

Curriculum Vitae

Mohammad Rashedul Hasan

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EDUCATION

2011-present PhD, Computing & Informatics, University of North Carolina at Charlotte
(expected to complete by August 2014)

Dissertation Title: Towards a Generalized Theory of Communication
Convention in Multiagent Systems
Adviser: Dr. Anita Raja

2006 Master of Applied Information Technology, Monash University (Australia)
Dissertation Title: Iterative Cluster Formation in Wireless Sensor Networks

2001 M.Sc., Physics, University of Dhaka (Bangladesh)

2000 B.Sc. (Honours), Physics, University of Dhaka (Bangladesh)
(minor in *Mathematics & Statistics*)

PUBLICATIONS

Book

- Mohammad Rashedul Hasan, [An Iterative Cluster Formation Routing Protocol for Wireless Sensor Network](#), VDM Verlag Dr.Muller Aktiengesellschaft & Co. KG Dudweiler Landstr. 99, 66123 Saarbrucken, Germany, 2009

Journal

- Nayeema Sadeque, Neva Agarwala and Mohammad Rashedul Hasan, “[An Adaptive Clustering Scheme for Mobile Ad-Hoc Networks](#)”, International Journal of Computer Applications 47(1):50-56, June 2012. Published by Foundation of Computer Science, New York, USA

Highly Refereed Conference Publications

1. **Mohammad Rashedul Hasan**, Sherief Abdallah and Anita Raja, "Topology Aware Convention Emergence", to appear in the Proceedings of the Thirteenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2014), May 5-9, 2014, Paris, France.
2. **Mohammad Rashedul Hasan** and Anita Raja, "[Emergence of Cooperation using Commitments and Complex Network Dynamics](#)", in the Proceedings of the 2013 IEEE/ WIC/ ACM International Conference on Intelligent Agent Technology (IAT-2013), pp 345-352 November 17-20, 2013, Atlanta, Georgia. (Acceptance Rate 30.7%)
3. **Mohammad Rashedul Hasan**, Mohamed Shehab and Ali Noorollahiravari. "Game Theoretic Approach for User Migration in Distributed Social Networks", Short Paper in the Proceedings of the 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2013), August 25-28, 2013, Niagara Falls, Canada. (Acceptance Rate 15%)
4. **Mohammad Rashedul Hasan**; Rony, M.A.; Chowdhury, S.A.; Rizwan, M.A., "[A self adaptive super peer based topology for unstructured P2P system](#)," *EUROCON, 2013 IEEE* , pp. 218-225, 1-4 July 2013, Zagreb, Croatia.
5. **Mohammad Rashedul Hasan** and Anita Raja, "[The Role of Complex Network Dynamics in the Emergence of Multiagent Coalition](#)", Short paper in the Proceedings of the Twenty-Seventh AAAI Conference on Artificial Intelligence, pp 1615-1616, July 14-18, 2013, Bellevue, Washington.
6. **Mohammad Rashedul Hasan** and Anita Raja, "[Emergence of Multiagent Coalition by Leveraging Complex Network Dynamics](#)", in the Proceedings of AAMAS 2013 Fifth International Workshop on Emergent Intelligence on Networked Agents (WEIN'13), pp 9-23, May 6-10, 2013, St. Paul, Minnesota.
7. **Mohammad Rashedul Hasan** and Anita Raja, "[Emergence of Privacy Conventions in Online Social Networks](#)", in the Proceedings of the Twelfth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2013), pp 1433-1434, May 6-10, 2013, St. Paul, Minnesota.
8. Anita Raja, **Mohammad Rashedul Hasan**, Shalini Rajanna, Ansaf Salleb-Aoussi, "[Leveraging Structural Characteristics of Interdependent Networks to Model Nonlinear Cascading Risks](#)", in the Proceedings of Naval Postgraduate Schools 10th Annual Acquisition Research Symposium, pp 137-152. Monterey, CA, May 2013.
9. Anita Raja, **Mohammad Rashedul Hasan** and Maureen Brown, "[Facilitating Decision Choices with Cascading Consequences in Interdependent Networks](#)", Proceedings of Naval Postgraduate Schools 9th Annual Acquisition Research Symposium, May 16-17, pp197-220, Monterey, CA, May 2012.
10. Anika Binte Kasem, Amatus Samiu binte Awal and **Mohammad Rashedul Hasan**, "[Interference mitigation in coexisting bluetooth and WLAN network using power](#)

[efficiency method](#)”, in *Proc. of 2012 International Conference on Computer, Information and Telecommunication Systems (CITS)*, 2012, pp. 1-5.

11. Monami Hassan, Syed Ashfaque Rahman, Kazi Mehedi Hasan and **Mohammad Rashedul Hasan**, “[Rate adaptive MAC protocol for wireless ad hoc networks](#)”, in *Proc. of Research and Development (SCORED) 2011 IEEE Student Conference*, 19-20 December 2011, pp. 454-458.
12. M.S. Mishkat-Ul-Masabih, M.S. Alam and **Mohammad Rashedul Hasan**, “[Adaptive relay selection scheme using hybrid forwarding protocol](#)”, in *Proc. of ICT Convergence (ICTC) 2011 International Conference*, 28 – 30 September 2011, pp. 46-51.
13. Kazi Mehedi Hasan, Montasir Farhan and **Mohammad Rashedul Hasan**, “[Gateway placement and adaptive overlay in backhaul wireless mesh network](#)”, in *Proc. of 17th Asia-Pacific Conference on Communications (APCC)*, Sabah, Malaysia, 2011, pp. 609-614.
14. M.M. Bhuiyan, S.M. Salim and **Mohammad Rashedul Hasan**, “[Density aware broadcasting scheme for VANET](#)”, in *Proc. of 17th Asia-Pacific Conference on Communications (APCC)*, 2011, pp. 467-471
15. **Mohammad Rashedul Hasan**, “Towards the development of Bangladesh through ICT: Through the Indian “Information Village Centre” perspective”, in *the Proc. of Business and Government in Bangladesh in the 21st Century conference*, arranged by the Department of management, Monash University (Melbourne) on November 7, 2005.

EMPLOYMENT

August 2011 – Present

Graduate Research Assistant
Distributed Artificial Intelligence Research Lab
Dept. of Software and Information Systems
College of Computing and Informatics
University of North Carolina at Charlotte

August 2013 – December 2013

Lecturer
Dept. of Software and Information Systems
College of Computing and Informatics
University of North Carolina at Charlotte

May 2007 – August 2011

Lecturer
Department of Electrical Engineering and
Computer Science
North South University, Bangladesh

August 2009 – August 2011

Legal Main Contact & CISCO Instructor

NSU Cisco Academy
North South University, Bangladesh

July 2006 – November 2006

Tutor
School of Computer Science & Software
Engineering
Monash University, Australia

December 2001 – December 2004

Entrepreneur and IT Consultant
Global Village.Com, Bangladesh
(an ICT venture for rural development)

RELEVANT GRADUATE COUSES DONE AT UNC CHARLOTTE

- Cloud Computing for Data Analysis
- Network Science
- Complex Adaptive Systems
- Intelligent Systems
- Access Control and Security Architecture

AWARDS AND HONORS

- *Chair's prize* in the Spring 2013 Department of Software and Information Systems Ph.D. Poster Competition, UNC Charlotte.
- *Australian Development Scholarship (AusAID)* in 2005 as the only candidate in Information Technology from Bangladesh in recognition of initiating and running a non-profit IT project for rural development.
- *Best Student Award* for scoring the highest grade in CSE 5510 (Mobile & Distributed Computing Systems) in July 2006, School of Computer Science & Software Engineering, Monash University.
- Secured 2nd position with a First Class degree in M.Sc. in Physics from the University of Dhaka, Bangladesh in 2001.
- Board stand, 9th position, Secondary School Certificate examination in 1993.

CONFERENCE ACTIVITY

Paper Presentation

- AAMAS (Autonomous Agents and Multiagent Systems) 2013 Fifth International Workshop on Emergent Intelligence on Networked Agents (WEIN'13)

- 2013 IEEE/ WIC/ ACM International Conference on Intelligent Agent Technology (IAT-2013)

Poster Presentation

- Twenty-Seventh Association for the Advancement of Artificial Intelligence (AAAI) Conference on Artificial Intelligence

INVITED TALK

- Design and Intelligence Laboratory, Georgia Institute of Technology, Fall 2013

CAMPUS TALK

- Talk on the research conducted at the Distributed Artificial Intelligence Research (DAIR) lab for the middle school summer camp students, Summer 2013
- Presentation at the Graduate Research Symposium of UNC Charlotte, Spring 2013
- College of Computing and Informatics (CCI) Friday Seminar Talk, Fall 2012
- Talk on the research conducted at the Distributed Artificial Intelligence Research (DAIR) lab for the prospective graduate student open house (GRAD 2012), Fall 2012

TEACHING EXPERIENCE

Lecturer, University of North Carolina at Charlotte

- Network Based Application Development, Fall 2013

Tutor, Monash University

- Database Design & Implementation, July-November 2006
- Data Mining, July-November 2006

Lecturer, North South University

- Theory of Electromagnetic Fields, Fall 2008, Spring 2009, Summer 2009, Fall 2009, Spring 2010, Summer 2010, Fall 2010, Spring 2011, Summer 2011
- Advanced Electronics and Communications LAB II, Spring 2010, Summer 2010, Fall 2010, Spring 2011, Summer 2011
- Analog Electronics, Fall 2007, Spring 2008, Fall 2008, Spring 2009, Summer 2009, Fall 2009
- Electrical and Electronics Circuit Design Lab II, Spring 2008, Summer 2008, Fall 2008, Spring 2009, Summer 2009, Fall 2009, Spring 2010, Summer 2010, Fall 2010, Spring 2011, Summer 2011
- Digital & Microprocessor Design Lab, Summer 2010
- Thermodynamics, Summer 2008

- Electricity & Magnetism, Summer 2007
- Mechanics, Fall 2007, Summer 2008
- Introduction to Engineering, Summer 2007
- Introduction to Telecommunication & Computer Engineering, Fall 2010, Spring 2011, Summer 2011
- Introduction to Linear Algebra, Summer 2007

Cisco Instructor, NSU Cisco Academy

- Cisco Certified Network Associate (CCNA) 1 – 4, Summer 2009, Fall 2009, Spring 2010, Summer 2010, Fall 2010, Spring 2011, Summer 2011

RESEARCH EXPERIENCE

2011-present Graduate Research Assistant, The Distributed Artificial Intelligence Research (DAIR) Lab, University of North Carolina at Charlotte

Project 1: Leveraging structural characteristics of interdependent networks to model non-linear cascading risks (Sponsor: Naval Postgraduate School)

Project 2: Emergence of Multiagent coalition by leveraging complex network dynamics (Sponsor: National Science Foundation)

Project 3: Modified PageRank algorithm and classification of Wikipedia pages using Naïve Bayes Classifier

2006 Monash University
Project: QoS in Wireless Sensor Network

GRANT PROPOSAL WRITING EXPERIENCE

- I have helped my adviser writing a grant proposal for the Naval Postgraduate School (NPS) project “Leveraging Structural Characteristics of Interdependent Networks to Model Non-linear Cascading Risks”, Principal Investigator: Anita Raja, 2/10/2013-6/4/2014, \$119,010.
- I have helped my adviser writing another grant proposal for the National Science Foundation (NSF) project on Privacy Conventions in Online Social Network in Fall 2012.

RESEARCH SUPERVISION

- University of North Carolina at Charlotte

Student leader for a team of graduate and undergraduate students who worked on the NPS project

- North South University

Undergraduate Final Year Thesis Supervision:

Thesis Title: Multiple Relay Selection Scheme for Optimized Power Distribution among the Relays in a Cooperative Diversity Network, Summer 2011

Thesis Title: Cognitive Radio for Wireless Nodes in IEEE 802.11 Based Wireless Mesh Network, Spring 2011

Thesis Title: Interference Mitigation Technique for Performance Enhancement in Coexisting Bluetooth & WLAN, Spring 2011

Thesis Title: Rate Adaptive MAC protocol for Wireless Ad Hoc Network, Spring 2011

Thesis Title: Packet Segmentation for Efficient Data Transmission in a Bluetooth Piconet, Spring 2011

Thesis Title: Interference aware Gateway Placement Algorithm for Wireless Mesh Network, Spring 2011

Thesis Title: Adaptive multiple relay selection scheme for OFDMA relay networks, Fall 2010

Thesis Title: Broadcast-storm mitigation in intelligent traffic information system for Vehicular Ad Hoc Networks (VANET), Fall 2010

Thesis Title: Integration of Cellular-IP with Wireless Mesh Network (WMN) for future generation Radio Access Networks, Fall 2010

Thesis Title: Design of efficient scheduling algorithm for scatternets, Fall 2010

Thesis Title: Cross-layer security enhancement in distributed Wireless Sensor Network, Summer 2010

Thesis Title: Efficient search algorithm for peer-to-peer network, Summer 2010

Thesis Title: QoS enabled MAC protocol for Wireless Sensor Network, Summer 2010

Thesis Title: Dynamic channel allocation through base station coordination in relay-enhanced OFDMA cellular network, Spring 2010

Thesis Title: Delaunay triangulation algorithm based on fractal topology for reliable optical radio access network, Spring 2010

Thesis Title: A scatternet based wireless sensor network for traffic monitoring, Spring 2010

Thesis Title: Passive Optical Transmission model for Smart Dust Network, Fall 2009

Thesis Title: Energy-efficient and QoS enabled multipath routing protocol for MANET, Fall 2009

Thesis Title: Battery-power level based multiple access algorithm for the MAC layer in MANET, Fall 2009

Thesis Title: Hierarchical Foreign-Agent based solution for smooth handoff in Mobile IP, Fall 2009

Thesis Title: Energy-efficient coordinated scatternet formation protocol, Fall 2009

Thesis Title: Congestion control and bandwidth reallocation in a cluster based Wireless Sensor Network, Summer 2009

Thesis Title: Design of adaptable MANET to combat link-failure, Fall 2008

Thesis Title: An Adaptive Clustering Scheme for Mobile Ad-Hoc Networks, Fall 2007

Thesis Title: Online library system design, Summer 2007

REFERENCES

Anita Raja, Ph.D. (my Ph.D. thesis adviser at UNC Charlotte)
Associate Professor
Department of Software and Information Systems
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PI and Director, CCI GAANN Fellowship Program
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Mirsad Hadzikadic, Ph.D.
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Faculty Director, Health Informatics Professional Science Master's
Director, Data Science and Business Analytics Professional Science Master's
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M V Ramakrishna, Ph.D. (my Master's thesis adviser at Monash University)
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