MD FARHADUR REZA
PhD Candidate
High Performance Embedded Nano-Computing Lab
The Center for Advanced Computer Studies
University of Louisiana at Lafayette

Phone: +1-3372551908
Email: mxr7945@louisiana.edu
Web: www.ucs.louisiana.edu/~mxr7945

SUMMARY

- Good knowledge of data structures, algorithms, and object-oriented programming
- Proficient in C/C++ and Java programming languages
- Good understanding of computer network, wireless networks, mobile networks, on-chip networks, and task-resource allocation & optimization

FIELDS OF INTEREST

- Computer Networks, Wireless Networks, Mobile Networks, Chip Networks, Many-Core Systems, Cloud Computing

EDUCATION

- PhD in Computer Science, The Center for Advanced Computer Studies (CACS)

  University of Louisiana at Lafayette, CGPA: 4.0 (4.00 scale) **May 2014 – Aug 2017 (Expected)**

  ✓ Major Coursework: Computer Networks; Wireless Computing and Networking Systems; Operating Systems; Information Storage and Retrieval; Advanced Computer Architecture; VLSI Design; Embedded Systems Design
- Master of Science in Computer Science **Aug 2012 – May 2014**

  University of Louisiana at Lafayette, CGPA: 4.0 (4.00 scale)
- B.Sc.Engg in Computer Science and Engineering **Jul 2000 – Jun 2005**

  Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh, CGPA: 3.60 (4.00 scale)

  ✓ Major Coursework: Software Engineering; Algorithms; Programming Languages (C / C++ /Java/ Assembly); Data Structures; Compiler; Operating Systems; Databases; Artificial Intelligence; Pattern Recognition; Discrete Mathematics; Computer Networks; Computer Graphics; Data Communication; Software Development

EMPLOYMENT

- **Graduate Research/Teaching Assistant, University of Louisiana at Lafayette** **Aug 2012 - Current**
  - ✓ Research in task-resource co-allocation and optimization in many-core chip networks
  - ✓ Teaching Assistant: *Advanced Data Structures and Software Design* course in Java (Spring'16 to Current); *Introduction to Data Structures and Software Design* course in C++ (Spring'13 to Spring'14); Computer Architecture (Fall'14 & Fall'15); Computer Organization and Assembly Language Programming (Spring'15)
- **Lead Engineer, GrameenPhone Ltd. (Telenor Group)** **Nov 2005 - Aug 2012**
  - ✓ Developed systems for telecom networks and services performance and quality reporting (using Oracle / MS-Access / MySQL / Web Technologies)
  - ✓ Lead projects to improve mobile services quality by enhancing end-to-end network performance
- **Quantitative Software Developer, Stochastic Logic, ACI Bangladesh Ltd.** **Jul 2005 - Oct 2005**
  - ✓ Designed & implemented financial pricing software using Mathematica, and C#.net

RESEARCH EXPERIENCE

- **PhD Dissertation** – Computation and Communication Optimization in Heterogeneous Many-Core Server-on-Chip
- Propose algorithm for optimization (minimization of hotspot, delay, energy, etc.) of task-resource mapping and configuration in heterogeneous many-core single-chip cloud computer
- Develop Linear Programming (LP) optimization modeling for mapping and implement the models using LP solvers
- Develop on-chip task mapping, performance and optimization simulator (in C++)
- Design hybrid on-chip overlay topology by placing wireless routers in base mesh wired network
- **Undergraduate Thesis** - Study on Graceful Labeling of Trees: Studied on classes of Graceful tree, construction of trees, methods of drawing trees etc., and finally, developed a Graceful Labeling Algorithm

PUBLICATION

- Md Farhadur Reza, Dan Zhao, Magdy Bayoumi, "Dark Silicon-Power-Thermal Aware Runtime Mapping and Configuration in Heterogeneous Many-Core Chip", Accepted to appear in the Proceedings of 50th IEEE International Symposium on Circuits and Systems (ISCAS), Baltimore, MD, USA, 2017
- Md Farhadur Reza, Dan Zhao, HongYi Wu, "Task-Resource Co-Allocation for Hotspot Minimization in Heterogeneous Many-Core NoCs", In Proceedings of 26th ACM international Conference on Great Lakes Symposium on VLSI (GLSVLSI), Boston, MA, USA, 2016

POSTER

- Computation Hotspots Avoidance in Many-Core Single-Chip Cloud-Computer, PhD Forum, Design Automation Conference (DAC), 2014

PROJECTS

- Economic e-Shopping Guide (Personalized Based Search Engine): Developed an efficient recommendation system for online shoppers to find the best deals based on their personal requirements (in Java)
- Simulated 802.11 DCF MAC Protocol, including RTS/CTS exchange (in C++)
- Implemented URL checker that can find out broken links and accessibility problems in a webpage (in Java)
- Developed Oil Well Monitoring software system using PHP, Web-based technologies (AJAX, JSON, JavaScript, etc.), MySQL, C#.net, and hardware (sensors, serial ports, etc.)
- Developed a database system for university examination result processing using Visual Basic and Oracle
- Implemented link state routing algorithm for OSI layered network architecture (in Java)
- Developed a Solar like system in C programming
- Developed a digital video processor and editor using Win32 programming

TECHNICAL SKILLS

- **Programming Languages:** Proficient - C, C++, Java, Matlab, SQL
  Familiar- C#, Web technologies (HTML, etc.), PHP, OpenGL, Prolog, Assembly, Verilog, Python, SystemC
- **Tools/Simulator:** IBM CPLEX, MS-Access, MS Visio, MS-Excel, MATLAB, YALMIP, Eclipse, NetBeans, Visual Studio, Wireshark, Business Object, Tektronix, Ericsson OSS, Huawei M2000, gem5, DSENT, Hotspot, ModelSim
- **Others:** Windows, Unix, Linux, macOS, MVC & .NET Frameworks, TCP/IP Socket Programming, Microcontrollers

AWARDS / ACHIEVEMENTS

- **A. Richard Newton Young Fellow Award**, Design Automation Conference (DAC), 2014
- **ACM Travel Grant Award**, Great Lakes Symposium on VLSI (GLSVLSI), 2016
- **GSO Travel Grant Award** from University of Louisiana at Lafayette at attend GLSVLSI conference, 2016
- **GSO Travel Grant Award** from University of Louisiana at Lafayette to attend DAC conference, 2014
- **Academic Excellence Awards**, University of Louisiana at Lafayette, 2014 and 2015
- Awarded Membership of **Phi Kappa Phi Honor Society**
- **Graduate Assistantship**, University of Louisiana at Lafayette, 2012-Current
- **Academic Excellence Awards**, Bangladesh University of Engineering & Technology, 2004 and 2005
- **Education Board Scholarship**, Govt. of Peoples Republic of Bangladesh, 2000–2005
- **GrameenPhone Ltd.**- Promoted to Senior System Engineer and Lead Engineer in Dec 2007 and Jan 2010
- **Ranked- 54th** in **undergraduate entrance exam** of Bangladesh University of Engineering & Technology among thousands of participants

OTHERS

- **Participant:** CajunCodeFest ’13 & ’ 14- Health Care Coding Challenges
- **Paper Reviewer:** ISCAS ’14 & ’15 & ’16 & ‘17, ASP-DAC’15 & ‘16, SoCC’14