

ENAMUL HOQUE

OBJECTIVE

- Internship in Summer / Fall of 2011

AREA OF INTEREST

- Wireless Sensor Networks, Data Mining, and their applications in Wireless Health, Assisted Living, and Energy Monitoring

EDUCATION

- **Third Year, Doctor of Philosophy**, Computer Science, University of Virginia
- **Master of Computer Science (MCS)**, University of Virginia
Graduation: May, 2011. **CGPA:** 3.85 / 4.00
- **Bachelor of Science (BSc) in Computer Science and Engineering**, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Graduation: June, 2007. **CGPA:** 3.92/4.00. **Merit Position:** 5th among 121 students

RESEARCH

- **Research Assistant** (Since Spring, 2009):

Advisor: Dr. John A. Stankovic

- **Projects:**

1. **Alarmnet:** [AlarmNet](#) is an assisted-living and residential monitoring network for smart healthcare research. Currently we are implementing a novel [Activity Monitoring System](#) that uses in-home wireless sensors. This will enable passive monitoring of elderly people to assess their cognitive and physical capabilities. Existing activity recognition algorithms mainly focus on determining which activity is currently being performed. They consider which sensors are fired within a fixed time window and based on the usage assign an activity label to that time window. We are designing a novel system using data mining techniques (clustering and pattern mining) that will detect more details of daily activities (e.g., specific order of object uses during an activity, temporal characteristics of object uses).
2. **Sleep Monitoring System:** As part of the above system I have designed and implemented a [Sleeping Monitoring Subsystem](#) using [Intel WISP's](#).
3. **PhysicalNet:** [PhysicalNet](#) is a generic paradigm for managing and programming world-wide distributed heterogeneous sensor and actuator resources in a multi-user and multi-network environment. It is developed using Java programming language. As part of this paradigm, we have designed an abstraction named [Bundle](#) for grouping wireless sensors and actuators.

- **Publications:**

1. **E. Hoque**, R. F. Dickerson, J. A. Stankovic, "Monitoring Body Positions and Movements During Sleeping using WISPs", ACM Wireless Health, October 2010.
2. P. A. Vicaire, Z. Xie, **E. Hoque**, J. A. Stankovic, "Physicalnet: A Generic Framework for Managing and Programming Across Pervasive Computing Networks", IEEE RTAS, April 2010.
3. S. Munir, S. Lin, **E. Hoque**, S. Nirjon, J. A. Stankovic, K. Whitehouse, "Addressing Burstiness for Reliable Communication and Latency Bound Generation in Wireless Sensor Networks", IPSN, April

2010.

4. P. A. Vicaire, **E. Hoque**, Z. Xie, J. A. Stankovic, "Bundle: A Group Based Programming Abstraction for Cyber Physical Systems", ICCPS, April 2010.
5. **E. Hoque**, J. A. Stankovic, "Poster Abstract: Monitoring Quantity and Quality of Sleeping Using WISPs", IPSN, April 2010.
6. **E. Hoque**, J. A. Stankovic, "Demo Abstract: Detecting Coughing Episodes Passively from Acoustic Signals in a Home Environment", ACM Wireless Health, October 2010.
7. P. A. Vicaire, Z. Xie, **E. Hoque**, J. A. Stankovic, "Demo Abstract: Physicalnet: Middleware for Programming Concurrent, Across Administrative Domain Sensor and Actuator Networks", ACM SenSys, November 2009.
8. R. Shahriyar, **E. Hoque**, S. M. Sohan, I. Naim, M. M. Akbar, M. Khan, "Remote Controlling of Home Appliances using Mobile Telephony", International Journal of Smart Home(IJSH),Vol. 2, No.3, 2008.
9. R. Shahriyar, **E. Hoque**, S. M. Sohan, I. Naim, M. M. Akbar, M. Khan, "Controlling Remote Systems using Mobile Telephony", MOBILWARE, February 2008.

COMPUTER SKILLS

- **Languages:** C, C++, Java, MATLAB, R, NesC, 80x86 Assembly language
- **Database:** MySQL, MS-SQL Server, MS Access, Oracle
- **Operating Systems:** Windows, LINUX, DOS, TinyOS, Android
- **Programming Environments:** MS Visual Studio.NET, Eclipse Platform, Android Platform, Netbeans
- **Design and Modeling:** UML

JOB EXPERIENCE

- **Teaching Assistant:** University of Virginia (Fall, 2008)
Courses Taken: Computer Architecture

- **Lecturer:** Department of CSE, BUET(August, 2007- July,2008)
Courses Taken: Computer Networks, Algorithms, Programming Language-Java

- **Software Engineer:** Spectrum Engineering Consortium Ltd. (November ,2006-July, 2007)
Projects: Worked in the project "Mobile Eye Video Surveillance System" which is currently used by a company of USA, "American Security Guard". I successfully implemented various protocols for both real time video playing and streamed transmission. I also implemented a vehicle tracking software that uses "Google Maps" for visualization.

MEMBERSHIPS

- Student member, ACM
- Graduate Student Member, IEEE