

# ALAN ROMANO

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## EDUCATION

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<b>PhD</b>	University at Buffalo, SUNY Dr. Weihang Wang Computer Science and Engineering	2018 – Present
<b>BS</b>	New Jersey Institute of Technology, Computer Science Summa Cum Laude (Cumulative GPA: 3.96) Minor in Applied Mathematics College of Computing Sciences, Albert Dorman Honors College	2014 – 2018

## HONORS AND AWARDS

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Arthur A. Schomburg Fellowship	2018 – 2021
NJIT Dean's List	2014 - 2018
2 <sup>nd</sup> Place Presentation in Computing – Philadelphia AMP	2016
NJIT Provost Summer Research Fellowship	2016
Ronald E. McNair Post-Baccalaureate Achievement Program	2016

## RESEARCH EXPERIENCE

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<b>University at Buffalo, SUNY</b> , Buffalo, NY	2019 – Present
<b>Research Assistant</b> , Dr. Weihang Wang	
<ul style="list-style-type: none"><li>• Investigated WebAssembly development and debugging methods</li><li>• Designed and implemented WebAssembly development tools</li><li>• Set up and led experiments related to WebAssembly data collection</li></ul>	
<b>New Jersey Institute of Technology</b> , Newark, NJ	2016 – 2018
<b>Undergraduate Researcher</b> , Dr. Michael Bieber	
<ul style="list-style-type: none"><li>• Led a team of four programmers to develop Participatory Learning experimental education platform</li><li>• Created necessary webpages using React and Node.js to increase flexibility of possible assignment structure in the system</li><li>• Managed all frontend aspects of system design and implementation</li></ul>	

## TEACHING EXPERIENCE

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<b>University at Buffalo, SUNY</b> , Buffalo, NY	2018 – 2019
<b>Teaching Assistant</b> , Dr. Matthew Hertz	
<ul style="list-style-type: none"><li>• Assisted in managing CSE 116 entry-level and CSE 542 master's-level courses</li><li>• Clarified any questions that students would have in-class</li><li>• Led in-person classes during professor absence</li></ul>	

## PROFESSIONAL EXPERIENCE

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<b>United Parcel Service</b> , Mahwah, NJ	2017 – 2018
<b>Enterprise Business Intelligence Intern</b> , Meryl Aronowitz	

- Extended functionality of existing online management system used to maintain the allowed standards for all corporate IT software and hardware procurement and usage
- Collaborated with team to convert legacy website from ColdFusion to .NET
- Implemented secure file upload functionality into website

## PUBLICATIONS

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### *Conference Papers*

**A. Romano**, D. Lehmann, M. Pradel, W. Wang, “Wobfuscator: Obfuscating JavaScript Malware via Opportunistic Translation to WebAssembly,” To Appear In *2022 43<sup>rd</sup> IEEE Symposium on Security and Privacy (S&P)* (acceptance: 15.2%, 54/355) [[Available on Personal Website](#)]

**A. Romano**, X. Liu, Y. Kwon, W. Wang, “An Empirical Study of Bugs in WebAssembly Compilers,” *2021 IEEE/ACM 36<sup>th</sup> International Conference on Automated Software Engineering (ASE)*. (acceptance: 19.2%, 82/427) [[Available on Personal Website](#)]

**A. Romano**, Z. Song, S. Grandhi, W. Yang and W. Wang, “An Empirical Analysis of UI-Based Flaky Tests,” *2021 IEEE/ACM 43<sup>rd</sup> International Conference on Software Engineering (ICSE)*, 2021 pp. 1585-1597. doi: [10.1109/ICSE43902.2021.00141](https://doi.org/10.1109/ICSE43902.2021.00141) (acceptance: 23%, 138/602) [[Available on Arvix](#)]

**A. Romano**, Y. Zheng and W. Wang, “MinerRay: Semantics-Aware Analysis for Ever-Evolving Cryptojacking Detection,” *2020 35<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE)*, 2020, pp. 1129-1140. doi: [10.1145/3324884.3416580](https://doi.org/10.1145/3324884.3416580) (acceptance: 22.5%, 93/414) [[Available on Personal Website](#)]

**A. Romano** and W. Wang, “WASim: Understanding WebAssembly Applications through Classification,” *2020 35<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE)*, 2020, pp. 1321-1325. doi: [10.1145/3324884.3415293](https://doi.org/10.1145/3324884.3415293) (acceptance: 62.5%, 18/29) [[Available on Personal Website](#)]

**A. Romano** and W. Wang, “WasmView: Visual Testing for WebAssembly Applications,” *2020 IEEE/ACM 42<sup>nd</sup> International Conference on Software Engineering: Companion Proceedings (ICSE-Companion)*, 2020, pp. 13-16. doi: [10.1145/3377812.3382155](https://doi.org/10.1145/3377812.3382155) (acceptance: 33%, 25/75) [[Available on Personal Website](#)]

## PRESENTATIONS

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“An Empirical Study of Bugs in WebAssembly Compilers,” 36<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE), November 2021.

“An Empirical Analysis of UI-Based Flaky Tests,” 43<sup>rd</sup> International Conference on Software Engineering (ICSE), May 2021.

“MinerRay: Semantics-Aware Analysis for Ever-Evolving Cryptojacking Detection,” 35<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE), September 2020.

“WASim: Understanding WebAssembly Applications through Classification,” 35<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering (ASE), September 2020.

“WasmView: Visual Testing for WebAssembly Applications,” 42<sup>nd</sup> Annual International Conference on Software Engineering (ICSE), July 2020.

“Probabilistic Testing in the Presence of Flaky Tests,” 3<sup>rd</sup> annual Facebook Testing and Verification Symposium, November 2019.

“Building a Flexible and Collaborative Online Learning System,” 5<sup>th</sup> Annual NJIT Innovation Day, April 2017.

“Building a Flexible and Collaborative Online Learning System,” Philadelphia AMP 18<sup>th</sup> Annual Research Symposium, October 2016.

“Building a Flexible and Collaborative Online Learning System,” NJIT Ninth International Summer Research Symposium, July 2016.