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AGENDA

Committee on Pathways to Doctoral Degrees in Computing

Meeting 9
June 8, 2023 @ 1-5pm
Virtual
https://vimeo.com/event/3468381

MEETING OBJECTIVES

- Discuss graduate admissions practices, recruitment, and retention in computer science doctoral programs
- Discuss the impact of graduate fellowship and mentorship programs

Thursday, June 8, 2023

OPEN SESSION

1:00 pm	Equity in Graduate Education Resource Center → Casey Miller, Rochester Institute of Technology, College of Science Associate Dean for Research and Faculty Affairs; Director, Inclusive Graduate Education Network Inclusive Practices Hub
1:30 pm	CSGrad4US and NSF Graduate Research Fellowship → Susanne Hambrusch, Purdue University, Professor of Computer Science
1:50 pm	Computing Innovation Fellowship 2020 → Ellen Zegura, Georgia Tech, Fleming Chair and Professor of Computer Science (Telecommunications)
2:10 pm	Computing Talent Initiative → Sathya Narayanan, CSU Monterey Bay, Professor of Computer Science
2:30 pm	UR2PhD and CRA-WP Grad Cohort Workshops → Kelly Shaw, Williams College, Associate Professor of Computer Science
2:50 pm	Break
3:00 pm	Panel on Graduate Admissions Practices → Leslie Kolodziejski, MIT → Elise DeGoede Dorough, University of Washington → Yair Amir, Johns Hopkins University → Omar Ghattas, Oden Institute for Computational Engineering and Sciences, University of Texas at Austin

CLOSED SESSION

4:00 pm	Closed Session Begins
5:00 pm	Adjourn Meeting

SPEAKER BIOGRAPHIES

Casey Miller is Associate Dean for Research and Faculty Affairs in the College of Science at the Rochester Institute of Technology. He is an experimental physicist focusing on nanoscale magnetic materials and related devices. He graduated summa cum laude with University and Physics Departmental Honors from Wittenberg University, where he was also elected to phi beta kappa. He earned his PhD from the University of Texas at Austin in 2003, did his post-doctoral work at the University of California, San Diego, and is recipient of the NSF-CAREER and AFOSR-Young Investigator Awards.

Susanne Hambrusch is a professor of Computer Science at Purdue University. She served as the Department Head of the Computer Science department from 2002-07 and 2018-19. From 2010 to 2013, she served as the Director of the Computing and Communication Foundations (CCF) Division in the CISE Directorate at NSF. Her research interests are in analysis of algorithms, computer science education, and parallel computation. Susanne is currently a board member of CRA's Education committee where she served as co-chair until 2022. She is a past CRA Board member and she served as CRA's vice chair 2015-19. Susanne played a leading role in two CS undergraduate enrollment efforts addressing the drivers of the recent surge enrollments: the NAS study on "Assessing and Responding to the Growth of Computer Science Undergraduate Enrollments" which she co-chaired and the CRA study "Generation CS: CS Undergraduate Enrollments Surge Since 2006." Currently, Susanne is a member of the CSGrad4US Fellowship Mentoring team which developed and delivers the mentoring program for recipients of NSF's CSGrad4US Graduate PhD Fellowships. She holds a Diplom Ingenieur in Computer Science from the Technical University of Vienna, Austria, and a Ph.D. in Computer Science from Penn State. She is a Fellow of the ACM.

Ellen Zegura is the Fleming Chair and Professor in the School of Computer Science at Georgia Tech. She received the BS in Computer Science, the BS in Electrical Engineering, the MS in Computer Science and the DSc in Computer Science, all from Washington University in St. Louis, Missouri. Since 1993 she has been on the faculty of the College of Computing at Georgia Tech where she conducts research and teaches in computer networking and computing for development. In 2008, she helped create the Computing for Good initiative in the College of Computing, a project-based teaching and research activity that focuses on the use of computing to solve pressing societal problems. She is a Fellow of the IEEE, a Fellow of the ACM, and an elected member of the Computing Research Association Board (CRA). Since Fall 2014 she has been on the Executive Board of the CRA. She served on the NSF CISE Advisory Committee from 2005-2009.

Sathya Narayanan is a Professor of Computer Science at California State University Monterey Bay (CSUMB) and leads the institute of Computing Talent Initiative (CTI) as its founding director. His work, along with a team of educators, focuses on developing, testing and refining a cohort-based bachelor's degree model, which has resulted in significant increases in retention, transfer, graduation, and internship/job placement for first-generation, low-income, underrepresented minority students. The State of CA provided $10M funding to establish CTI to unbundle and scale the impact of this model to serve students across the state. This work won an award for innovation in higher education from the state of CA, as well as multiple National Science Foundation grants. A paper describing the model, "Upward Mobility for Underrepresented Students: A Model for a Cohort-Based Bachelor's Degree in Computer Science" won a best paper award at SIGCSE 2018 and was nominated for the SIGCSE Top Ten

Symposium Papers of All Time award. Sathya received his Master's in Computer Applications from the College of Engineering, Guindy, India, in 1994, his M.S. in Computer Science from Temple University, Philadelphia, in 1998, and his Ph.D. in Computer Science from NYU-Polytechnic University, Brooklyn, NY, in 2006.

Kelly Shaw is a Professor of Computer Science at Williams College. Prior to moving to Williams College in 2019, she was an Assistant Professor (2004) and Associate Professor (2010) of Computer Science in the Department of Mathematics and Computer Science at the University of Richmond. Dr. Shaw's primary research interests are in computer architecture, particularly parallel architectures. She has long been involved in efforts to support and encourage participation of undergraduate students in Computer Science research and is currently co-chair of the Computing Research Association's (CRA) Committee on Education (CRA-E), including serving as a program leader for CRA's mentoring program for the NSF CSGrad4US Fellowship. Dr. Shaw is also committed to making the computing field more diverse and inclusive and has served in a variety of organizer and speaker roles for efforts to broaden participation in computing, including for the Grace Hopper Celebration of Women in Computing and for CRA's Committee on Widening Participation's workshops. Shaw is a Senior Member of the Association for Computing Machinery. She received her B.S. in Computer Science from Duke University in 1997 and her M.S. and Ph.D. in Computer Science from Stanford University in 2001 and 2005 respectively.

Leslie Kolodziejski is a principal investigator in the Research Laboratory of Electronics (RLE) at the Massachusetts Institute of Technology (MIT). She began her career at Purdue University in 1986 when she joined the Electrical and Computer Engineering Department as Assistant Professor. In 1987, Professor Kolodziejski was awarded the Presidential Young Investigator Award from the National Science Foundation and Young Investigator Award from the Office of Naval Research. In 1988, Professor Kolodziejski joined the Department of Electrical Engineering and Computer Science at MIT. She was honored with the Karl van Tassel Career Development Chair from 1992–3 and with the Esther and Harold E. Edgerton Career Development Chair from 1993–6. Professor Kolodziejski was promoted to Associate Professor in 1992 and full Professor in 1999. Professor Kolodziejski currently participates in a National Academy of Engineering Committee addressing Advanced Research Instrumentation and Facilities. She is on the Sensors and Electron Devices Panel of the NRC's Army Research Laboratory's Technical Assessment Board. In addition, she has carried out the role of Program Chair for numerous conferences such as the North American Molecular Beam Epitaxy Conference and Conference on Lasers and Electro-optics. She was on the Editorial Board of APL and JAP from 2000–2003. Professor Kolodziejski serves as academic advisor and organized a Graduate Women Seminar to mentor and support women graduate students at MIT.

Elise deGoede Dorough is Director of Graduate Student Services in the Paul G. Allen School of Computer Science & Engineering at the University of Washington. Since 2013, she has supported doctoral students in computer science and engineering and has been involved in doctoral-level diversity, equity, and inclusion initiatives with NCWIT and the NSF-funded LEAP Alliance. As a student-affairs professional, she sees diversity, equity, and inclusion as central to her job supporting students and faculty. An essential component of her role is to help design policies and advocate for institutional change that supports, uplifts, and puts students at the center of all we do.

Yair Amir is Professor of Computer Science and the director of the Distributed Systems and Networks (DSN) lab at Johns Hopkins University. From June 2015 to June 2018, he served as the chair of the Department of Computer Science. His goal is to invent resilient, performant and secure distributed systems that make a difference, collecting friends along the way. Dr. Amir is the recipient of the Alumni Association Excellence in Teaching Award for 2014, the highest teaching award in the Whiting School of Engineering, Johns Hopkins University. He was a finalist for the Excellence in Mentoring and Advising award in 2014 and for an Excellence in Teaching award in 2013. Dr. Amir served on various technical program committees including co-chair of the IFIP/IEEE Dependable Systems and Networks (DSN) for 2015, and as an associate editor for the IEEE Transactions on Dependable and Secure Computing (2010-2013). Until 2016, Dr. Amir led the development of the LTN cloud (www.ltnglobal.com). He continues to provide technical leadership at LTN. LTN offers a global transport service for broadcast-quality live TV that is used by major broadcasters including CNN, Fox, Disney, ABC, Bloomberg, CBS, CNBC, ESPN, NBC, PBS, and Turner. Dr. Amir holds B.Sc. (1985) and M.Sc. (1990) from the Technion, Israel Institute of Technology, and a Ph.D. (1995) from the Hebrew University of Jerusalem, Israel.

Omar Ghattas is a Professor of Geological Sciences and Mechanical Engineering at The University of Texas at Austin. He is also the Director of the Center for Computational Geosciences and Optimization in the Oden Institute for Computational Engineering and Sciences and holds the John A. and Katherine G. Jackson Chair in Computational Geosciences. He is a member of the faculty in the Computational Science, Engineering, and Mathematics (CSEM) interdisciplinary PhD program in the Oden Institute, and holds courtesy appointments in Computer Science and Biomedical Engineering. Before moving to UT Austin in 2005, he spent 16 years on the faculty of Carnegie Mellon University. He holds BSE (civil and environmental engineering) and MS and PhD (computational mechanics) degrees from Duke University. With collaborators, he received the ACM Gordon Bell Prize in 2003 (for Special Achievement) and again in 2015 (for Scalability), and was a finalist for the 2008, 2010, and 2012 Bell Prizes. He received the 2019 SIAM Computational Science & Engineering Best Paper Prize, and the 2019 SIAM Geosciences Career Prize. He is a Fellow of the Society for Industrial and Applied Mathematics (SIAM).