

# Nazmiye Gizem Bacaksızlar

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## EDUCATION

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**Ph.D. College of Computing and Informatics, Software and Information Systems** 2015 - 2019  
University of North Carolina at Charlotte (UNC Charlotte)

**Summer School at New England Complex Systems Institute, MIT, Cambridge, MA** June 2018

Ph.D. Student at Infrastructure and Environmental Systems, UNC Charlotte 2014 - 2015

**M.S. Industrial Engineering, Boğaziçi University, Istanbul, Turkey** 2011 - 2014

**B.S. Industrial Engineering, Yıldız Technical University, Istanbul, Turkey** 2006 - 2010

## WORK EXPERIENCE

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**SFI Program Postdoctoral Fellow** February 2019 – Present  
Santa Fe Institute, New Mexico

**Graduate Research Assistant** August 2017 – February 2019  
Complex Systems Institute and Data Science Initiative, UNC Charlotte

- Technical Mentor, Python Workshop for the Carolina Fintech Hub Hackathon at UNC Charlotte
- Technical Mentor, Python Workshop for Data Science Initiative Students
- Research Assistant, National Science Foundation Program: Center for Visual & Decision Informatics and Industry/University Cooperative Research Center
- Program Coordinator, Data Science for Social Good Charlotte Summer Fellowship Program

**Project Manager for a Research Group** June 2017 - August 2017

Data Science for Social Good Summer Fellowship Program, Europe 2017, Portugal

Project: Identifying Green Rooftops in Rotterdam to Improve Urban Planning

- Led the team of four fellows with the Municipality of Rotterdam's Data Science Team
- Managed the communication between the team and partners at the Municipality of Rotterdam
- Helped the team with providing and presenting technical reports, posters, and presentations
- Continued communication with partners for the project implementation process

**Graduate Teaching and Research Assistant** August 2015 - June 2017

Department of Software and Information Systems and Complex Systems Institute, UNC Charlotte

- Graduate Course: System Dynamics
- Research Assistant, Summit for Social Good 2016 and Social Good Hackathon

**Research Analyst** May 2015 - June 2015

Department of Environmental Engineering, Boğaziçi University, Istanbul, Turkey

Project: Governance and Systematic Changes Associated with Small-Scale Hydropower Production

- Performed field-based research to study the effects of small-scale hydropower plants on the İkizdere Valley, Rize, Turkey
- Managed and supported several interviews with the local people, farmers, and governors
- Modeled causal relationships between tea farmlands and hydropower plants constructions
- Analyzed statistically the collected data with R

**Graduate Teaching Assistant** August 2014 - August 2015

Department of Systems Engineering and Engineering Management, UNC Charlotte

- Undergraduate Courses: Engineering Fundamentals, Systems Engineering Concepts
- Graduate Courses: Decision and Risk Analysis, Designed Experimentation

**Graduate Teaching Assistant**

September 2013 - June 2014

Department of Industrial Engineering, Bilgi University, Istanbul, Turkey

Undergraduate Courses: Introduction to Industrial Engineering, Exploring Engineering, Introduction to Probability, Probability and Statistics for Engineers and Scientists

**Teaching Assistant**

September 2012

Boğaziçi University, The Scientific and Technological Research Council of Turkey

Project: Systems Language of Ecology - A System Dynamics Atelier

- Conducted research on direct learning while playing group games that raise awareness about environmental problems, sustainable living, and community building with high-school students from Darüşşafaka Schools
- Prepared team projects and presentations

**SOFTWARE SKILLS**

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**Programming Languages:** Python, R (less experienced)**Python Libraries/Packages:** Scikit-learn, NumPy, SciPy, Matplotlib, Pandas, NetworkX, PyCX, NLTK**Tools:** NetLogo, Gephi, Vensim, Stella, Simul8, Arena**PUBLICATIONS**

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**Bacaksizlar, N. G.** & Hadzikadic, M. (2017) Modeling Social Media Effect on Social Movements. *Journal of Policy and Complex Systems*, 3(2), 14-30.von Briesen, E., **Bacaksizlar, N. G.**, & Hadzikadic, M. (2017) Modeling Genocide at the System and Agent Levels. *Journal of Policy and Complex Systems*, 3(2), 31-48.Martin, R., & **Bacaksizlar, N. G.** (2015). Modeling the Dynamics of an Urban Emergency Medical Services System. In *Proceedings, 35th International Conference on Systems Dynamics Society (Cambridge, MA)*.**Bacaksizlar, N. G.**, & Barlas, Y. (2015). The Feedback Dynamics between Poverty and Education Opportunity: Vicious Circle of Poverty. In *Proceedings, 33rd International Conference on Systems Dynamics Society (Cambridge, MA)*.**Bacaksizlar, N. G.**, & Önsel, N. (2013). Modeling the Dynamics of MethylMercuryBiomagnification. In *Proceedings, 31st International Conference on Systems Dynamics Society (Cambridge, MA)*.Yavaş, M. & **Bacaksizlar, N. G.** (2012). Financial Sustainability of Social Security Institutions in the Presence of Aging Populations. In *Proceedings, 30th International Conference on Systems Dynamics Society (Cambridge, MA)*.**CONFERENCE PRESENTATIONS**

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Computational Social Science Conference, Santa Fe, NM, October 25 - 28, 2018

Poster Presentation Title: Emotion Contagion in Digital-Age Social Movements

Complexity-Based Analytics and Policies for Social Good, Washington, DC, April 12 - 14, 2017

Presentation Title: Modeling Social Media Effect on Civil Revolutions

33<sup>rd</sup> International Conference of the System Dynamics Society, Cambridge, MA, July 19 - 23, 2015

Presentation Title: The Feedback Dynamics between Poverty and Education Opportunity: Vicious Circle of Poverty

31<sup>st</sup> International Conference of the System Dynamics Society, Cambridge, MA, July 21 - 25, 2013  
Presentation Title: Modeling the Dynamics of Methyl-mercury Biomagnication

33<sup>rd</sup> National Congress of Operational Research and Industrial Engineering, Istanbul, June 26 - 28, 2013  
Presentation Title: Modeling the Dynamics of Methyl-mercury Biomagnication

30<sup>th</sup> International Conference of the System Dynamics Society, St. Gallen, Switzerland, July 22 - 26, 2012  
Presentation Title: Financial Sustainability of Social Security Institutions in the Presence of Aging Populations

## **SELECTED GRANTS, FELLOWSHIPS, and HONORS**

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Travel/Summer School Grant, Data Science Initiative, UNC Charlotte	June 2018
Tuition Waiver Award (GASP), UNC Charlotte	August 2014 – Present
Graduate and Professional Student Government Travel Grant, UNC Charlotte	2017 & 2018
CRA - Women Travel/Conference Grant, Grad Cohort for Women 2018, San Francisco	April 2018
UNC Charlotte Graduate Life Fellowship	August 2016 – August 2017
Istanbul Bilgi University Teaching Assistantship Grant	September 2013 – June 2014

## **SERVICE**

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Conference Organization Committee Member, Complexity and Policy Studies Conference	2017 - Present
Communication Editor, Journal on Policy and Complex Systems	2017 - Present
Graduate Student Representative, College of Computing and Informatics, UNC Charlotte	2016 - 2018
Graduate Life Fellow, The Graduate School, UNC Charlotte	2016 - 2017
Graduate Teaching Assistant Fellow, UNC Charlotte	February & August 2015
Event Volunteer and Judge, North Carolina Science Olympiad	February 2015

## **REFERENCES**

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### **Ph.D. Advisor:**

Mirsad Hadžikadić, Ph.D. in Computer Science from Southern Methodist University  
Professor, Software and Information Systems  
Director, Complex Systems Institute  
College of Computing and Informatics, University of North Carolina at Charlotte  
Email: mirsad@uncc.edu

### **Ph.D. Thesis Committee Member:**

Samira Shaikh, Ph.D. in Computer Science from University at Albany, State University of NY  
Assistant Professor, Computer Science Department and Department of Psychology (joint appointment)  
College of Computing and Informatics, University of North Carolina at Charlotte  
Email: samirashaikh@uncc.edu

### **M.S. Thesis Committee Member:**

Fikret Adaman, Ph.D. in Economics from Manchester University  
Professor, Department of Economics  
Boğaziçi University, Istanbul, Turkey  
Email: adaman@boun.edu.tr