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# Nirav Ajmeri

| EDUCATION | **North Carolina State University, Raleigh NC** | May 2019 |
|---|---|---|

**North Carolina State University, Raleigh NC** — May 2019
Ph.D. in Computer Science
*Adviser:* Professor Munindar P. Singh

**North Carolina State University, Raleigh NC** — Dec 2018
M.S. in Computer Science

**Gujarat University, India** — May 2007
B.E. in Computer Engineering (First class)

PROFESSIONAL EXPERIENCE

**North Carolina State University** — Feb 2019–present
Postdoctoral Research Scholar, NCSU Science of Security Lablet — Raleigh NC
*Advisers:* Professors Munindar P. Singh and Laurie Williams

**North Carolina State University** — Aug 2012–Dec 2018
Graduate Research Assistant, MAS and SOC Laboratory — Raleigh NC
*Supported by:* NCSU Science of Security Lablet and Laboratory of Analytic Sciences

**HERE Technologies (formerly Nokia Maps)** — Sep 2017–Dec 2017
Research Intern, CTO Research — Chicago IL

**Tata Consultancy Services** — Sep 2007–Jul 2012
Researcher, Software Engineering Lab, TCS–TRDDC — Pune, India

AWARDS AND ACCOLADES

- NCSU Sole Nominee for the Joint AAAI/ACM SIGAI Doctoral Dissertation Award — 2019
- Computer Science Outstanding Dissertation Award, NCSU — 2019
- NSF Travel Grant to attend the Requirements Engineering Conference (*declined*) — 2018
- FADEx laureate (AI), Office for Science & Tech., Embassy of France (*declined*) — 2018
  (Among 10 US doctoral students selected by the Office for Science & Tech. of the French Embassy in the US to participate in the FADEx program on Artificial Intelligence)
- Best Paper Award, 15th International Conf. on Privacy, Security and Trust; for [C11] — 2017
- Computer Science Outstanding Research Award, NCSU — 2017
- AAMAS Travel Scholarship — 2017
- Outstanding Research Paper Award, TCS; for [B17] — 2012
- Mentor, Best Student Intern Research Project, TCS — 2010, 2011
- Beyond Performance Award—Patron of the Library, TCS — 2009
- Departmental Nominee for the Best Outgoing Student Award, SVIT Vasad, GU — 2007

PUBLICATIONS

**Journal:** TOSEM $\times$ 1, KER $\times$ 1, SIMPAT $\times$ 1, JSS $\times$ 1, Internet Computing $\times$ 3, Computer $\times$ 1, Intelligent Systems $\times$ 1
**Conference (main track):** IJCAI $\times$ 3, AAMAS $\times$ 2, AAAI $\times$ 1, RE $\times$ 2, PST $\times$ 1

**Doctoral Dissertation**

[D1] N. Ajmeri. "Engineering Multiagent Systems for Ethics Aware and Privacy Respecting Social Computing." PhD Dissertation, North Carolina State University, 2019.
*Committee:* Professor Munindar P. Singh (Chair), Professor Jon Doyle, Dr. William Enck, Dr. Jessica Staddon, and Professor Laurie Williams, Professor Chris Mayhorn (Graduate School Representative)

**Journal Papers and Columns**

[J1] R. Kafalı, N. Ajmeri, and M. P. Singh. "DESEN: Specification of Sociotechnical Systems via Patterns of Regulation and Control." ACM TOSEM, 29(1)7:1–7:50, 2019.

[J2] N. Ajmeri, H. Guo, P. K. Murukannaiah, and M. P. Singh. "Designing Ethical Personal Agents." IEEE Internet Computing, 22(2):16–22, 2018. [Selected for IEEE ComputingEdge, Jul 2018]

[J3] S. Al-Amin, N. Ajmeri, H. Du, E. Z. Berglund, and M. P. Singh. "Toward Effective Adoption of Secure Software Development Practices." Simulation Practice and Theory, 85:33–46, 2018.

[J4] H. Guo, N. Ajmeri, and M. P. Singh. "Teaching Crowdsourcing: An Experience Report." IEEE Internet Computing, 22(6):44–52, 2018.

[J5] N. Ajmeri, C-W. Hang, S. Parsons, and M. P. Singh. "Aragorn: Eliciting and Maintaining Secure Service Policies." IEEE Computer, 50(12):50–58, 2017. [Used in teaching Software Engineering (CSC 616/585, Spring 2018) and Requirements Engineering (CSC617/585, Spring 2019) courses at University of Kentucky, KY]

[J6] R. Kafalı, N. Ajmeri and M. P. Singh. "Revani: Revision and Verification of Normative Specifications for Privacy." IEEE Intelligent Systems, 31(5):8–15, 2016.

[J7] L. G. Nardin, T. Balke, N. Ajmeri, A. K. Kalia, J. S. Sichman and M. P. Singh. "Classifying Sanctions and Designing a Conceptual Sanctioning Process Model for Socio-Technical Systems." The Knowledge Engineering Review. 31(2):142–166, 2016.

[J8] P. K. Murukannaiah, N. Ajmeri and M. P. Singh. "Engineering Privacy in Social Applications." IEEE Internet Computing, 20(2):72–76, 2016. [Selected for IEEE ComputingEdge, Aug 2016]

[J9] M. Daneva, E. van der Veen, C. Amrit, S. Ghaisas, K. Sikkel, R. Kumar, N. Ajmeri, U. Ramteerthkar and R. Wieringa. "Agile Requirements Prioritization in Large-scale Outsourced System Projects: An Empirical Study." JSS. 86(5): 1333–1353, 2013.

## Conference Papers

[C10] N. Ajmeri, H. Guo, P. K. Murukannaiah, and M. P. Singh. "Elessar: Ethics in Norm-Aware Agents." Proc. 19th International Conf. Autonomous Agents and Multiagent Systems (AAMAS), pages 1–9, 2020.

[C11] P. K. Murukannaiah, N. Ajmeri, C. M. Jonker, and M. P. Singh. "New Foundations of Ethical Multiagent Systems." Proc. 19th International Conf. Autonomous Agents and Multiagent Systems (AAMAS), Blue Sky track, pages 1–5, 2020.

[C12] A. K. Kalia, N. Ajmeri, K. Chan, J. Cho, S. Adalı, and M. P. Singh. "The Interplay of Emotions and Norms in Multiagent Systems." Proc. 28th International Joint Conf. Artificial Intelligence (IJCAI), pages 371–377, 2019.

[C13] Shubham Goyal, N. Ajmeri, and M. P. Singh. "Applying Norms and Sanctions to Promote Cybersecurity Hygiene." Proc. 18th International Conf. Autonomous Agents and Multiagent Systems (AAMAS), pages 1991–1993, 2019.

[C14] N. Ajmeri, H. Guo, P. K. Murukannaiah, and M. P. Singh. "Robust Norm Emergence by Revealing and Reasoning about Context: Socially Intelligent Agents for Enhancing Privacy." Proc. 27th International Joint Conf. Artificial Intelligence (IJCAI), pages 28–34, 2018.

[C15] V. T. Dhinakaran, R. Pulle, N. Ajmeri, and P. K. Murukannaiah. "App Review Analysis via Active Learning: Reducing Supervision Effort without Compromising Classification Accuracy." Proc. 26th International Requirements Engineering Conf. (RE), pages 170–181, 2018.

[C16] P. K. Murukannaiah, N. Ajmeri, and M. P. Singh. "Toward Automating Crowd RE." Proc. 25th IEEE International Requirements Engineering Conference (RE), Data Track, pages 512–515, 2017.

[C17] K. Sheshadri, N. Ajmeri, J. Staddon. "No (Privacy) News is Good News: An Analysis of Privacy News in the U. S. and U. K. from 2010–2015." Proc. 15th International Conf. Privacy, Security and Trust (PST), pages 1–10, 2017. [Best Paper Award]

[C18] N. Ajmeri, P. K. Murukannaiah, H. Guo, and M. P. Singh. "Arnor: Modeling Social Intelligence via Norms to Engineer Privacy-Aware Personal Agents." Proc. 16th International Conf. Autonomous Agents and Multiagent Systems (AAMAS), pages 230–238, 2017.

[C19] N. Ajmeri. "Engineering Socially Intelligent Personal Agents via Norms." Proc. 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Doctoral Consortium, pages 1822–1823, 2017.

[C20] R. Kafalı, N. Ajmeri and M. P. Singh. "Kont: Computing Tradeoffs in Normative Multiagent Systems." Proc. 31st AAAI Conf. Artificial Intelligence (AAAI), pages 3006–3012, 2017.

[C21] P. K. Murukannaiah, N. Ajmeri, and M. P. Singh. "Acquiring Creative Requirements from the Crowd." Proc. 24th International Requirements Engineering Conf. (RE), pages 176–185, 2016.

[C22] N. Ajmeri, J. Jiang, R. Chirkova, J. Doyle, and M. P. Singh. "Coco: Runtime Reasoning About Conflicting Commitments." Proc. 25th International Joint Conf. Artificial Intelligence (IJCAI), pages 17–23, 2016.

[C23] H. Du, B. Y. Narron, N. Ajmeri, E. Berglund, J. Doyle and M. P. Singh. "Understanding Sanction under Variable Observability in a Secure, Collaborative Environment." Proc. HotSoS, pages 12:1–12:10, 2015.

### Book Chapter

[B24] S. Ghaisas and N. Ajmeri. "Knowledge-assisted Ontology-based Requirements Evolution." Managing Requirements Knowledge, pages 143–167, Springer Berlin Heidelberg, 2013.

### Other Peer-Reviewed Publications

[W25] H. Du, B. Y. Narron, N. Ajmeri, E. Berglund, J. Doyle, and M. P. Singh. "ENGMAS Understanding Sanction under Variable Observability in a Secure Environment." Proc. 2nd International Workshop on Agents and CyberSecurity (ACySE), pages 15-22, 2015.

[W26] A. K. Kalia, N. Ajmeri, K. Chan, J. Cho, S. Adalı, and M. P. Singh. "A Model of Trust, Moods, and Emotions in Multiagent Systems, and its Empirical Evaluation." Proc. 17th International Workshop on Trust in Agent Societies (AAMAS Trust), pages 1–11, 2014.

[W27] C-W. Hang, N. Ajmeri, M. P. Singh, and S. Parsons. "Argumentation, Evidence, and Schemes: Abstract." Proc. 10th International Workshop on Argumentation in Multi-Agent Systems (ArgMAS), pages 1–1 , 2013.

[W28] N. Ajmeri, K. Vidhani, M. Bhat, and S. Ghaisas. "An Ontology-based Method and Tool for cross-Domain Requirements Visualization." Proc. 4th Managing Requirements Knowledge (MaRK), pages 22–23, 2011.

[W29] N. Ajmeri, K. Vidhani, M. Bhat, and S. Ghaisas. "A Semantic and Collaborative platform for Agile Requirements Evolution." Proc. 4th Managing Requirements Knowledge (MaRK), pages 32–40, 2010.

[W30] M. Kumar, N. Ajmeri, and Smita Ghaisas. "Towards Knowledge assisted Agile Requirements Evolution." Proc. 2nd International Workshop on Recommendation Systems for Software Engineering (RSSE), pages 16–20, 2010.

### Submissions in Review and Working Drafts

[R31] N. Ajmeri, S. Goyal, and M. P. Singh. "Norms and Sanctions as a Basis for Promoting Cybersecurity Practices." In review at IEEE Computer.

[R32] P. Murukannaiah, N. Ajmeri, F. M. Rahman, and M. P. Singh. "Crowdsourcing Requirements: Does Teamwork Enhance Crowd Creativity?" In review at IEEE TSE.

[R33] M. Masayekhi, N. Ajmeri, G. List, and M. P. Singh. Topic: Fairness and Prosociality in Multiagent Systems (*Title withheld for anonymity*). In review at IJCAI.

**PROFESSIONAL SERVICE**

### Proceedings Chair

- Symposium and Bootcamp on the Science of Security (HotSoS)      2014

### Program Committee

- International Joint Conference on Artificial Intelligence (IJCAI)      2020
- AAAI Conference on Artificial Intelligence (AAAI)      2020
- International Conf. Autonomous Agents and Multiagent Systems (AAMAS)      2019, 2020
- Symposium and Bootcamp on the Science of Security (HotSoS)      2020

- AI for Requirements Engineering (AIRE) workshop 2018, 2019
- Crowd-based Requirements Engineering (CrowdRE) workshop 2017, 2019
- ACM COMPUTE 2012

**Journal Reviewer**
- Artificial Intelligence (AIJ) 2019
- Journal of Artificial Intelligence Research (JAIR) 2019
- IEEE Transactions on Services Computing (TSC) 2019
- Information and Software Technology (IST) 2019
- ACM Transactions on Intelligent Systems and Technology (TIST) 2018
- Autonomous Agents and Multi-Agent Systems (JAAMAS) 2018
- IEEE Transactions on Parallel and Distributed Systems (TPDS) 2017
- Managing Requirements Knowledge book 2012

**Conference and Workshops Reviewer**
- International Conference on Software Engineering (ICSE) 2020
- ACM ESEC/FSE 2019
- International Symposium on Software Reliability Engineering (ISSRE) 2019
- ACM/IEEE ESEM 2019
- AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) 2019
- The Web Conference (formerly WWW) 2019
- Learning from Authoritative Security Experiment Results (LASER) workshop 2017
- Symposium on Usable Privacy and Security (SOUPS) 2016
- Normative Multiagent Systems 2015
- India Software Engineering Conference 2012

**Student Volunteer**
- International Joint Conference on Artificial Intelligence (IJCAI) 2016
- ACM Conference on Computer and Communications Security (CCS) 2012
- AIMS International Conference of Management 2006, 2007
- International Conf. Operations and Quantitative Management (ICOQM) 2005, 2006

**Webmaster**
- AIMS International Conference of Management 2006, 2007
- International Conf. Operations and Quantitative Management (ICOQM) 2005, 2006

EXTERNAL
COLLABORATORS
(IN LAST FIVE YEAR)

- Amazon: Shubham Goyal
- Delft University of Technology (TU Delft): Pradeep K. Murukannaiah
- Google: Jessica Staddon
- IBM: Chung-Wei Hang, Anup K. Kalia, and Zhe Zhang
- Kings College, UK: Simon D. Parsons
- Microsoft: Guangchao Yuan
- National College of Ireland, Ireland: Luis G. Nardin
- Rensselaer Polytechnic Institute, NY: Sibel Adalı
- SAS: Pankaj Telang
- University of Kent, UK: Özgür Kafalı
- University of Sao Paulo, Brazil: Jaime S. Sichman
- Virginia Tech, VA: Jin-Hee Cho

WEBSITE

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Google Scholar. https://scholar.google.com/citations?user=aACjWd8AAAAJ&hl=en

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Github. https://github.com/niravajmeri