Sarah Cooney

1230 W 29th Street, Apt. 17
Los Angeles, CA 90007
✆ (+1) 570-786-7682
✉ cooneys@usc.edu
🖥 sarah-cooney.com

Education

2017–Present	**University of Southern California - PhD Computer Science**, *Los Angeles, CA*. Qualifying Examinations - Passed June 2020 Expected Graduation - Spring 2022
2013–2017	**Saint Joseph's University - B.S. Mathematics and Computer Science**, *Philadelphia, PA*. Cumulative GPA - 3.97, English Minor, Summa Cum Laude, Dean's List, Honor's Program Honor Societies: Phi Beta Kappa, Sigma Zeta, Pi Mu Epsilon, Upsilon Pi Epsilon
Spring 2016	**University College Cork - Semester Abroad**, *Cork*, Ireland.

Teaching Experience and Training

Fall 2021	**Future Faculty Teaching Institute**, *Center for Excellence in Teaching*, University of Southern California, Los Angeles, CA. Weekly seminar covering topics related to syllabus preparation and classroom management.
Aug.—Dec. 2021	**Undergraduate Discrete Mathetmatics - Teaching Assistant**, *Dr. Victor Adamchik*, University of Southern California, Los Angeles, CA. Preparation of homework, quiz discussion, and exam materials. Lead weekly discussion sections.
Jan.—May. 2021	**Undergraduate Computing for Social Good - Teaching Assistant**, *Dr. Barath Raghavan*, University of Southern California, Los Angeles, CA. Weekly meetings with project groups. Grading of reading responses.
Aug.—Dec. 2019	**Undergraduate Discrete Mathetmatics - Teaching Assistant**, *Dr. Sandra Batista*, University of Southern California, Los Angeles, CA. Creation of homework and discussion problems. Led weekly discussion section.
July 2019	**Teaching Assistant**, *USC Discovery Program*, University of Southern California, Los Angeles, CA. Taught rising 8th and 9th grade students basic coding skills in Python.
May–Jul. 2019	**Undergraduate Data Structures - Teaching Assistant**, *Dr. Mark Redekopp*, University of Southern California, Los Angeles, CA. Led weekly lab sessions.
Aug.—Dec. 2017	**Undergraduate Software Engineering - Teaching Assistant**, *Dr. Nenad Medvidovic*, University of Southern California, Los Angeles, CA. Held office hours. Facilitated quizzes and exams.

Research Experience

May 2019–Present	**Graduate Student Research Assistant**, *Dr. Barath Raghavan*, University of Southern California, Los Angels, CA. Creating co-creative tools for novice urban design and tactical urban revitalization.
June 2019	**Summer Institute in Computational Social Science**, *Center for Population Research*, University of California Los Angeles, Los Angels, CA. Two week summer institute covering major topics in computation social science.

August 2017–May 2019 | **Graduate Student Research Assistant**, *Dr. Milind Tambe*,
University of Southern California, Los Angels, CA.
Conducting human subject tests of game theoretic signaling algorithms for cyber security. Creating improved signaling models for boundedly rational adversaries.
Developing mobile applications to study decision making of Los Angeles street gang members in the context of adversarial groups.

Honors and Awards

2021	**2021 CHI Doctoral Consortium Participant**	*ACM SIGCHI*
2018	**2018 US Building Cybersecurity Diversity Scholarship**	*Financial Services ISAC*
2017	**Women in Science and Engineering PhD Top-off Fellowship**	*University of Southern California*

Publications and Presentations

Conference Proceedings

Opening the Gate to Urban Repair: A Tool for Citizen-Led Design,
Sarah Cooney and Barath Raghavan.
To Appear *in Proceedings of CSCW 2021*

Riding the Bus in Los Angeles: Creating Cultural Micro-Exposures via Technology,
Sarah Cooney.
In proceedings of alt.CHI 2021 at CHI 2021, Virtual, May 2021

Adaptive Cyber Deception: Cognitively Informed Signaling for Cyber Defense,
Edward A. Cranford, Palvi Aggarwal, Cleotilde Gonzalez, Sarah Cooney, Milind Tambe, Christian Lebiere.
In proceedings of the 53rd Hawaii International Conference on System Sciences, Maui, HI, 2020
** Best Paper - Digital Government Track

Learning to Signal in the Goldilocks Zone: Improving Adversary Compliance in Security Games,
Sarah Cooney, Kai Wang, Elizabeth Bondi, Thanh Nguyen, Phebe Vayanos, Hailey Winetrobe, Edward A. Cranford, Cleotilde Gonzalez, Christian Lebiere, Milind Tambe.
In proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Würzburg, Germany, 2019 (in press.)

Towards Personalized Deceptive Signaling for Cyber Defense Using Cognitive Models,
Edward A. Cranford, Cleotilde Gonzalez, Palvi Aggarwal, Sarah Cooney, Milind Tambe, Christian Lebiere.
In proceedings of the 17th Annual Meeting of the International Conference on Cognitive Modelling, Montreal, Canada, 2019

Warning Time: Optimizing Strategic Signaling for Security Against Boundedly Rational Adversaries,
Sarah Cooney, Thanh H. Nguyen, Edward A. Cranford, Christian Lebiere, Cleotilde Gonzalez, Phebe Vayanos, Milind Tambe.
In proceedings of the International Conference on Autonomous Agents and Multiagent Systems, Montreal, Canada, 2019 (As Extended Abstract)

Learning about Cyber Deception through Simulations: Predictions of Human Decision Making with Deceptive Signals in Stackelberg Security Games,
Edward A. Cranford, Christian Lebiere, Cleotilde Gonzalez, Sarah Cooney, Phebe Vayanos, Milind Tambe.
In proceedings of the Annual Meeting of the Cognitive Science Society, Madison, WI, 2018

Journal Papers

Towards a Cognitive Theory of Cyber Deception,
Edward A. Cranford, Cleotilde Gonzalez, Palvi Aggarwal, Milind Tambe, Sarah Cooney, Christian Lebiere.
In Cognitive Science, July 2021

Toward Personalized Deceptive Signaling for Cyber Defense Using Cognitive Models,
Edward A. Cranford, Cleotilde Gonzalez, Palvi Aggarwal, Sarah Cooney, Milind Tambe, Christian Lebiere.
In TopiCS in Cognitive Science, Forthcoming Topic: Best of Papers from the 17th International Conference on Cognitive Modeling, Early Release July 2020

Workshop Papers

Toward Co-Creative Tools for Tactical Urban Revitalization,
Sarah Cooney.
In Doctoral Consortium, CHI 2021, Virtual, May 2021

Mobile Game Theory with Street Gangs,
Sarah Cooney, Wendy Gomez, Kai Wang, Jorja Leap, P. Jeffrey Brantingham, Milind Tambe.
In ECML PKDD 4th Workshop on Data Science for Social Good (SoGood), Würzburg, Germany, September 2019

Signaling Just Enough: Learning to Find the Goldilocks Zone to Improve Adversary Compliance in Security Games,
Sarah Cooney, Kai Wang, Elizabeth Bondi, Thanh Nguyen, Phebe Vayanos, Hailey Winetrobe, Edward A. Cranford, Cleotilde Gonzalez, Christian Lebiere, Milind Tambe.
In IJCAI 1st Workshop on Artificial Intelligence for Business Security (AIBS), Macao, China, August 2019

Current Security Threats and Prevention Measures Relating to Cloud Services, Hadoop Concurrent Processing, and Big Data,
Ather Sharif, Sarah Cooney, Andrew Vitek, Shengqi Gong.
Presented at the 2nd International Workshop on Privacy and Security of Big Data during the 2015 IEEE International Conference on Big Data, San Jose, CA, 2015

Under Submission

Religion and Spirituality in CHI: A Review,
Sarah Cooney.
Under Submission to CHI 2022

The CommYOUnity Data Project: Exploring Novice Evaluations of Urban Spaces,
Sarah Cooney and Barath Raghavan.
Under Revision for CSCW 2022

Service and Outreach

- USC Human-Computer Interaction Reading Group Founder and Faciltator
  Summer 2021 - Present

- USC Women in Science and Engineering (WiSE) PhD Advisory Board Member
  Summer 2019-Present

- PhD Women in Computing Club Organizing Committee Member
  Spring 2019 - Present

- ACM COMPASS 2021 Shadow PC Participant
  Spring 2021

- Student Committee for new CS Building
  Fall 2020

- Computer Science Department Grade Appeal Committee Student Representative
  Summer 2019

- Saint Joseph's University McNulty Scholars Program Outreach and Recruitment
  Fall 2107 - Present

Speaking Events and Panels

- **Speaker:** "Religion and Spirituality in CHI: A Review" WiSE STEM Bytes Series
  Fall 2021

- **Moderator:** A Girl's Journey from Turkey to Silicon Valley (Serpil Bayraktar, Distinguished Engineer at Cisco) WiSE Seminar Series
  Spring 2021

- **Panelist:** USC Computer Science Department (Virtual) PhD Visit Day for Admitted Students
  Spring 2021

- **Panelist:** Mentor Training - USC Viterbi School of Engineering Graduate Mentorship Program
  Fall 2020

- **Panelist:** Planning for a Successful Summer Research Experience - Undergraduate Research Fellows Program
Summer 2020

Mentorship

Research Mentorship

Runmu Yue	*Undergraduate Student, Fall 2021 - Present*
Joshua Joseph	*Undergraduate Student, Fall 2021 - Present*
Runmu Yue	*Undergraduate Student, Fall 2021 - Present*
Yibo Wen	*Undergraduate Student, Fall 2021 - Present*
Gireesh Mahajan	*Undergraduate Student, Spring 2020-Spring 2021*
Spencer Davis	*Undergraduate Student, Summer 2020-Spring 2021*
Abhishek Chhabra	*Masters Student, Summer 2020-Spring 2021*
Wentao Pei	*Masters Student, Summer 2020-Spring 2021*
Kuan-Yu (Jeffery) Chang	*Masters Student, Summer 2020-Fall 2020*
Gloria Chang	*Undergraduate Student, Summer 2020*

General Mentorship

Bhavya Vasudeva	*PhD Student, Summer 2021 - Fall 2021*
Various Incoming Students	*Masters and PhD Students, Viterbi Graduate Mentorship Program, Fall 2019, Fall 2020, Spring 2021, Fall 2021*
Anthony Flores-Alvarez	*High School Student, Spring 2021 - Summer 2021*
Kivilcim (Kylie) Cumbul	*Undergraduate WiSE Fellow, Summer 2019*