Monika Dhok

Department of Computer Science and Automation, IISc, Bangalore
Email: monika.dhok@csa.iisc.ernet.in

Interests	Program Analysis, Software Engineering.

Publications

Pegasus: Automatic Barrier Inference for Stable Multithreaded Systems
Monika Dhok, Rashmi Mudduluru and Murali Krishna Ramanathan
International Symposium on Software Testing and Analysis (ISSTA), 2015

Type-Aware Concolic Testing of JavaScript Programs
Monika Dhok, Murali Krishna Ramanathan and Nishant Sinha
International Conference on Software Engineering (ICSE), 2016

Directed Test Generation to Detect Loop Inefficiencies
Monika Dhok, and Murali Krishna Ramanathan
International Symposium on the Foundations of Software Engineering (FSE), 2016

Education

Indian Institute of Science, Bangalore, Karnataka.
Ph.D student, August 2013 to present
(CGPA: 6.5/8) Advisor: Dr. Murali Krishna Ramanathan

Birla Institute of Technology and Science, Pilani, Rajasthan.
(CGPA: 7.21/10) B.E (Hons.) Computer Science, 2008-2012

Brijlal Biyani Science College, Amravati, Maharashtra.
Maharashtra Board (Class XII), 2008
97.50% Maharashtra State topper

Narayan Das Laddha Highschool, Amravati, Maharashtra.
Maharashtra Board (Class X), 2006
93.33% 13th Rank

Experience

Teaching Assistant   Jan 2016 to May 2016
Advanced Software Engineering by Dr. Murali Krishna Ramanathan
Department of Computer Science and Automation, Indian Institute of Science

Teaching Assistant   Aug 2015 to Dec 2015
Operating Systems by Dr. Murali Krishna Ramanathan
Department of Computer Science and Automation, Indian Institute of Science

Application Developer Programmer Analyst   June 2012 to July 2013
Citicorp Services India Ltd, Mumbai
- The job involved developing new features for trading application BECS, testing the application and fixing bugs. BECS provides transaction cost management tools to improve trading performance.
- BECS is in production environment for JP, UK and US. I was in support team to handle production issues.
- Active member of Citi Diversity People Strategy team in Citigroup.

Intern   July 2011 to Dec 2011
Hewlett Packard (India Software Operations), Bangalore

- Worked on HP Web2Print project as a 3D developer.
- The job involved integrating 3D proofing technology in to Web2Pring system. This helped users to preview print jobs in 3D and verify printing options. To achieve this, Print Driver Publishing technology was used which involves Silverlight, balder etc.
- For integration, this system was deployed on Amazon cloud using amazon EC2 instance.

Service

- Program committee member: Artifact evaluation for PLDI 2016.
- Program committee member: Artifact evaluation for PPoPP 2016/CGO 2016.
- Subreviewer: CAV 2015, ICPP 2015

Projects

- Project on 'Automatic Schema generation from SQL query workload' as a requirement for Database Management Systems course, 2015
- Project on 'scaling multithreaded systems' as a requirement for Topics in Software Bug detection course, 2014.
- Implemented 'FastTrack: efficient and precise dynamic race detection, PLDI 09' on soot framework in Java, 2014.
- Implemented major components of operating systems in 'Pintos' framework, 2013.
- Implemented intra-procedural and inter-procedural slicing on wala framework in Java, 2013.
- 2D to 3D conversion of an image using image processing techniques, 2011.
- Implemented major components of compiler in C, 2010.
- Built personal firewall as a requirement for Computer Networks course, 2010.

Graduate Courses

Operating Systems, Design and Analysis of Algorithms, Program Analysis and Verification, Topics in Software Bug Detection, Automated Verification, Database Management Systems, Stochastic Models and Applications .

Achievements

- SIGSOFT CAPS Grant for ICSE 2016 (800 USD).
- Microsoft India Travel Grant for ICSE 2016 (1490 USD).
- Invited to ACM-MSR Academic Research Summit.
- Joint third prize in the IDRBT doctoral colloquium.
- Sarukkai Jagannathan Student Travel Award, 2015 (20000 INR).
- Google India Travel Grant for ISSTA 2015 (2730 USD).
- PLMW scholarship for POPL 2015 (500 USD).
- Student Volunteer at ICSE 2014.
- Secured 99.76 percentile in GATE.
- Awarded Dhirubhai Ambani State Merit Scholarship for 8 semesters in B.E. program.
- Awarded Maharashtra State Board scholarship for excellence in 12th std. in 2008.
- Ranked in top 300s in National Science Olympiad.

ExtraCurricular activities

- Management trainee at Yashoda Hospitals, Hyderabad, 2009.
- Won 3 medals(2,1) in swimming competitions at BOSM (Bits Open Sports Meet), BITS Pilani, 2009-10.
- Organized annual cultural night ULHAAS and Cultural performances on founders day in BITS Pilani, 2010.
- Actively participated in 'National Social Services group' at BITS to reach out young girls and children in pilani about computers.