

# Danaja Maldeniya

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**RESEARCH INTERESTS** I'm interested in understanding the mechanisms that support sustainable large-scale collaboration dynamics. In particular, I am exploring the interactions between mechanisms at different scales of behavior, such as individuals, teams, and the community, and linking them to outcomes. I use a computational social science approach which combines theory driven frameworks with innovative computational methods, from network analysis and causal modeling among others, that leverage large-scale observational datasets.

**EDUCATION** **PhD in Information Science** 2023  
University of Michigan  
Advisor: Daniel Romero

**BSc in Computer Science & Engineering (First Class)** 2011  
University of Moratuwa, Sri Lanka

**EXPERIENCE** **Postdoctoral fellow** 2023 -  
University of Michigan, Center for the Study of Complex Systems Ann Arbor, MI

**Research Assistant** 2022 - 2023  
University of Michigan, Center for the Study of Complex Systems Ann Arbor, MI

**Research Assistant** 2016 - 2021  
University of Michigan, School of Information Ann Arbor, MI

**Research Intern** May 2020 - Aug 2020  
USC Information Sciences Institute Los Angeles, CA

**Research Intern** Jun 2017 - Aug 2017  
Bell Laboratories, Social Dynamics Team Cambridge, UK

**Research Fellow** Aug 2016 - present  
LIRNEasia Colombo, Sri Lanka

**Senior Researcher** Apr 2015 - Aug 2016  
LIRNEasia, Big Data for Development Team Colombo, Sri Lanka

**Researcher** Apr 2014 - March 2015  
LIRNEasia, Big Data for Development Team Colombo, Sri Lanka

**Senior Software Engineer** Jan 2014 - Apr 2015  
CodeGen International Colombo, Sri Lanka

**Software Engineer** Dec 2011 - Dec 2013  
CodeGen International Colombo, Sri Lanka

SELECTED  
PUBLICATIONS

**D. Maldeniya**, M. De Choudhury, D. Garcia, D.M. Romero “Pulling Through Together: Social Media Trajectories of Recovery in Disaster Stricken Communities”. *Journal of Computational Social Science*, 1-52, 2023.

J. Jiang, **D. Maldeniya**, K. Lerman, and E. Ferrara. “The Wide, the Deep, and the Maverick: Types of Players in Team-based Online Games”. *Proc. ACM Hum.-Comput. Interact.*5, CSCW, 2021

**D. Maldeniya**, C. Budak, L. Robert, and D.M. Romero. “Herding a Deluge of Good Samaritans: How GitHub Projects Respond to Increased Attention.”. *Proc. of The Web Conference (WWW)*, 2020.

J.E. Blumenstock, **D. Maldeniya**, and S. Lokanathan. “Understanding the Impact of Urban Infrastructure: New Insights from Population-Scale Data”. *The 9th IEEE/ACM International Conference on Information and Communication Technologies and Development (ICTD)*, 2017

**D. Maldeniya**, A. Varghese, T. Stuart, and D.M. Romero. “The Role of Optimal Distinctiveness and Homophily in Online Dating.” *Proc. 11th International AAAI Conference on Web and Social Media (ICWSM)*, 2017

R. Samarajiva, S. Lokanathan, K. Madhawa, G. Kriendler, **D. Maldeniya**, “Big data to improve urban planning”, *Economic and Political Weekly*, Vol. L, No. 22, 2015.

OTHER  
PUBLICATIONS

**D. Maldeniya**, A. Kumarage, S. Lokanathan, G. Kriendler, K. Madhawa, “Where did you come from? Where did you go? Robust policy relevant evidence from mobile network big data”, *CPRSouth*, 2015.

K. Madhawa, S. Lokanathan, **D. Maldeniya**, R. Samarajiva, “Using mobile network data for land use classification”, *CPRSouth*, 2015.

K. Madhawa, S. Lokanathan, R. Samarajiva, **D. Maldeniya**, “Understanding communities using mobile network big data”, *CPRSouth*, 2015.

**D. Maldeniya**, S. Lokanathan, A. Kumarage, “Origin-Destination matrix estimation for Sri Lanka using mobile network big data”, *13th International Conference on Social Implications of Computers in Developing Countries*, 2015.

K. Madhawa, S. Lokanathan, **D. Maldeniya**, R. Samarajiva, “Land use classification using call detail records” (Poster Abstract), *NetMob*, 2015.

N. de Silva, A. Perera, **D. Maldeniya**, “Semi-supervised Algorithm for Concept Ontology Based Word Set Expansion”, *International Conference on Advances in ICT for Emerging Regions (ICTER)*, 2013.

SCHOLARLY  
PRESENTATIONS

“Ties That Bind: Influence of Online Social Capital on Relocation Choice after Disasters”, *IC2S2 2022*

“How GitHub Projects Respond to Increased Attention”, *IC2S2 2020*

“Herding a Deluge of Good Samaritans: How GitHub Projects Respond to Increased Attention.”, *MIDAS Symposium 2020*

“Psychological Response of Communities affected by Natural Disasters in Social Media”, UMTweetCon2019

“Psychological Response of Communities affected by Natural Disasters in Social Media”, MIDAS Symposium 2018 (Award for Most Innovative Use of Data)

PROFESSIONAL  
SERVICE

**Reviewing:** ICWSM 2023, IC2S2 2022, CSCW 2022, ICWSM 2022, WebScience (WWW) 2021, CSCW 2021, ICWSM 2021, EPJ Data Science, IC2S2 2020, ICWSM 2020, WWW 2020, WSDM 2020, ICDM 2020, Nature Scientific Reports, WWW 2018, WSDM 2018

**Mentoring:** Kaifeng Chen (Masters Student), Stella Choi (Masters Student), Jiaxin Ye (Undergraduate Student), Eric Lian (Undergraduate Student)

TEACHING  
EXPERIENCE

**SIADS 516: Big Data: Scalable Data Processing** Summer 2022  
University of Michigan Ann Arbor, MI

**SIADS 652: Network Analysis** May 2022  
University of Michigan Ann Arbor, MI

**CMPLXSYS 251: Computational Social Science** Winter 2022  
University of Michigan Ann Arbor, MI

**SI 618: Data Manipulation and Analysis** Fall 2021  
University of Michigan Ann Arbor, MI

**SI 301: Models of Social Information Processing** Fall 2017  
University of Michigan Ann Arbor, MI