Pulak Chowdhury

CONTACT INFORMATION

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EDUCATION

University of California, Davis, USA

PhD, Computer Science (expected graduation date: December 2010)

- Advisor: Professor Biswanath Mukherjee
- GPA: *3.95 out of 4.00*

McMaster University, Hamilton, ON Canada

MASc, Software Engineering (graduation date: August 2005)

- Advisor: Professor Jacques Carette
- GPA: *9.25 out of 12.00*

Bangladesh University of Engineering and Technology (BUET), Bangladesh

BSc Engineering, Computer Science and Engineering (graduation date: April 2002)

- GPA: *3.85 out of 4.00*

SKILLS

Operating Systems/Firmware: Microsoft Windows, Apple OS X, Linux/Unix, FreeBSD, Ubuntu and other UNIX variants, OpenWrt
Programming: C/C++, C#, UNIX Shell Scripting, SQL, Pascal, HASKELL, VHDL, x86 Assembly Language, PHP, HTML
Tools: MATLAB, ns-2 simulator
Extensive hardware and software experience in prototype developments
Detailed understanding of MAC, Network and Transport Layer protocols
Expertise in Network Programming, Simulation, Algorithms, and Modeling

AWARDS

University of California, Davis

- UC Davis Graduate Student Researcher Award, June 2008 - Present
- UC Davis Non-Resident Tuition Fellowship, September 2007 - Present
- UC Davis Graduate Fellowship, September 2007 –May 2008

University of Oklahoma

- University of Oklahoma Research Assistantship, August 2005 – May 2007

McMaster University

- McMaster University Graduate Scholarship, August 2003 – August 2005

Bangladesh University of Engineering and Technology (BUET)

- Best student award '00 by the Association of Computer and Electrical Students
- Dean's Merit Award (Top 2% students in each academic year), 1998 – 2002
- Academic Performance Scholarship, 1997–2002

RESEARCH AND PROFESSIONAL EXPERIENCE

University of California, Davis

Research Assistant **June 2008 – Present**

- Research Area: Hybrid Wireless-Optical Broadband Access Networks (WOBAN)

- Developed and experimented with a fully-functional WOBAN prototype at UC Davis campus. This prototype is built on open-source, off-the-shelf network components and features programmability and slice-based experimentation.
- Currently working on developing "Green" networking architectures and protocols.
- Working on fault-tolerance, risk awareness, and self-organization issues of WOBAN.

Teaching Assistant **September 2007 – May 2008**

- Courses: Introduction to Programming and Computer Networks

University of Oklahoma

Research Assistant **August 2005 – August 2007**

- Research Area: Wireless and Mobile Networks
- Worked on a NASA-funded project called SIGMA (Seamless IP diversity based Generalized Mobility Architecture). In this project, we developed, tested, and evaluated SIGMA, a Seamless IP-diversity based Generalized Mobility Architecture, by extensive prototyping.
- Developed an extension of SIGMA architecture for NEtwork MObility (NEMO), called Seamless IP diversity based NEtwork MObility (SINEMO). We developed a testbed for SINEMO experiments using off-the-shelf network components.
- Collaborated with NASA researchers to demonstrate SIGMA on VMOC satellites.

Teaching Assistant **August 2005 – August 2007**

- Courses: Computer Architecture and Discrete Structures

McMaster University

Research Assistant **August 2003 – August 2005**

- Research Area: Reverse Engineering of Legacy Assembly Codes
- This project was jointly funded by Ontario Power Generation (OPG) and Communication and Information Technology Ontario (CITO).
- Developed tools and methods to assist a developer in reverse engineering a legacy assembly program to high-level requirements specifications.

Teaching Assistant **August 2003 – August 2005**

- Courses: Digital Logic Design, Computer Architecture, and Algorithm Analysis

Bangladesh University of Engineering and Technology (BUET)

Lecturer **May 2002 – August 2003**

- Courses Taught: Computer Organization and Numerical Methods

Publications

Authored 10+ scholarly papers in IEEE/ACM Journals and Conferences.

- **Pulak Chowdhury**, Suman Sarkar, Glen Kramer, Sudhir Dixit, and Biswanath Mukherjee, "Hybrid Wireless-Optical Broadband Access Network (WOBAN): Prototype Development and Research Challenges," IEEE Network, May 2009 (accepted for publication).
- **Pulak Chowdhury**, Mohammed Atiquzzaman, and William Ivancic, "Handover Schemes in Satellite Networks: State-of-the-Art and Future Research Directions," IEEE Communications Surveys and Tutorials, vol. 8, no. 4, August 2006.
- Suman Sarkar, **Pulak Chowdhury**, Sudhir Dixit, and Biswanath Mukherjee, "Hybrid Wireless-Optical Broadband Access Network (WOBAN)," [for the book: Broadband Access Networks, Springer, to be published].
- **Pulak Chowdhury**, Suman Sarkar, and Abu (Sayeem) Reaz, "Comparative Cost Study of Broadband Access Technologies," 2^{nd} IEEE International Symposium on Advanced Networks and Telecommunication Systems (ANTS 2008), Mumbai, India, 15 -17 December 2008.

- **Pulak Chowdhury**, Abu S Reaz, Mohammed Atiquzzaman, and William Ivancic, "Performance Analysis of SINEMO: Seamless IP-diversity based Network Mobility," IEEE Conference on Communications (ICC 2007), Glasgow, Scotland, 24 - 28 June 2007.
- Abu S Reaz, **Pulak Chowdhury**, Mohammed Atiquzzaman, and William Ivancic, "Signalling Cost Analysis of SINEMO: Seamless End-to-End Network Mobility," 1^{st} IEEE International Workshop on Mobility in the Evolving Internet Architecture (MobiArch 2006) (co-located with GLOBECOM 2006) , San Francisco, CA, 27 November - 1 December 2006.
- **Pulak Chowdhury**, Mohammed Atiquzzaman, and William Ivancic, "Performance of End-to-End Mobility Management in Satellite IP Networks," 49^{th} Annual IEEE Global Telecommunications Conference (GLOBECOM 2006), San Francisco, CA, 27 November - 1 December 2006.
- **Pulak Chowdhury**, Mohammed Atiquzzaman, and William Ivancic, "SINEMO: An IP-diversity based Approach for Network Mobility in Space," 2^{nd} IEEE International Conference on Space Mission Challenges for Information Technology (SMC-IT 2006), Pasadena, CA, 17 - 21 July 2006.
- **Pulak Chowdhury**, Mohammed Atiquzzaman, and William Ivancic, "Handover Schemes in Space Networks: Classification and Performance Comparison," 2^{nd} IEEE International Conference on Space Mission Challenges for Information Technology (SMC-IT 2006), Pasadena, CA, 17 - 21 July 2006.
- Mohammed Atiquzzaman, **Pulak Chowdhury**, and William Ivancic, "SIGMA for Seamless Handover in Space," 6^{th} Annual NASA Earth Science Technology Conference, College Park, MD, 27 - 29 June 2006.
- Jacques Carette and **Pulak Chowdhury**,"Symbolic Interpretation of Legacy Assembly Language," 12^{th} Working Conference on Reverse Engineering (WCRE 2005), Pittsburgh, PA (Carnegie Mellon), USA, 8 - 11 November 2005.

References

Will be available upon request