

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**
- M. Oliveira and M. Wehar. Intersection Non-Emptiness and Hardness within Polynomial Time. DLT 2018, pages 282-290, 2018.
- 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**
- Computer Science and Engineering Graduate Leadership Award and Graduate Dean’s Scholars Award from University at Buffalo.
 - Best Student Paper Award for ICALP 2014 (Track B) in Copenhagen, Denmark.
 - Invited to Heidelberg Laureate Forum 2017 in Heidelberg, Germany and China Theory Week 2015 in Shanghai, China.

TEACHING

Assistant Professor of Instruction (Jul 2018 - Present): Full-time instructional faculty member teaching Software Design (CIS 3296) and Data Structures (CIS 2168) at Temple University.

Part-time Instructor (Fall 2017): Adjunct instructor teaching algorithm implementation (CS 1501) 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.

SOFTWARE

Computer Vision Programmer at Capsen Robotics [C++] (**Jan 2017 - Jul 2018**):

- 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.

PATENTS

M. Hailpern, M. Hernandez-Sherrington, Y. Li, M. Wehar, and H. Zhu. Constraint tracking and inference generation. Filed March 2018. Patent Pending.

M. Wehar. Human and Computer Cooperative Artistic Creation. U.S. Provisional Patent Application No. 62/590,577. Filed November 2017.

POSTERS

C. Cossé, I. Livni, and M. Wehar. Converting unstructured web data into sequenced STEM educational games. PYCON 2018.

SERVICE

Member (Fall 2018 - Present): Serving on CIS Undergraduate Curriculum Committee at Temple University.

Volunteer Software Developer (Feb 2018 - Present): Language preservation project @ friisk.org to digitize an endangered dialect of North Frisian.

- Responsibilities include data organization, testing procedures, website frontend & backend, spell checking, and pronunciation generator.

Mentorship (Spring 2018): Innovation competitions at University of Pittsburgh.

- Volunteer mentor for University of Pittsburgh's startup creation competition.
- Invited judge for University of Pittsburgh's annual healthcare innovation hackathon.

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.

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