











RESEARCH INTERESTS

- > Human-aware and human-centric planning for automated agents - generating explainable plans and plan explanations for a social robot [1, 3, 4, 13]
- > Cooperating robots in and outside avenues of traditional human-robot teams - challenges in human-robot cohabitation [6, 7, 8, 9, 14, 15]
- > Crowdsourced planning and proactive decision support - planning techniques to guide and critique behavior of humans engaged in planning/scheduling tasks [2, 6, 10, 11, 16, 12]





PUBLICATIONS

CONFERENCES

- [1] **Explanation Generation as Model Reconciliation in Multi-Model Planning.** *T. Chakraborti*, S. Sreedharan, S. Kambhampati and Y. Zhang. Submitted to the 27th International Conference on Automated Planning and Scheduling (ICAPS) 2017. [Under Review]
- [2] **UbuntuWorld 1.0 LTS - A Platform for Automated Problem Solving & Troubleshooting in the Ubuntu OS.** *T. Chakraborti*, K. Talamadupula, K. P. Fadnis, M. Campbell, and S. Kambhampati. To be presented at the International Conference of Innovative Applications of Artificial Intelligence (IAAI) 2017. 
- [3] **Explicable Robot Planning as Minimizing Distance from Expected Behavior.** A. Kulkarni, *T. Chakraborti*, Y. Zhang, S. Vadlamudi and S. Kambhampati. Submitted to the IEEE International Conference on Robotics and Automation (ICRA) 2017. [Under Review] Available at <https://arxiv.org/abs/1611.05497>. 
- [4] **Plan Explicability and Predictability for Robot Task Planning.** Y. Zhang, S. Sreedharan, A. Kulkarni, *T. Chakraborti*, H. H. Zhuo and S. Kambhampati. Submitted to the IEEE International Conference on Robotics and Automation (ICRA) 2017. [Under Review] Available at <https://arxiv.org/abs/1511.08158>. 
- [5] **Compliant Conditions for Polynomial Time Approximation of Operator Counts.** *Tathagata Chakraborti*, Sarath Sreedharan, Sailik Sengupta, T. K. Satish Kumar and Subbarao Kambhampati. In proceedings of the Symposium on Combinatorial Search (SoCS) 2016.  
- [6] **Planning with Resource Conflicts in Human-Robot Cohabitation.** *T. Chakraborti*; Y. Zhang; D. Smith and S. Kambhampati. In Proc. of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2016. 
- [7] **Planning for Serendipity.** *T. Chakraborti*; G. Briggs; K. Talamadupula; Y. Zhang; M. Scheutz; D. Smith; and S. Kambhampati. In IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015. 
- [8] **A Human Factors Analysis of Proactive Support in Human-Robot Teaming.** Y. Zhang; V. Narayanan; *T. Chakraborti*; and S. Kambhampati. In Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015. 
- [9] **Coordination in Human-Robot Teams Using Mental Modeling and Plan Recognition.** K. Talamadupula, G. Briggs, *T. Chakraborti*, M. Scheutz, S. Kambhampati. In Proc. of the International Conference on Intelligent Robots and Systems (IROS) 2014. 
- [10] **AI-MIX: How a Planner Can Help Guide Humans Towards a Better Crowdsourced Plan.** L. Manikonda, *T. Chakraborti*, S. De, K. Talamadupula, S. Kambhampati. In the International Conference of Innovative Applications of Artificial Intelligence (IAAI) 2014. 

JOURNALS & BOOK CHAPTERS

- [11] **Herding the Crowd: Using Automated Planning for Better Crowdsourced Planning.** L. Manikonda, *T. Chakraborti*, S. De, K. Talamadupula, S. Kambhampati. In the Journal of Human Computation.

- [12] **Proactive Decision Support using Automated Planning.** S. G. Vadlamudi, T. Chakraborti, Y. Zhang and S. Kambhampati. Available at <https://arxiv.org/abs/1606.07841>. 
- [13] **Plan Explainability and Predictability for Robot Task Planning.** Y. Zhang; S. Sreedharan; A. Kulkarni; T. Chakraborti; H. H. Zhuo; and S. Kambhampati. In RSS Workshop on Planning for Human-Robot Interaction: Shared Autonomy and Collaborative Robotics. Full version available at <http://arxiv.org/abs/1511.08158>. 
- [14] **A Formal Framework for Studying Interaction in Human-Robot Societies.** T. Chakraborti; K. Talamadupula; Y. Zhang; S. Kambhampati. In AAAI 2016 Workshop on Symbiotic Cognitive Systems (SCS). 
- [15] **A Game-Theoretic Approach to Ad-hoc Coalition Formation in Human-Robot Societies.** T. Chakraborti; Venkata Vamsikrishna Meduri; Vivek Dondeti; and S. Kambhampati. In AAAI 2016 Workshop on Multiagent Interaction without Prior Coordination (MIPC). 
- [16] **AI-MIX: How a Planner Can Help Guide Humans Towards a Better Crowdsourced Plan.** L. Manikonda, T. Chakraborti, S. De, K. Talamadupula, S. Kambhampati. To appear in the ICAPS'14 Scheduling and Planning Applications Workshop (SPARK), 2014. Also appears in HCOMP WiP 2014.
Winner of People's Choice Best System Demonstration Award at ICAPS 2014!

SUMMARY OF ACADEMIC ACTIVITIES

- [current] PhD program, CS, ASU. (since Fall 2013) - *Overall Graduate GPA: 4.0/4.*
- Bachelor of Engineering in Electronics and Telecommunication from Jadavpur University, India. (2009-13)
- *CGPA: 8.97/10 (84.45%, First Class Honours)*

PROFESSIONAL EXPERIENCE

- Fall 2013 - present: graduate research assistant at Yochan Lab, ASU under Dr. Subbarao Kambhampati.
- Summer 2016: intern at Cognitive Algorithms Department at IBM T.J. Watson Research Center, NY.
- Summer 2015: intern at United Technologies Research Center, Berkeley.

SERVICE/INVOLVEMENT

- Co-Chair of the AAMAS 2017 Workshop on Multi-Agent Interaction Without Prior Coordination (MIPC)
- Member of the IJCAI 2016 Review Process Committee
- Reviewer for AAAI'14, AAAI'15, AAAI'17 and IROS'16; AI-HRI AAAI'16 Fall Symposium; Journal of Advanced Robotics; Journal of Autonomous Agents and Multi-Agent Systems; IEEE Transactions on Systems, Man, and Cybernetics - Part B; IEEE Transactions on Biomedical Circuits and Systems
- Student volunteer for the Graduate and Professional Student Association (GPSA) at ASU
- Student volunteer at ICAPS'14, Portsmouth

AWARDS AND RECOGNITION

- IBM PhD Fellowship 2016-17, in the news 
- University Graduate Fellowship Award (Spring 2015)
- People's Choice Best System Demonstration Award ICAPS'14 
- Travel Grants from ICAPS'14, ICAPS'15, IROS'15 and AAMAS'16
- University Graduate Fellowship Fall 2013 - Spring 2014
- Central Board of Secondary Education Merit Scholarship 2009-13
- Certificate of Merit in Science (Physics) in 2009

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current as of 12/12/2016