Abstract:
In this talk, I will outline a number of elements that I believe are necessary for conducting high quality research. I will begin by briefly describing my expectations for granting a doctorate degree. I will then talk about integrity in research, which will involve discussions on plagiarism, proper etiquette for citing others' works, what constitutes a mistake versus a fraud, and how to best present one's results. Next, I will discuss some strategies for success. These strategies will include (i) a self-examination to assess your own readiness for embarking on a PhD; (ii) how to choose and interact with your advisor, (iii) some strategies for building your tool-set in order to prepare yourself before and during the research process; (iv) a discussion on how to choose a good problem; (v) strategies for solving difficult problems that I have observed to work well, and what to look for in a solution; (vi) how to write a good paper, mistakes to avoid, and some resources that you should always have in your personal library; and (vii) how to create an intellectual environment that will enable you to graduate into a scholar rather than only being a specialist technician. This talk is based on my own observations, mistakes, and interactions with a variety of PhD students and colleagues over the past twenty years.

Bio:
Ness B. Shroff received his Ph.D. degree from Columbia University, NY in 1994 and joined Purdue university immediately thereafter as an Assistant Professor. At Purdue, he became Professor of the school of Electrical and Computer Engineering in 2003 and director of CWSA in 2004, a university-wide center on wireless systems and applications. In July 2007, he joined the ECE and CSE departments at The Ohio State University, where he holds the Ohio Eminent Scholar Chaired Professorship of Networking and Communications. From 2009-2012, he also served as a Guest Chaired professor of Wireless Communications at Tsinghua University, Beijing, China, and currently holds an honorary Guest professor at Shanghai Jiao tong University in China.

Dr. Shroff's research interests span the areas of communication, social, and cyberphysical networks. He is especially interested in fundamental problems in the design, control, performance, pricing, and security of these networks. He is a past editor of IEEE/ACM Trans. on Networking and the IEEE Communications Letters and currently serves on the editorial board of the Computer Networks Journal, IEEE Network Magazine, and the Networking Science journal. He has served on the technical and executive committees of several major conferences and workshops. For example, he was the technical program co-chair of IEEE INFOCOM’03, the technical program co-chair of ACM Mobihoc’08, the General co-chair of WICON’08, and the conference chair of IEEE CCW’99. He has served as a keynote speaker and panelist on several major conferences in the networking area. Dr. Shroff was also a co-organizer of the NSF workshop on Fundamental Research in Networking in 2003, and the NSF workshop on the Future of Wireless Networks in 2009.

Dr. Shroff is a Fellow of the IEEE, and a National Science Foundation CAREER awardee. His papers have received numerous awards at top-tier venues. For example, he received the best paper award at IEEE INFOCOM 2006 and IEEE INFOCOM 2008 and runner-up awards at IEEE INFOCOM 2005 and IEEE INFOCOM 2013, and the best paper of the year in the journal of Communication and Networking (2005) and in Computer Networks (2003). His papers have also received the best student paper award (from all papers whose first author is a student) at IEEE WIOPT 2012-2013, and IEEE IWQoS 2006.