

# ROKAN UDDIN FARUQUI

## Curriculum Vitæ

Department of Computing and Software  
McMaster University  
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## RESEARCH INTERESTS

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Ontologies and Semantic Web, Model Merging, Model Checking, and Formal Methods.

## EDUCATION

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- JANUARY 2013 - PhD in COMPUTER SCIENCE  
**McMaster University**, Canada  
SUPERVISOR: Professor Thomas Maibaum.
- SEPTEMBER 2009 - DECEMBER 2012 MS in COMPUTER SCIENCE  
**St. Francis Xavier University**, Canada  
SUPERVISOR: Professor Wendy MacCaull.
- JANUARY 2001 - NOVEMBER 2005 BSc (Honours) in COMPUTER SCIENCE AND ENGINEERING  
**Chittagong University of Engineering and Technology**, Bangladesh

## RESEARCH EXPERIENCE

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- JANUARY 2013 -  
Research Assistant DEPT. OF COMPUTING AND SOFTWARE  
*McMaster University, Canada*  
Working on Model Merging. Applying an ontological approach to represent and merge software models.
- SEPTEMBER 2009 - JUNE 2012  
Research Assistant at STFX CENTRE FOR LOGIC AND INFORMATION  
*St. Francis Xavier University, Canada*  
Worked on the project entitled *Building Decision-Support Through Dynamic Workflow Systems, Academia and Industry Working Together for Better Healthcare*. Developed a scalable reasoning system for OWL 2 RL ontologies with large ABoxes.
- DECEMBER 2011 - FEBRUARY 2012  
NSERC IPS Intern at PALOMINO SYSTEM INNOVATIONS INC.  
Worked on the project *Ontology-Driven Document Management System* at *Palomino System Innovation Inc.* as an intern for **NSERC Industrial Postgraduate Scholarship(IPS)**. The goal of the project was the integration of ontologies into the existing web-based document management system that provide enhanced and precise semantic search facilities, reasoning and SPARQL end points for link data publications and queries.
- JUNE 2010 - AUGUST 2010  
NSERC IPS Intern at PALOMINO SYSTEM INNOVATIONS INC.  
Worked on the project *HL7 CTS Integration Engine: Design and Implementation* at *Palomino System Innovation Inc.* as an intern for the **NSERC Industrial Postgraduate Scholarship(IPS)**. The goal of the project was to build a middleware that will communicate between client software's and services provided by care providers using HL7 Reference Information Model (RIM).

## TEACHING EXPERIENCE

Teaching Assistant at DEPT. OF COMPUTING AND SOFTWARE  
*McMaster University, Canada*

Worked as a TA for the following courses:

- **SE3A04** : Software Design II - Large System Design. Shared responsibility for conducting tutorials and marking assignments and projects. [Fall term 2013/2014]
- **COMPSCI 4WW3**: Web Systems and Web Computing. Was responsible for grading homework and exams. [Winter term 2012/2013]

JANUARY 2009 - CURRENT

Assistant Professor at DEPT. OF COMPUTER SCIENCE AND ENGINEERING

JANUARY 2006 - JANUARY 2009

Lecturer at DEPT. OF COMPUTER SCIENCE AND ENGINEERING  
*University of Chittagong, Bangladesh*

Teaching undergrad and postgraduate diploma level courses of Computer Science. Responsible for

- preparing and delivering lectures to students
- preparing, administering and grading homework, laboratory reports, and final examinations
- supervising students to conduct their research
- curriculum planning and other administrative duties as a member of the departmental academic and planning committee

List of courses that I taught at the department of Computer Science and Engineering, University of Chittagong.

- **CSE 402**: Computer Networks
- **CSE 304**: Operating Systems
- **CSE 201**: Algorithms
- **CSE 103**: Computer Programming

List of courses I taught at other departments of University of Chittagong as a guest lecturer:

- **PA 406**: Computer Application in Public Administration, *Department of Public Administration*
- **PYS 106**: Fundamental of Computer Science I, *Department of Psychology*
- **Stat 226**: Computer Programming II, *Department of Statistics*
- Data Analysis and Research Methodology, *Department of Soil Sciences.*

I am on study leave since September 2009 from University of Chittagong, Bangladesh.

FALL 2008

Guest Lecturer at DEPT. OF COMPUTER SCIENCE AND ENGINEERING  
*Premier University, Bangladesh*

Taught undergrad level course on *Compiler Design and Automata Theory*. Was responsible for preparing and delivering lectures and preparing, administering and grading homework and exams.

FALL 2007

Guest Lecturer at DEPT. OF BUSINESS ADMINISTRATION  
*International Islamic University Chittagong, Bangladesh*

Taught undergrad level course on *E-Commerce* . Was responsible for preparing and delivering lectures and preparing, administering and grading homework and exams.

## PUBLICATIONS

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- Rakib, Abdur, Hafiz Mahfooz Ul Haque, and **Rokan Uddin Faruqi**: A Temporal Description Logic for Resource-Bounded Rule-Based Context-Aware Agents. In 2nd International Conference on Context-Aware Systems and Applications (ICCASA'13), Revised Selected Papers, volume 128, of LNICST, pages 3-14, November 2013. Springer-Verlag [Best Paper].
- Rabbi, Fazle, Wendy MacCaull, and **Rokan Uddin Faruqi**: A scalable ontology reasoner via incremental materialization. In 26th IEEE International Symposium on Computer-Based Medical Systems (CBMS'13), pages 221-226, June 2013.
- **Rokan Uddin Faruqi** and Wendy MacCaull: OwlOntDB: A Scalable Reasoning System for OWL 2 RL Ontologies. In International Symposium on Foundations of Health Information Engineering and Systems (FHIES 2012) co-located with FM 2012, Springer LNCS.
- Abdur Rakib, **Rokan Uddin Faruqi**, Wendy MacCaull, *Verifying resource requirements for ontology driven rule-based agents*. In 7th International Symposium on Foundations of Information and Knowledge Systems (FoIKS 2012) Kiel, Germany, LNCS Vol. 7153 Springer.
- Abdur Rakib, **Rokan Uddin Faruqi** : A Formal Approach to Modelling and Verifying Resource-Bounded Context-Aware Agents. In 1st International Conference on Context-Aware Systems and Applications (ICCASA'12), Revised Selected Papers, volume 109, of LNICST, pages 86-96, November 2012. Springer-Verlag.
- Nihad Karim Chowdhury, **Rokan Uddin Faruqi**, and Mohammed Kamal Hossen, *Approximate Travel Time Measure From Moving Object Trajectory in Road Network*, Computer Science and Engineering Research Journal Vol. 04 ISSN: 1990-4010, Chittagong University of Engineering and Technology, Bangladesh (2006).

## TALKS

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- Fazle Rabbii, Wendy MacCaull, **Rokan Uddin Faruqi**: A scalable ontology reasoner via incremental materialization. In CBMS 2013, Porto, Portugal, June 20-22, 2013.
- Abdur Rakib, **Rokan Uddin Faruqi**, Wendy MacCaull: Verifying resource requirements for ontology driven rule-based agents. In FoIKS 2012, Kiel, Germany, March 5-9, 2012.
- Wendy MacCaull, Fazle Rabbi and **Rokan Uddin Faruqi**: Next Generation Workflow and Data Management Tools with Application to Health Services Delivery, National Research Council, Fredericton, 2012.
- **Rokan Uddin Faruqi** and Wendy MacCaull, Scalable Reasoning over OWL 2 RL Ontologies. 4th Atlantic Workshop on Semantics and Services (AWoSS 2012) May 04, 2012, Halifax, NS, Canada.

## WORKSHOP AND TRAINING

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- Mitacs Workshop on "Proactive and Practical Communications", McMaster University, Hamilton, ON, March 12, 2013.
- School on New Perspective in Wireless Networking Applications and followed by Relevance of Low Cost Wireless ICTP Solutions for Development:An Awareness Workshop organized by The Abdus Salam ICTP. Trieste, Italy, February 11 -March 5, 2008.

## HONOUR'S AND AWARDS

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NSERC Industrial Postgraduate Scholarship (IPS 1), Canada - \$21,000/year	FEBRUARY 2010 - JANUARY 2012
Graduate Research Assistantship, McMaster University, Canada	JANUAR 2013 - DECEMBER 2016
Teaching Assistantship, McMaster University, Canada	JANUAR 2013 - DECEMBER 2016
Graduate Research Fellowship, StFX Center for Logic and Information,Canada	SEPTEMBER 2009 - JUNE 2012
Graduate Student Assistantship, St. Francis Xavier University, Canada	SEPTEMBER 2009 - JUNE 2012
Merit Scholarship for all semesters, Chittagong University of Engineering and Technology, Bangladesh	2001- 2005

## SKILLS

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- Semantic Web Languages: RDFa, SWRL, OWL , SKOS, SPARQL, RDF(S).
- Model Checker: DiVinE, SMV
- Programming Languages: C,C++, Java, MPI C, Unix shell scripts
- Web Programming: HTML, PHP, XML, XSLT.
- Database Systems: MySQL, Oracle, MS SQL Server
- Tools: Matlab, NS2 Simulator, L<sup>A</sup>T<sub>E</sub>X, GNU Plot, *Protégé*, Literate Programming tools
- Networking: Experienced in configuring DNS server, Proxy server, Mail server(Sendmail & Qmail), Web server
- Operating Systems: Unix/Linux, Mac OS, Windows.

## GRADUATE COURSES

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- PhD**
- CAS 701 Logic and Discrete Mathematics
  - CAS 703 Software Design
  - CAS 706 Programming Languages
  - CAS 707 Formal Specification Techniques
- MS**
- CS522 High Performance Computing
  - CS541 Theory of Computing
  - CS543 Specifications and Verifications
  - CS561 Computer & Network Security