disease Detectives: Using Mathematics to Forecast the Spread of Infectious Diseases. *Front. Young Minds.* 9:577741. doi: 10.3389/frym.2020.577741

HONORS AND AWARDS

Presidential Fellowship
George Mason University 2020 - Present

Successful Participant
COMAP Mathematical Contest in Modeling 2020

Excellence in STEM (Mathematics) Award
Foothill College 2018

TEACHING EXPERIENCE

Mathematics & Statistics Tutor

Oct 2017 - Jun 2018

Foothill College (Los Altos Hills, CA), EOPS Program

- Tutored college-level mathematics and statistics to underrepresented students in the EOPS program. Hired based on professors' recommendations.

PRESENTATIONS

(Paper discussion) "The Effects of Social Networks on Employment and Inequality, Calvo-Armengol & Jackson 2004." UCLA Networks Journal Club, September 2020.

"Coevolving bounded confidence: modeling opinion dynamics on adaptive social networks with homophily (working paper)." UCLA Networks Journal Club, May 2020.

"Graph-based Recommendation Systems." UCLA Networks Journal Club, Feb 2020.

"Innovating Preferential Attachment Models to Study Innovation Networks." UCLA Math 168 Final Project Paper Presentation, June 2019.

"Interpretability in Machine Learning & Sparse Linear Regression." UCLA Department of Mathematics Directed Reading Program, Quarter-end Presentation, Jan 2019.

"Principal Component Analysis: A Mathematical Introduction." Foothill College Independent Study Presentation, June 2018.

PROFESSIONAL MEMBERSHIPS

Women in Network Science Society, 2020-Present. Member.

Institute for the Quantitative Study of Inclusion, Diversity, and Equity, 2020-Present. Research Affiliate.

UCLA Networks Journal Club, 2019-2020. Member.

UCLA Women in Mathematics, 2018-2019. Member.

ACTIVITIES/PARTICIPATION

Panelist & Participant, ICERM Computational Approaches to Social Justice Workshop, March 2021.

Participant, American Mathematical Society Short Course “Mathematical and Computational Methods for Complex Social Systems,” January 2021.

Participant, UCLA IDRE Census Data Analysis and Mapping with Python Workshop, January 2021.

Participant, COMAP’s Mathematical Contest in Modeling, March 2020.

Participant, UCLA Department of Mathematics Directed Reading Program, AY20218-2019.

- Paired with a graduate student mentor to read text on interpretable machine learning and implement models.

Participant, Stanford University TreeHacks Hackathon (Stanford, CA), February 2018.

- Developed a prototype for a blogging platform with sentiment analysis for mental health care use cases.

Participant, NASA Space Apps Challenge (Palo Alto, CA), April 2017.

- Along with team, developed an informational chatbot for natural disasters using NASA’s databases.

SKILLS

Programming: Network analysis (Python, networkx, Graphviz); data visualization (matplotlib, Tableau, Gephi); object-oriented programming; simulation programming; data science and machine learning in the Python environment; SQL; Julia (intermediate); HTML/CSS (familiar).

Misc: LaTeX, Git, scientific communication

Languages: English (primary), Thai (native)

OTHER

Scientific blogging at unchitta.com/blog

Citizenship: THAI