Michael Wehar

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EDUCATION

PhD, Computer Science and Engineering, University at Buffalo
Concentration: Automata, Formal Languages, and Complexity
Dates: Aug 2013 - Dec 2016

MS & **BS**, Mathematical Sciences, Carnegie Mellon University
Honors Thesis: Intersection Emptiness for Finite Automata
Dates: Aug 2009 - May 2012

RESEARCH

PhD Thesis (Aug 2013 - Dec 2016): Work on the complexity of intersection non-emptiness for finite automata with Kenneth Regan from University at Buffalo.

Collaborative Research (Summer 2013): Work on the complexity of time-bounded inductive inference problems with Manuel Blum from Carnegie Mellon.

Research Assistant (May 2012 – Dec 2012): Work on the complexity of decision problems for finite automata with Klaus Sutner from Carnegie Mellon.

PAPERS

D. Chistikov, W. Czerwinski, P. Hofman, M. Pilipczuk, and M. Wehar. Shortest paths in one-counter systems. FoSSaCS 2016, pages 462-478, 2016.

J. Swernofsky and M. Wehar. On the complexity of intersecting regular, context-free, and tree languages. ICALP 2015 (Part II), pages 414-426, 2015.

M. Wehar. Hardness results for intersection non-emptiness. ICALP 2014 (Part II), pages 354-362, 2014. **(Best Student Paper Award)**

M. Wehar. Intersection emptiness for finite automata. Honors thesis, Carnegie Mellon University, 2012.

TALKS

- IBM Research: "On the Complexity of Intersection Non-Emptiness Problems".
- University of Waterloo and **China Theory Week 2015**: "Intersection Non-Emptiness for Tree Shaped Finite Automata".
- Rochester Theory Seminar: "Intersection Non-Emptiness for Restricted Classes of Finite Automata".

HONORS & AWARDS

- Graduate Dean's Scholars Award and Computer Science and Engineering Graduate Leadership Award from University at Buffalo.
- Best Student Paper Award for ICALP 2014 (Track B) in Copenhagen, Denmark.
- Invited to China Theory Week 2015 in Shanghai, China and Heidelberg Laureate Forum 2017 in Heidelberg, Germany.
- Student travel grants to attend CCC 2014 and LFCS 2016.

SOFTWARE **Computer Vision Programmer** at Capsen Robotics [C++] (**Jan 2017 - Present**):
- Working with a small team on development and testing of our core computer vision technologies for object recognition, 3D scanning, and bin picking.

Summer Research Intern at IBM Research [Java] (**Summer 2016**):
- Developed a query evaluation system for a specialized query language. Designed a parser using ANTLR and built a data accessor using SPARK.
- Development in Eclipse using Maven for project dependencies and JUnit for testing.

Software Developer at Soglo Startup [Java, Android] (**Jan 2013 - Mar 2013**):
- Developed an Android App to facilitate bluetooth communication with a wearable apparel device. App integrated with API's for accelerometer, voice, and weather.

TEACHING **Part-time Instructor (Fall 2017)**: Adjunct instructor teaching algorithm implementation (CS1501) at University of Pittsburgh.

Adjunct Faculty (Summer 2015): Adjunct instructor teaching computer science theory (CSCI 262) at Rochester Institute of Technology.

Teaching Assistant (Aug 2013 – Dec 2016): Assisting with introduction to computer science, discrete structures, theory of computation, and software engineering concepts at University at Buffalo.

Teaching Assistant (Spring 2010 & Fall 2012): Assisting with concepts of mathematics and honors matrix theory at Carnegie Mellon University.

SERVICE **President (Feb 2016 - Nov 2016)**: Graduate Student Association for Computer Science and Engineering at University at Buffalo.
- Represented the graduate student body organizing monthly meetings, social events, and funding opportunities.
- Student representative at department faculty, advisory board, and grievance committee meetings.

Technical Evangelist Intern (**Spring 2016**): Growing online platform created by Meed Inc Startup.
- Content writer for software engineering community offering help and advice to undergraduate computer science students from across the country.

Volunteer (4 years): Pittsburgh Refugee Youth Summer Enrichment Academy.

REFERENCES Kenneth Regan, Associate Professor, University at Buffalo.
Email: regan@buffalo.edu

Atri Rudra, Associate Professor, University at Buffalo.
Email: atri@buffalo.edu

Manuel Blum, B. Nelson Professor of Computer Science, Carnegie Mellon University.
Email: mblum@cs.cmu.edu