

MUNEEB ALI

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RESEARCH INTERESTS

Networked Systems, Wireless and Sensor Networks, and Systems for Developing Regions.

EDUCATION

PRINCETON UNIVERSITY Princeton, NJ
PhD in Computer Science (**Expected 2013**) *Sep'2008 – Present*

LAHORE UNIVERSITY OF MANAGEMENT SCIENCES (LUMS), Lahore, Pakistan
BSc (**Honours**) in Computer Science, with minor in Mathematics *Aug'1999 – May'2003*

HONORS & AWARDS

- Best Written Business Plan Award, Princeton TigerLaunch 2009
- 3rd Prize, Princeton Entrepreneurship Competition (TigerLaunch) 2009
- Awarded J. William Fulbright Fellowship for PhD (Declined) 2006
- President of the ACM LUMS Student Chapter 2001–2002
- ACM Award for Outstanding Student Chapter Website 2000–2001

RESEARCH EXPERIENCE

- **Princeton University**, Princeton, NJ
Grad. Research Assistant, Advisor: Michael Freedman, *Sep'2008 – Present*
- **Delft University of Technology (TU Delft)**, Delft, The Netherlands
Research Staff, Advisor: Koen Langendoen, *Apr'2006 – Aug'2008*
- **Stanford University**, Stanford, CA
Visiting Researcher, Advisor: Philip Levis, *Summer 2007*
- **Swedish Institute of Computer Science (SICS)**, Kista, Sweden
Visiting Researcher, Advisor: Thiemo Voigt, *Fall 2005*

WORK EXPERIENCE

- **Evolutions Inc.**, Lahore, Pakistan
Co-Founder and CTO, *2003 – 2005*

PUBLICATIONS

Conference Papers

1. Adam Dunkels, Oliver Schmidt, Thiemo Voigt, and **Muneeb Ali**, “Protothreads: Simplifying Event-Driven Programming of Memory-Constrained Embedded Systems”, In *Proceedings of the 4th ACM Conference on Embedded Networked Sensor Systems (SenSys'06)*, pp. 29-42, Boulder, CO, November 2006.

2. **Muneeb Ali** and Zartash Uzmi, "CSN: A Network Protocol for Serving Dynamic Queries in Large-Scale Wireless Sensor Networks", In *Proceedings of the 2nd Annual Conference on Communication Networks and Services Research (CNSR'04)*, pp. 165-174, Fredericton, N.B, Canada, May 2004.

Workshop Papers

3. **Muneeb Ali** and Koen Langendoen, "TinyPC: Enabling Low-Cost Internet Access in Developing Regions", In *ACM SIGCOMM Workshop on Networked Systems for Developing Regions (NSDR'07)*, pp. 177-182, Kyoto, Japan, August 2007.
4. **Muneeb Ali** and Koen Langendoen, "A Case for Peer-to-Peer Network Overlays in Sensor Networks", In *Proceedings of the International Workshop on Wireless Sensor Network Architecture (WWSNA'07)*, pp. 55-60, Cambridge, MA, USA, April 2007.
5. **Muneeb Ali**, Thimeo Voigt, and Zartash Uzmi, "Mobility Management in Sensor Networks", In *Workshops Proceedings of 2nd IEEE Conference on Distributed Computing in Sensor Systems (DCOSS'06)*, pp. 131-140, San Francisco, CA, June 2006.
6. **Muneeb Ali**, Tashfeen Suleman, and Zartash Uzmi, "MMAC: A Mobility-Adaptive, Collision-Free MAC Protocol for Wireless Sensor Networks", In *Workshops Proceedings of the 24th IEEE Performance, Computing, and Communications Conference (IPCCC'05)*, pp. 401-407, Phoenix, AZ, April 2005.
7. **Muneeb Ali** and Zartash Uzmi, "An Energy-Efficient Node Address Naming Scheme for Wireless Sensor Networks", In *Proceedings of the IEEE International Networking and Communications Conference (INCC'04)*, pp. 25-30, June 2004.

Journal Papers

8. **Muneeb Ali** and Zartash Uzmi, "Medium Access Control with Mobility-Adaptive Mechanisms for Wireless Sensor Networks", In *International Journal of Sensor Networks*, vol. 1, no. 3, pp. 134-142, 2006.

Editorials

9. Kentaro Toyama and **Muneeb Ali**, "Computing for Global Development: Is it Computer Science Research?", In *ACM Computer Communication Review (CCR)*, vol. 39, no. 5, pp. 40-43, October 2009.
10. **Muneeb Ali**, Umar Saif, Adam Dunkels, Thimeo Voigt, Kay Römer, Koen Langendoen, Joseph Polastre, and Zartash Uzmi, "Medium Access Control Issues in Sensor Networks", In *ACM Computer Communication Review (CCR)*, vol. 36, no. 2, pp. 33-36, April 2006.

TEACHING EXPERIENCE

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- Assistant in Teaching: Computer Networks (COS-461), *Princeton University* *Spring 2010*
 - Assistant in Teaching: Intro. to Programming Systems (COS-217), *Princeton University* *Fall 2009*
 - Guest Lecturer: Wireless Networking, *Abdus Salam Center for Theoretical Physics, Italy* *Feb'2008*
 - Co-instructor: Wireless Sensor Networks (IN4181), *TU Delft, the Netherlands* *Spring 2007*

PROFESSIONAL ACTIVITIES

Technical Program Committees

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- DEV'10, London, UK *Dec'2010*
 - RealWSN'10, Colombo, Sri Lanka *Dec'2010*
 - NSDR'10 (with MobiSys'10), San Francisco, CA *June'2010*
 - NSDR'09 (with SOSP'09), Big Sky, MT *Oct'2009*
 - CCC Workshop on Development, Berkeley, CA - **Organizer** *Aug'2009*
 - WCSN'08, Allahabad, India *Dec'2008*
 - WSN'08, Ottawa, Canada *July'2008*
 - NSDR'08 (with SIGCOMM'08), Seattle, WA - **Program Co-chair** *Aug'2008*
 - WEWSN'08 (with DCOSS'08), Santorini Island, Greece *Jun'2008*
 - RealWSN'08 (with EuroSys'08), Glasgow, Scotland *Apr'2008*

- WCSN'07, Allahabad, India *Dec'2007*
- WSN'07, Albacete, Spain *Sep'2007*
- NSDR'07 (with SIGCOMM'07), Kyoto, Japan - **Publicity Chair** *Aug'2007*
- WCSN'06, Allahabad, India *Dec'2006*
- RealWSN'06 (with MobiSys'06), Uppsala, Sweden *Jun'2006*

External Reviews

- **2009:** USENIX ATC
- **2008:** TOSN, INFOCOM, IPSN/SPOTS, and ICDCS.
- **2007:** TOSN, EWSN, MobiQuitous, INSS, ARCS, and ISWPC.
- **2006:** SECON, EWSN, and NCC.

TALKS

Conference/Workshop Talks

1. "Low-Cost Internet via TinyPC", at ACM NSDR'07, Kyoto, Japan *Aug 27th 2007*
2. "P2P meets Sensornets", at WWSNA'07, Cambridge, MA *Apr 24th 2007*
3. "4-Bit Addressing in Sensor Networks", at IEEE INCC'04, Lahore, PK *Jun 11th 2004*
4. "Chord for Sensor Networks", at CNSR'04, Fredericton, N.B, Canada *May 20th 2004*

Other Talks

5. "A Brief History of Sensor Networks", at Princeton University, NJ *Dec 09th 2008*
6. "Routing in Low Power & Lossy Networks", at Stanford University, CA *Aug 16th 2007*
7. "A Case for P2P Overlays in Sensornets", at 14th GNARP, Garderen, The Netherlands *Mar 15th 2007*
8. "Protothreads: Simplifying Embedded Programming", at FIT'05, Islamabad, PK *Dec 29th 2005*
9. "Towards a Sensornet Architecture", at SICS, Kista, Sweden *Nov 21st 2005*
10. "MMAC: Mobility-Adaptive MAC", at Dagstuhl Summer School on WSN, Germany *Aug 30th 2005*

LANGUAGES

Proficient in English and Urdu. Some knowledge of Dutch and Swedish.

REFERENCES

Available upon request.