Chandrakana Nandi

Paul G. Allen School of Computer Science & Engineering, University of Washington
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Education

PhD in Computer Science at UW CSE, Fall 2015 - now
Website: homes.cs.washington.edu/∼cnandi
Advisor: Dan Grossman

Master of Science, Computer Science
École Polytechnique Fédérale de Lausanne(EPFL), Switzerland, August 2014
Thesis: Contracts for Real-Time, Safety Critical Systems
Supervisors: Prof.Viktor Kuncak, Dr.Manuel Oriol
M.Sc Research Scholars Program and Swiss Government Fellow

Bachelor of Science, Statistics, Mathematics and Computer Science
Banaras Hindu University (BHU), Varanasi, India, June 2012
Concentration: Statistics
Thesis: Social Network-based Analysis of Behavior
Supervisor: Prof. R.D Singh
University Gold Medalist for graduating with highest GPA

Work Experience

Summer intern at Microsoft Research, Redmond June 2016-August 2016
RiSE group

- Extended a probabilistic programming language to make statistical inference a first class citizen
- Designed and implemented a debugger for probabilistic programs

Research Assistant September 2014-June 2015
Chair of Software Engineering, ETH Zurich

- Worked on specifying functional properties of concurrent OO programs in the SCOOP concurrency model in Eiffel

Masters Thesis student Feb 2014-Aug 2014
EPFL and ABB Corporate Research Center, Switzerland
Advisors: Prof. Viktor Kuncak, Dr. Manuel Oriol

- Designed and implemented a framework for specifying and checking functional and real-time properties of component-based industrial software

Software Intern Aug 2013-Jan 2014
Software Systems Group, ABB Corporate Research Center, Switzerland

- Designed and implemented a bi-directional model transformation tool between two component based frameworks used for writing real-time safety-critical software

Summer Intern at BIOROB, EPFL Jun 2010-Jul2010
Supervisor: Prof. Auke J. Ijspeert

- Analyzed the locomotion of a salamander from X-Ray movies and implemented a graphical simulation of the temporal variations in the angles at the different joints on the salamander's body
- This was very useful for the design of the famous salamander robot developed at EPFL called Salamandra Robotica

Publications

Peer reviewed conference and workshop papers

1. Chandrakana Nandi, Dan Grossman, Adrian Sampson, Todd Mytkowicz, Kathryn S. McKinley. Debugging Probabilistic Programs. MAPL 2017.
2. Chandrakana Nandi, Anat Caspi, Dan Grossman, Zachary Tatlock. Programming Language Tools and Techniques for 3D Printing. SNAPL 2017.
3. Chandrakana Nandi, Michael D. Ernst. Automatic Trigger Generation for Rule-based Smart Homes. ACM SIGPLAN PLAS 2016.
4. Chandrakana Nandi. Automatic Trigger Generation for End User Written Rules for Home Automation. ACM FSE SRC 2016.
5. Chandrakana Nandi: Correctness and Security for Home Automation. POPL SRC 2016.
6. Chandrakana Nandi, Aurelien Monot, Manuel Oriol: Stochastic Contracts for Runtime Checking of Component-based Real-time Systems. CBSE'15: 18th International ACM SIGSOFT Symposium on Component-Based Software Engineering.

Theses and Technical Reports

1. C. Nandi: Contracts for Real-Time, Safety Critical Systems, Masters Thesis, EPFL, August 2014
2. C. Nandi: Social Network based Analysis of Behavior, Bachelors Thesis, BHU, April 2012

Awards

1. Student Travel Grants from ACM CCS and PLAS 2016
2. CRA-W Grad Cohort Workshop 2016 invitee
3. Scholarship and travel grant to attend SIGPLAN PLMW and POPL 2016
4. 5 awards including 3 Gold medals in the 95^{th} convocation of BHU, 2013
    - University Gold Medal for having the highest GPA ("Topper") in the Institute of Science, BHU
    - Department Gold Medal for having the highest GPA in the Department of Statistics, BHU
    - Gold Medal for having the highest GPA among all Female students in the Institute of Science, BHU
    - Dr. Basudeo Sahni Gold Medal
    - Cash award and university scholarship holder for academic excellence for 3 consecutive years
5. Swiss Government Fellow from September 2012-2014 (full fellowship during masters studies at EPFL)
6. Selected for the prestigious M.Sc Research Scholar Program at the School of Computer and Communication Sciences at EPFL in 2012. Worked under Prof. Joseph Sifakis (Turing Award 2007)
7. Secured **All India Rank 14** in the IIT-Joint Admission Test for Mathematical Statistics in 2012

Teaching experience (TAship)

1. Spring 2016. CSE 331: Software Design and Implementation, UW, Seattle
2. Fall 2016. CSE 331: Software Design and Implementation, UW, Seattle
3. Spring 2015: Concepts of Concurrent Computation, graduate level, ETH Zurich
4. Fall 2014: Introduction to Programming, undergraduate level, ETH Zurich

Professional Services

1. PSC Chair, Visit Days 2017, UW CSE
2. Reviewer for Elsevier journal, Future Generation Computer Systems
3. Student volunteer at POPL 2016
4. ACM-W mentorship program 2015: Mentoring female CSE undergrduates at UW Seattle, currently have two mentees
5. Session Chair at ACM CBSE 2015, session: Component and Composition
6. Member of the organizing team of the 2010 National Conference on High Performance Computing and Applications and Workshop on Graph and Geometric Algorithms organized by Banaras Hindu University

Language Proficiency

English: fluent
French: basic
German: basic
Bengali: mother tongue
Hindi: fluent