

MONOWAR HASAN

Ph.D. Student, Department of Computer Science, University of Illinois Urbana-Champaign

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Education

- **Ph.D. in Computer Science** **Fall 2015 - Present**
University of Illinois Urbana-Champaign (UIUC), Illinois, United States
 - Advisor: *Prof. Sabin Mohan*
 - Primary research area: *Security issues in hard real-time systems*
 - **M.Sc. in Electrical and Computer Engineering** **May 2015**
University of Manitoba (U of M), Manitoba, Canada
 - Advisor: *Prof. Ekram Hossain*
 - Thesis: *Radio resource management for relay-aided device-to-device communication*
(URI: <http://hdl.handle.net/1993/30531>)
 - **B.Sc. in Computer Science and Engineering** **April 2012**
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
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Work Experience

- **Student Research Associate** **Summer 2017**
SRI International, Menlo Park, California, United States
 - Mentor: *Dr. Ulf Lindqvist*
 - Primary research area: *Security issues in embedded systems and Internet of things (IoT)*
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Publications

Total citations: 451 (as of March 2017)

h-index: 9 (as of March 2017)

- **Book Chapter:**
 14. **M. Hasan** and E. Hossain, “Distributed resource allocation in 5G cellular networks,” book chapter in *Towards 5G: Applications, Requirements & Candidate Technologies*, Wiley, 2016. [cited **9** times]
- **Journals and Magazines:**
 13. **M. Hasan** and E. Hossain, “Distributed resource allocation for relay-aided device-to-device communication under channel uncertainties: A stable matching approach,” *IEEE Transactions on Communications*, vol. 63, no. 10, pp. 3882-3897, Oct. 2015. [cited **17** times]
 12. E. Hossain and **M. Hasan**, “5G cellular: Enabling technologies and research challenges,” *IEEE Instrumentation & Measurement Magazine*, vol. 18, no. 3, pp. 11-21, Jun. 2015. [cited **93** times] (*top most frequently downloaded document from IEEE Xplore for IM Magazine in June 2015-June 2016*)
 11. M. Rasti, **M. Hasan**, L. Le, and E. Hossain, “Distributed uplink power control for multi-cell cognitive radio networks,” *IEEE Transactions on Communications*, vol. 63, no. 3, pp. 628-642, Mar. 2015. [cited **13** times]
 10. **M. Hasan**, E. Hossain, S. Balasubramaniam, and Y. Koucheryavy, “Social behavior in bacterial nanonetworks: Challenges and opportunities,” *IEEE Network*, vol. 29, no. 1, pp. 26-34, Jan. 2015. [cited **6** times]
 9. **M. Hasan** and E. Hossain, “Distributed resource allocation for relay-aided device-to-device communication: A message passing approach,” *IEEE Transactions on Wireless Communications*, vol. 13, no. 11, pp. 6326-6341, Nov. 2014. [cited **24** times]
 8. **M. Hasan**, E. Hossain, and D. I. Kim, “Resource allocation under channel uncertainties for relay-aided device-to-device communications underlying LTE-A cellular networks,” *IEEE Transactions on Wireless Communications*, vol. 13, no. 4, pp. 2322-2338, April 2014. [cited **52** times]
 7. **M. Hasan**, E. Hossain, and D. Niyato, “Random access for machine-to-machine communication in LTE-Advanced networks: Issues and approaches,” *IEEE Communications Magazine*, vol. 51, no. 6, pp. 86-93, June 2013. [cited **208** times]

• **Refereed Conferences:**

6. **M. Hasan**, S. Mohan, R. Pellizzoni, and R. Bobba, “TimeShield: An adaptive framework for integrating security tasks in real-time systems,” to be presented in *Euromicro Conference on Real-Time Systems (ECRTS)*, Jul. 2017.
5. **M. Hasan**, S. Mohan, R. Bobba, and R. Pellizzoni, “Exploring opportunistic execution for integrating security into legacy hard real-time systems,” in Proc. of *IEEE Real-Time Systems Symposium (RTSS)*, Nov. 2016. (*received Outstanding Paper and Best Student Paper award*)
4. **M. Hasan** and E. Hossain, “Distributed resource allocation in D2D-enabled multi-tier cellular networks: An auction approach,” in Proc. of *IEEE International Conference on Communications (ICC)*, pp. 4552-4557, Jun. 2015. [cited **13** times]

• **Refereed Workshops:**

3. **M. Hasan**, S. Mohan, R. Bobba, and R. Pellizzoni, “A server model to integrate security tasks into fixed-priority real-time systems,” in Proc. of *Workshop on Security and Dependability of Critical Embedded Real-Time Systems (CERTS)*, pp. 61-68, Nov. 2016.
2. F. Abdi, **M. Hasan**, S. Mohan, D. Agarwal, and M. Caccamo, “ReSecure: A restart-based security protocol for tightly actuated hard real-time systems,” in Proc. of *Workshop on Security and Dependability of Critical Embedded Real-Time Systems (CERTS)*, pp. 47-53, Nov. 2016. [cited **1** time]
1. **M. Hasan** and E. Hossain, “Resource allocation for network-integrated device-to-device communications using smart relays,” in Proc. of *IEEE Globecom Workshops (GC Wkshps)*, pp. 597-602, Dec. 2013. [cited **15** times]

Media Coverage

- *Newly developed security mechanism aims to guard existing real-time systems against cyberattacks* **April 2017**
Dept. of Computer Science, UIUC newsletter (<http://goo.gl/jy6wkW>)

Awards and Honors

- C.L. and Jane W.-S. Liu Award **April 2017**
Dept. of Computer Science, University of Illinois Urbana-Champaign
- Feng Chen Memorial Award **April 2017**
Dept. of Computer Science, University of Illinois Urbana-Champaign
- Best Student Paper Award **December 2016**
2016 IEEE Real-Time Systems Symposium (RTSS)
- Outstanding Paper Award **December 2016**
2016 IEEE Real-Time Systems Symposium (RTSS)
- NSF/IEEE Student Travel Grant **November 2016**
Sponsored by NSF and IEEE
- Research Assistantship **August 2015 – Present**
Dept. of Computer Science, University of Illinois Urbana-Champaign
- UMGSA Conference Grant **June 2015**
University of Manitoba Graduate Students’ Association
- University of Manitoba General Award **November 2014**
University of Manitoba
- Swedish-Bangladesh Trust Fund Travel Grant **December 2013**
Economic Relations Division, Ministry of Finance, Bangladesh
- Graduate Student Travel Award **September 2013**
Faculty of Graduate Studies, University of Manitoba
- University of Manitoba Graduate Fellowship (UMGF) **July 2013 – June 2014**
Faculty of Graduate Studies, University of Manitoba
- International Graduate Student Entrance Scholarship (IGSES) **September 2012 – April 2013**
Faculty of Graduate Studies, University of Manitoba

- Research Assistantship July 2012 – June 2015
Wireless Communications, Networks, and Services Research Group, University of Manitoba
 - “Professor Dr. Ahmad Ullah and Chemanara Ahmed Ullah Trust Fund” Scholarship 2010
Bangladesh University of Engineering and Technology (BUET)
 - Dean’s List Award for academic excellence in Level-2, 3, and 4 2009 – 2011
Bangladesh University of Engineering and Technology (BUET)
 - University Merit Scholarship 2009 – 2011
Bangladesh University of Engineering and Technology (BUET)
 - Dhaka Education Board Scholarship 2007 – 2010
Ministry of Education, Dhaka, Bangladesh
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Professional Activity

- Reviewer September 2013 – Present
- Journals:* IEEE Communications Surveys and Tutorials, IEEE Transactions on Vehicular Technology, IEEE Wireless Communications Magazine, IEEE Transactions on Wireless Communications, IEEE Transactions on Signal Processing, IEEE Transactions on Communications
- Conferences:* IEEE LCN 2014, IEEE APWCS 2014, IEEE ICC 2015, IEEE RTAS 2017 (secondary reviewer)
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Technical Skills

Languages: C, MATLAB, Python

Mathematical Tools: Stochastic and robust optimization, geometric programming, game theory, mechanism design (matching and auction theory), probabilistic inference, reinforcement learning

Communication: Excellent oral and written technical communication skills through academic talks and research publications; proficient in collaborative project execution (developed through working experience with faculty members and researchers from difference schools)

References

- **Dr. Sibin Mohan**, Research Assistant Professor
Computer Science and Information Trust Institute
University of Illinois Urbana-Champaign, USA
E-mail: sabin@illinois.edu
Web: <http://www.cs.illinois.edu/~sibin/>
- **Dr. Rakesh B. Bobba**, Assistant Professor
School of Electrical Engineering and Computer Science
Oregon State University, USA
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- **Dr. Rodolfo Pellizzoni**, Associate Professor
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- **Dr. Ekram Hossain**, Professor, Fellow IEEE
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- **Dr. Dusit Niyato**, Associate Professor, Fellow IEEE
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