PROMOTION RECOMMENDATION
The University of Michigan
College of Engineering
Department of Electrical Engineering and Computer Science

Prabal Dutta, assistant professor of electrical engineering and computer science, Department of Electrical Engineering and Computer Science, College of Engineering, is recommended for promotion to associate professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

Academic Degrees:

Ph.D.	2009	University of California, Computer Science, Berkeley, CA
M.S.	2004	The Ohio State University, Electrical Engineering, Columbus, OH
B.S.	1997	The Ohio State University, Electrical and Computer Engineering, Columbus, OH

Professional Record:

2010 – present	Assistant Professor, Department of Electrical Engineering and Computer Science, University of Michigan
2011	Visiting Assistant Professor, Stanford University, Stanford, CA
2008	Course Development Teaching Assistant, Computer Science Division, University of California, Berkeley, CA
2005	Graduate Student Instructor, Computer Science Division, University of California, Berkeley, CA
2002 – 2003	Graduate Teaching Associate, Department of Electrical Engineering, The Ohio State University, Columbus, OH
1995 – 1997	Teaching Assistant, Freshman Engineering Honors Program, College of Engineering, The Ohio State University, Columbus, OH
1993 – 1994	Teaching Assistant, Electrical Engineering, The Ohio State University, Columbus, OH
1998 – 2002	Co-Founder, Chairman, and CEO, NetEnabled, Inc., Santa Clara, CA
1997 – 1998	Chief Technology Officer, Bamboo Systems, Inc., Columbus, OH

Summary of Evaluation:

Teaching: Professor Dutta consistently receives high marks from students on his teaching evaluations: an average of 4.39 overall for Q1 and 4.35 for Q2. Since arriving at Michigan in 2010, Professor Dutta has taught or co-taught several different courses at both the graduate and undergraduate levels, and has done so successfully. He expended considerable time and effort in improving EECS 373, Design of Microprocessor Based Systems, by updating the course material and ensuring that students have a complete, and completely modern, experience in the classroom. Professor Dutta is an excellent mentor to students, and has advised many over the course of his short career. His students speak well of him, reporting that he is a committed and passionate teacher who truly cares about his students. Furthermore, Professor Dutta has proven capable of

recruiting high-caliber students, many of whom have gone on to claim their own prestigious awards, including five NSF Graduate Fellowships.

Research: Professor Dutta is a prolific researcher in the areas of sensor networks and wireless communication protocols whose work is widely admired by his peers. His research realizes the vision of "smart dust" in millimeter-scale computing systems and has many practical, real-world applications, including smart and responsive buildings. Due to the timely and relevant nature of his research to so many, Professor Dutta is attracting attention outside the world of computer science. Recently, he was named to *Popular Science's* "Brilliant 10" list. He has won an NSF CAREER award, four Best Paper Awards, and has been awarded grants and gifts totaling more than $4 million.

Recent and Significant Publications:
William Huang, Ye-Sheng Kuo, Pat Pannuto and Prabal Dutta, "Opo: A Wearable Sensor for Capturing High-Fidelity Face-to-Face Interactions," in *Proceedings of the 12th ACM Conference on Embedded Networked Sensor Systems (SenSys'14)*, Memphis, TN, Nov. 3-5, 2014.
Ye-Sheng Kuo, Pat Pannuto, Ko-Jen Hsiao and Prabal Dutta, "Indoor Positioning with Mobile Phones and Visible Light," in *Proceedings of The 20th ACM Annual International Conference on Mobile Computing and Networking (MobiCom'14)*, Maui, HI, Sept. 7-11, 2014.
Samuel DeBruin, Bradford Campbell and Prabal Dutta, "Monjolo: An Energy-Harvesting Energy Metering Architecture," in *Proceedings of the 11th ACM Conference on Embedded Networked Sensor Systems (SenSys'13)*, Rome, Italy, Nov. 2013.
Ye-Sheng Kuo, Patrick Pannuto, Thomas Schmid and Prabal Dutta, "Reconfiguring the Software Radio to Improve Power, Price, and Portability," in *Proceedings of the 10th ACM Conference on Embedded Networked Sensor Systems (SenSys'12)*, Nov 2012.
Sonal Verma, Andrew Robinson and Prabal Dutta, "AudioDAQ: Turning the Mobile Phone's Ubiquitous Headset Port into a Universal Data Acquisition Interface," in *Proceedings of the 10th ACM Conference on Embedded Networked Sensor Systems (SenSys'12)*, Nov 2012.
Lohit Yerva, Apoorva Bansal, Bradford Campbell, Thomas Schmid and Prabal Dutta, "Grafting Energy-Harvesting Leaves onto the Sensornet Tree," in *Proceedings of the 11th ACM/IEE Conference on Information Processing in Sensor Networks (IPSN'12)*, Apr. 2012.

Service: Professor Dutta has an especially strong external service record. He co-chaired the technical Program Committee of the 2014 ACM SenSys Conference, which is unusual for an assistant professor. He has organized conferences and workshops, served on numerous program committees, and served as an associate editor of *IEEE Embedded Systems Letters*. He makes his research infrastructure and research artifacts available to outside researchers in both academia and industry, which is both useful and impactful.

Internally, Professor Dutta's biggest accomplishment in an internal service capacity is an initiative he started as a consequence of an internal review committee assignment. That activity revealed that Division of Computer Science and Engineering could improve its record of placing Ph.D. graduates in faculty positions. Professor Dutta instituted a number of steps aimed at improving this record, including teaching a workshop on applying for NSF Fellowship grants,

and involving Ph.D. students in the faculty hiring and PhD admission processes. Additional activities at the department level include service as a faculty advisor and as a member of the Graduate Admissions Committee.

External Reviewers

Reviewer A: "He is perhaps *the* most prolific author...highest citation measures in the most prestigious forums of computer systems. With an H-index of 32 and 5K citations, he is already outperforming many tenured professors in his area."

Reviewer B: "Professor Dutta's embedded sensing hardware platform building expertise and impact is second to none in the community."

Reviewer C: "...Prabal is one of the very best researchers in wireless sensor networks and is recognized as such by the field. He has all the skills necessary to succeed at the highest levels well into the future."

Reviewer D: "Dr. Dutta has made many significant research contributions to the area of embedded systems and sensor networks over the years and has established himself as a leading researcher in this domain."

Reviewer E: "The research of Prabal Dutta is – in relation to his seniority – absolutely impressive."

Summary of Recommendation: Professor Dutta has established a highly successful record of teaching, scholarly research, and service at the University of Michigan. It is with the support of the College of Engineering Executive Committee that I recommend Prabal Dutta for promotion to associate professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

David C. Munson, Jr.
Robert J. Vlasic Dean of Engineering
College of Engineering

May 2015