

PARUL PANDEY

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Research Areas Approximate Computing, Mobile Computing

Education **Rutgers, The State University of New Jersey, New Brunswick, NJ** **2011-Present**
Ph.D. in Electrical and Computer Engineering GPA: 3.6/4.0

- Thesis: Enabling Applications in Resource-constrained Mobile Computing via Approximation
- Advisor - Dr. Dario Pompili

The University of Utah, Salt Lake City, UT **2009-2011**
M.S. in Electrical and Computer Engineering GPA: 3.8/4.0

- Thesis: Modeling of Point Spread Functions for Astronomical Multifiber Spectrographs
- Advisor - Dr. Adam Bolton

Indira Gandhi Institute of Technology, GGSIP University, Delhi, India **2004-2008**
B.S. in Electronics and Communication Engineering

- Thesis: Physical Layer Implementation of WiMAX (IEEE 802.16-d) in MATLAB
- Advisor - Dr. Kanchan Sharma

Research Experience **Graduate Research Assistant** **2013-Present**
Department of Electrical and Computer Engineering, Rutgers University, NJ

Teaching Experience **Graduate Teaching Assistant** **2011-2013**
Department of Electrical and Computer Engineering, Rutgers University, NJ

- Courses: Programming Methodology, Discrete Mathematics.

Publications **Refereed Journals**

- **P. Pandey**, E. K. Lee, and D. Pompili, "A Distributed Computing Framework for Real-time Detection of Stress and of its Propagation in a Team," *IEEE Journal of Biomedical and Health Informatics*, preprints, 2015.
- **P. Pandey**, D. Pompili, and Jingang Yi, "Dynamic Collaboration between Networked Robots and Clouds in Resource-constrained Environments," *IEEE Transactions on Automation Science and Engineering*, vol. 12, no. 2, pp. 471-480, Jan. 2015. [**2016 IEEE RAS Best New Application Paper Award**]
- **P. Pandey**, M. Hajimirsadeghi, and D. Pompili, "Region of Feasibility of Interference Alignment in Underwater Sensor Networks," *IEEE Journal of Oceanic Engineering*, vol. 39, no. 1, pp. 189-202, Jan. 2014.

Refereed International Conferences

- H. Viswanathan, **P. Pandey**, and D. Pompili, "Maestro: Orchestrating Concurrent Workflows Execution in Mobile Device Clouds", in *2nd Workshop on Distributed Adaptive Systems at IEEE International Conference on Autonomic Computing (ICAC)*, Wurzburg, Germany, July 2016.
- **P. Pandey** and D. Pompili, "MobiDiC: Exploiting the Untapped Potential of Mobile Distributed Computing via Approximation," in *Proc. of IEEE Pervasive Computing and Communications Conference (PerCom)*, Sydney, Australia, March 2016.

- E. K. Lee, **P. Pandey**, and D. Pompili, “Real-time Tracking of Stress Propagation using Distributed Granger Causality,” in *Proc. of ACM International Conference on Body Area Networks (BodyNets)*, Boston, MA, Sept. 2013.
- **P. Pandey**, H. Viswanathan, and D. Pompili, “Leveraging Mobile Grid Computing for Interference Alignment and Cancellation,” in *Proc. of IEEE Military Communications Conference (MILCOM)*, Orlando, FL, Nov. 2012.
- B. Chen, **P. Pandey**, and D. Pompili, “A Distributed Adaptive Sampling Solution using Autonomous Underwater Vehicles,” in *Proc. of ACM International Conference on Underwater Networks & Systems (WUWNet)*, Los Angeles, CA, Nov. 2012.
- **P. Pandey** and D. Pompili, “On the Region of Feasibility of Interference Alignment in Underwater Sensor Networks,” in *Proc. of IEEE Underwater Communications: Channel Modelling & Validation (UComms)*, NATO Centre, La Spazia, Italy, Sept. 2012.
- B. Chen, **P. Pandey**, and D. Pompili, “Adaptive Sampling Based on Deterministic Compressive Sensing using Autonomous Underwater Vehicles,” in *Proc. of IFAC Conference on Maneuvering and Control of Marine Craft (MCMC)*, Arenzano (GE), Italy, Sept. 2012.

Posters

- **P. Pandey**, and D. Pompili. “Distributed Computing Framework for Underwater Acoustic Sensor Networks.” in *Proc. of IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*, Cambridge, MA, May 2013.

Awards

- Scholarship to attend Doctoral Consortium at 2016 ACM Richard Tapia Celebration of Diversity in Computing.
- Teaching Asst. & Graduate Asst. Professional Development Fund Award, Rutgers University.
- Scholarship to attend Early-Career Mentoring Workshop at Computing Research Association-Women (CRA-W), 2015
- Grace Hopper Celebration Scholarship Grant, 2014.
- ECE Travel Award, 2014, by Dept. of Electrical and Computer Engineering, Rutgers University.

Skills

Programming & Scripting Languages: Java, Android, MATLAB, Python, AMPL, C/C++
Simulation & Analysis Tools: MATLAB, Iperf
Technical Documentation Tools: T_EX, L^AT_EX
Platforms: Shimmer motes, Unix/Linux, Windows, Raspberry Pi

Relevant Courses

Data Structures and Algorithms	Wireless Communication	Advanced Random Processes
Digital Image Processing	Advanced Random Processes	Digital Signal Processing

Services

- Mentored a group of high school students on a research project under New Jersey Governor’s School of Engineering & Technology program at Rutgers University.
- Collaborated with Curiosity Machine, a non-profit organization, to introduce underwater communication research to children through online activities and videos.
- Served as external reviewer for major journals and conferences including Ad Hoc Networks (Elsevier), Ocean Engineering (Elsevier), Journal of Oceanic Engineering, IEEE SECON, IEEE INFOCOM, ACM WUWNet, IEEE GLOBECOM.