

# Sebastian S. Rodriguez

## Curriculum Vitae

University of Illinois at Urbana-Champaign  
Human-Computer Interaction Group  
srodri44@illinois.edu  
sebas.me

### RESEARCH INTERESTS

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Human-computer interaction, human-automation/AI interaction, explainable AI, human factors, cognitive science, virtual/augmented/mixed reality, game design and development

### EDUCATION

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2016 – Present **University of Illinois at Urbana-Champaign**, Urbana, IL

*Doctor of Philosophy in Computer Science*

Advisor: Alex Kirlik

2012 – 2016 **Northwestern University**, Evanston, IL

*Bachelor of Science in Computer Engineering*

### EXPERIENCE

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2021 **Facebook**, Menlo Park, CA

Quantitative UX Research Intern (Host: TBD)

2018 – 2020 **U.S. Army CCDC Army Research Laboratory**, Aberdeen, MD

Research Fellow (Advisors: Derrik Asher and Erin Zaroukian)

Investigated the effects of complacency and emergent collaboration in heterogeneous teams consisting of humans and autonomous agents [C-2, 3, 4, 5, 6]

2018 **U.S. Army CCDC Army Research Laboratory**, Playa Vista, CA

Research Intern (Host: James Schaffer)

Investigated the effects of complacency in knowledge and judgment for recommendation and game-based systems [C-1]

2016 – 2018 **University of Illinois at Urbana-Champaign**, Urbana, IL

Graduate Research Assistant (Advisor: Alex Kirlik)

Developed an API for devices communicating with a ROS framework which controls aerial drones in coordinated behavior to help elderly users retain independence

2015 – 2016 **Northwestern University**, Evanston, IL

Undergraduate Research Assistant (Advisor: Corey Brady)

Programmed hackable hardware for teaching network topology through participatory simulations in Chicago middle and high schools [J-1]

2015 **Washington State University**, Pullman, WA

Research Experience for Undergraduates Intern (Host: Anurag Srivastava)

Implemented fault and failure detection algorithms for phasor measurement units in smart electric grids

## SKILLS

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**Quantitative Methods:** inferential/summary statistics, mediation analysis, regression, machine learning, survey design

**Qualitative Methods:** user interviews, usability testing

**Programming/Frameworks:** Python, R, NumPy/pandas, scikit-learn, TensorFlow, C++, C#, Unity, Java, SQL, git, CI/CD

**Languages:** English, Spanish (fluent)

## PEER-REVIEWED PUBLICATIONS

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- C-6 Emergent Heterogeneous Strategies from Homogeneous Capabilities in Multi-Agent Systems  
Fernandez R., Zaroukian E., Humann J., Perelman B., Dorothy R., **Rodriguez S.**, Asher D. (2020)  
World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE) Proceedings
- C-5 Multi-Agent Collaboration with Ergodic Spatial Distributions  
Asher D., Zaroukian E., Perelman B., Perret J., Fernandez R., Hoffman B., **Rodriguez S.** (2020)  
Society of Photo-Optical Instrumentation Engineers (SPIE) Defense + Commercial Sensing Proceedings
- C-4 Measuring Complacency in Humans Interacting with Autonomous Agents in a Multi-Agent System  
**Rodriguez S.**, Chen J., Deep H., Lee J., Asher D., and Zaroukian E. (2020)  
Society of Photo-Optical Instrumentation Engineers (SPIE) Defense + Commercial Sensing Proceedings
- C-3 Multi-Agent Coordination Profiles Through State Space Perturbations  
Asher D., Garber-Barron M., **Rodriguez S.**, Zaroukian E., and Waytowich N. (2019)  
International Conference on Computational Science and Computational Intelligence (CSCI) Conference Proceedings
- C-2 Algorithmically Identifying Strategies in Multi-Agent Game-Theoretic Environments  
Zaroukian E., **Rodriguez S.**, Barton S., Schaffer J., Perelman B., Waytowich N., Hoffman B., and Asher D. (2019)  
Society of Photo-Optical Instrumentation Engineers (SPIE) Defense + Commercial Sensing Proceedings
- C-1 Knowledge Complacency and Decision Support Systems **[Best Paper Award]**  
**Rodriguez S.**, Schaffer J., O'Donovan J., and Höllerer T. (2019)  
Cognitive and Computational Aspects of Situation Management (CogSIMA) Proceedings
- J-1 All Roads Lead to Computing: Making, Participatory Simulations, and Social Computing as Pathways to Computer Science  
Brady C., Weintrop D., Anton G., Orton K., **Rodriguez S.**, and Wilensky U. (2016)  
IEEE Transactions on Education Journal

## TEACHING EXPERIENCE

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SP21 **CS 565: Human-Computer Interaction**

Department of Computer Science, University of Illinois at Urbana-Champaign

SP20, FA20	<b>CS 225: Data Structures (Head TA)</b> Department of Computer Science, University of Illinois at Urbana-Champaign
SU20	<b>CS 498: Data Visualization</b> Department of Computer Science, University of Illinois at Urbana-Champaign
FA18	<b>CS 498: Experimental Methods of Human Computer Interaction</b> Department of Computer Science, University of Illinois at Urbana-Champaign
SP16	<b>EECS 395: Tangible Interaction Design and Learning</b> Department of Electrical Engineering and Computer Science, Northwestern University
WI16	<b>EECS 330: Human Computer Interaction</b> Department of Electrical Engineering and Computer Science, Northwestern University
FA15	<b>EECS 111: Fundamentals of Computer Programming I</b> Department of Electrical Engineering and Computer Science, Northwestern University
SP15	<b>EECS 214: Data Structures and Data Management</b> Department of Electrical Engineering and Computer Science, Northwestern University

## MENTORING

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2020	<b>Sarah Shaw</b> UIUC BS student in Computer Science and Statistics
2020	<b>Ziyuan Wei</b> UIUC BS student in Computer Science and Statistics
2019	<b>Jaewook Lee</b> UIUC BS student in Computer Science
2019	<b>Jacqueline Chen</b> UIUC BS student in Computer Science
2019	<b>Harsh Deep</b> UIUC BS student in Computer Science and Statistics
2017	<b>Amber Zhang</b> UIUC BS in Computer Science, 2018
2017	<b>Wyatt McAllister</b> UIUC MS in Electrical and Computer Engineering, 2018 (next: UIUC PhD)
2017	<b>Ambika Dubey</b> UIUC BS in Computer Science, 2018 (next: Microsoft)

## AWARDS AND HONORS

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2021	<b>Illinois Scholars Undergraduate Research Program Mentor Funding</b> UIUC grant to support an undergraduate research apprentice
2020	<b>Apple Scholars in AI/ML University Nomination</b> Nominated by the Graduate College to represent UIUC at Apple's fellowship competition
2020	<b>Richard Tapia Celebration of Diversity in Computing Travel Grant</b> UIUC travel grant to attend the 2020 Tapia Conference
2019	<b>U.S. Army CCDC Army Research Laboratory Journeyman Fellowship</b> Prestigious 1-year fellowship to conduct dissertation research with ARL
2019	<b>IEEE CogSIMA 2019 Best Paper Award</b> Knowledge Complacency and Decision Support Systems [C-1]

- 2018 **UIUC Certificate of Recognition for Academic Excellence**  
UIUC award for excellence in research, teaching, or service
- 2016 **UIUC Graduate College Distinguished Fellowship**  
UIUC award to support graduate studies with 2 years of funding
- 2016 **Illinois Sloan Scholar, Alfred P. Sloan Foundation's Minority PhD Program**  
Merit-based award for incoming minority PhD students

## SERVICE

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<b>Reviewer</b>	<p><i>Conferences</i></p> <ul style="list-style-type: none"> <li>• CSCW 2021</li> <li>• CHI 2021</li> <li>• CHI PLAY 2019, 2020</li> <li>• IEEE VR 2021</li> </ul> <p><i>Journals</i></p> <ul style="list-style-type: none"> <li>• Human Factors and Ergonomics Society</li> <li>• Production and Operations Management</li> </ul>
<b>Development</b>	<p>Human Factors and Ergonomics Society, Member (2021 – Present)</p> <p>UIUC Chapter</p> <p>Tau Beta Pi Engineering Honor Society, Member (2020 – Present)</p> <p>Illinois Alpha Chapter</p> <p>Society of Hispanic Professional Engineers, Member (2016 – Present)</p> <p>UIUC Chapter</p> <p>Society of Hispanic Professional Engineers, Internal Vice President (2015 – 2016)</p> <p>Society of Hispanic Professional Engineers, Member (2012 – 2015)</p> <p>NU Chapter</p>
<b>Education</b>	<p>UIUC Illinois Scholars Undergraduate Research Program 2021</p> <p>UIUC Computer Science Graduate Ambassador 2016, 2017, 2018</p> <p>Alfred P. Sloan UIUC Mentorship Program 2017</p>
<b>Planning</b>	<p>Alfred P. Sloan UIUC Mini-Conference 2019</p>

Last updated: April 27, 2021