

Sungwook Moon

4440 SW Archer Rd APT 604, Gainesville, Florida 32608 United States

(352) 359-6190 | smoon@cise.ufl.edu

OBJECTIVE

To obtain a full-time software engineer/researcher position.

EDUCATION

Ph.D. candidate in Computer Science University of Florida	Aug 2011 (expected)	Committee Chair: Dr. Ahmed Helmy
M.S. in Computer Science University of Florida	May 2006	
B.S. in Computer Science Sogang University	Feb 2004	

EXPERIENCE

- Research Assistant**, Department of Computer Science Jun 2007 - present
- Developed a mobile networking testbed with robots and PDAs to implement social networking protocols and programmed on the Nokia MeeGo PDAs and Windows Mobile .NET based HP iPAQs to emulate human behavior.
 - Won the runner-up award at WINTECH best demo competition in ACM MobiCom '10.
 - Analyzed large-scale database of more than 50,000 mobile users, including two college campuses using statistical analysis and clustered mobile users according to their profiles of contact pattern.
 - Identified periodic behaviors for predicting mobile users' behavior and developed an overlay service to utilize the periodic property in profile based message transfer between mobile users.
 - Developed a program and framework to display animation of mobile network users on Google Earth (contributed with two of the other lab members).
 - Demonstrated in IEEE INFOCOM and demo chair recognized as the best demo; this demo was invited to present at IEEE SECON'08 and its poster version appeared at IEEE ICNP'08.
 - Currently, designing and programming mobile games on smart phones (Windows Mobile and Android) to study the effect of the rules in games to human behavior.
- Database Programmer**, Department of Anesthesiology, University of Florida Jan 2005 - Jul 2005
- Developed an online web-based survey and statistics tool for the users (medical doctors) of the Virtual Anesthesia Machine.
 - Presented and published a paper based on analysis (see the list of publication).
- Software Engineer**, Samsung Electronics Jan 2004 - May 2004
- Debugged and tested APIs for the embedded control browser of a digital television.

SELECTED AWARDS

- Runner-up at WINTECH best demo competition, ACM MobiCom, Sep 2010
- IEEE Communication Society travel grant for SECON (among 10 awardees out of 130 attendees)
- Travel grants, Operation of Research and Graduate student council, UF, Jun 2008 and Sep 2010
- Student Travel grant, Dept. of Computer Science, Univ. of Florida, Sep 2010
- Army Commendation Medal, 8th U.S. Army, Dec 2001 (also received Army Achievement Medal)

PUBLICATIONS AND PRESENTATIONS

- **Sungwook Moon**, Ahmed Helmy, “Sungwook Moon, Ahmed Helmy, “Challenge: Building Participatory Mobile Test Beds with an Attitude”, (under submission) to ACM MobiCom, Las Vegas, NV, Sep 2011
- **Sungwook Moon**, Ahmed Helmy, “Design and Implementation of Mobile Networking Testbeds with Personality Profiles”, accepted at workshop on testbed, IEEE IWCMC, Istanbul, Turkey, Jul 2011
- **Sungwook Moon**, Ahmed Helmy, “Spectral analysis of periodicity and regularity for mobile encounters in delay tolerant networks”, ACM SIGMOBILE Mobile Computing and Communications Review, vol 14., issue 4, 2010
- **Sungwook Moon**, Ahmed Helmy, “Understanding periodicity and regularity of nodal encounters in mobile networks: A spectral analysis”, IEEE GLOBECOM, Miami, FL, Dec 2010
- **Sungwook Moon**, Ahmed Helmy, “Mobile Testbeds with an Attitude”, ACM MobiCom demo session, Chicago, IL, Sep 2010. (also presented at IEEE GlobeCom, Dec 2010)
- **Sungwook Moon**, Ahmed Helmy, “Integration of Robots and Human Behavior for Mobile Testbeds”, WINTECH workshop, ACM MobiCom, Chicago, IL, Sep 2010. (Won the Best Demo runner-up award)
- **Sungwook Moon**, Udayan Kumar, Jeeyoung Kim, Wei-Jen Hsu, Ahmed Helmy, “Visualization and representation of mobile network users”, IEEE SECON demo session, San Francisco, CA, Jun 2008, (also presented at IEEE INFOCOM 2008, invited by the demo chair and published in IEEE explorer).
- Sem Lampotang, **Sungwook Moon**, David E. Lizdas, Jeffrey M. Feldman, Rensheng Zhang, “Anesthesia machine pre-use check survey”, poster presentation at American Society of Anesthesiologists, October 2005

SKILLS

- **Programming:** Bluetooth, WiFi, multicast, socket, middleware, firmware, compiler, P2P, Windows Mobile, Linux MeeGo SDK, serial programming, multi-thread, robot, routing protocol.
- **Language:** Java, C, C++, C# .NET, Assembly, PHP, ASP, SQL, Visual Basic, Java Swing.
- **Tools:** Visual Studio, Netbeans, Eclipse, WinAVR, Rational Rose, Knopflerfish, Ponyprog, MySQL, Oracle, iRobot Create, Matlab, Virtual Box, Scratch Box, WIDCOMM SDK, Bluez.

SELECTED COURSE PROJECTS

- **Compiler:** Built a compiler from scratch using to compile ML-like language, including scanner, parser, type-checker and compiler. Features include implementation of functions and arrays. Earned 96% (25 points above average). Coded with Java language.

- **Pipeline architecture simulator:** Built a pipeline architecture simulator that converts the given set of assembly codes to machine readable opcode while accommodating the various hazards situations. Coded with C language.
- **CHORD P2P protocol:** Programmed a modified version of CHORD P2P protocol. Earned 100%. Coded with Java language.
- **Web-service for rental car:** Built a rental car website using Oracle database (team project). Received maximum score (30/30) and recommendation to work at a medical school project. Coded with ASP .NET.
- **Sensor node simulator:** Developed a middleware simulator that can communicate with Atmega 128 sensor node (team project). Modified a firmware to interact with the developed simulator. Coded with C language.
- **Assembly programming:** Programmed string manipulation and visual effect using 8086 assembly language in an assembly language course in undergraduate school.

SERVICES

- External reviewer of the following conferences and journals.
 - IEEE INFOCOM 2011, 2009, 2007
 - IEEE ICNP 2010, 2008
 - IEEE SECON 2010, 2009, 2008
 - HiPC 2010
 - ACM UbiComp 2008
 - IEEE Transactions on Mobile Computing 2008

GRADUATE COURSES

Wireless mobile networks design and analysis, Mobile computing, Advanced computer networks, Computer networking, Operating systems principles, Computer architecture principles, Programming language principles, Analysis of algorithms, Advanced data structures, Database systems, Data mining, Software Engineering, Fundamentals of probability and Advanced computer networks.

ACTIVITIES

Affiliations: IEEE student member, ACM student member, KCISE (Korean students at UF), Sogang Chorus (performed at the most prestigious art center in Korea), Sogang Classical Guitar (performed in a Quartet and Double Trio), Sweet Swing (swing dance club - performed once)

Leadership: Senior KATUSA (squad leader of joint army for both Korean and U.S. Army soldiers)

REFERENCES

Ahmed Helmy (Advisor)

Associate Professor
E426, Department of Computer Science
University of Florida
(352) 450-3428
Helmy@ufl.edu

Sartaj K Sahni

Distinguished Professor & Chair
E301, Department of Computer Science
University of Florida
(352) 392-1527
sahni@cise.ufl.edu

Samsun (Sem) Lampotang

Professor
Department of Anesthesiology
University of Florida
(352) 273-6781
slampotang@anest.ufl.edu

Ye Xia

Associate Professor
E538, Department of Computer Science
University of Florida
(352) 450-6270
yx1@cise.ufl.edu