

Neea Rusch

Curriculum vitae

School of Computer and Cyber Sciences

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Education

- 8/2020–present PhD student in Computer Science, *Augusta University*, Augusta, GA USA.
- 8/2014–5/2016 Master of Science in Computer Science, *Georgia Institute of Technology*, Atlanta, GA USA.
- 8/2011–5/2014 Bachelor of Science in Computer Science, *Augusta University*, Augusta, GA USA.

Teaching Experience

- 2019–2021 CSCI 1301 - Principles of Computer Programming I, *Instructor*, Augusta University.
Total enrollment 228, 6 semesters: fall 2019 – spring and fall 2020 – spring and summer and fall 2021.
- 2019 CSCI 1200 - Introduction to Computers and Programming, *Instructor*, Augusta University.
Total enrollment 24, 2 semesters: spring and summer 2019.

Publications

- 2023 Clément Aubert, Thomas Rubiano, Neea Rusch, and Thomas Seiller. “Distributing and Parallelizing Non-canonical Loops”. In: *Verification, Model Checking, and Abstract Interpretation*. Springer Nature Switzerland, Jan. 2023, pp. 1–24. DOI: 10.1007/978-3-031-24950-1_1.
- 2022 Clément Aubert, Thomas Rubiano, Neea Rusch, and Thomas Seiller. “mwp-Analysis Improvement and Implementation: Realizing Implicit Computational Complexity”. In: *7th International Conference on Formal Structures for Computation and Deduction (FSCD 2022)*. Vol. 228. LIPIcs. Schloss Dagstuhl–Leibniz-Zentrum für Informatik, Aug. 2022, 26:1–26:23. DOI: 10.4230/LIPIcs.FSCD.2022.26.
- 2022 Neea Rusch. “Formally Verified Resource Bounds Through Implicit Computational Complexity”. In: *Companion Proceedings of the 2022 ACM SIGPLAN International Conference on Systems, Programming, Languages, and Applications: Software for Humanity*. SPLASH Companion 2022. ACM, Dec. 2022, pp. 17–20. DOI: 10.1145/3563768.3565545.

Software

- 2023 Clément Aubert, Thomas Rubiano, Neea Rusch, and Thomas Seiller. *pymwp: MWP analysis in Python*. Version 0.4.2. May 2023. DOI: 10.5281/zenodo.7908484.
- 2022 Clément Aubert, Thomas Rubiano, Neea Rusch, and Thomas Seiller. *Distributing and Parallelizing Non-canonical Loops – Artifact*. Version 1.0. Sept. 2022. DOI: 10.5281/zenodo.7080145.

Talks & Presentations

- 2023-03-10 🌐 SCOT: A Seminar on Semantic and Formal Approaches to Complexity, *online*.
- 2023-01-21 🇺🇸 The Ninth International Workshop on Coq for Programming Languages (CoqPL 2023), *Boston, USA*.
- 2023-01-16 🇺🇸 The 24th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2023), *Boston, USA*.
- 2022-12-06 🇳🇿 The SPLASH Doctoral Symposium (SPLASH 2022), *University of Auckland, New Zealand*.
- 2022-06-20 🇫🇷 The 28th International Conference on Types for Proofs and Programs (TYPES 2022), *University of Nantes, France*.
- 2022-04-01 🇺🇸 The 37th Annual Graduate Research Day – poster, *Augusta University, USA*.
- 2021-11-18 🇫🇷 Laboratoire d’Informatique de Paris Nord (LIPN) seminar, *Université Sorbonne Paris Nord, France*.
- 2021-11-15 🇫🇷 Inria Celtique research team seminar, *IRISA Rennes, France*.
- 2021-03-26 🌐 The 36th Annual Graduate Research Day, *online, Augusta University, USA*.

Academic Service

PC Member **Artifact Evaluation Committee (AEC).**

APLAS – Asian Symposium on Programming Languages and Systems – 2022.

COORDINATION – International Conference on Coordination Models and Languages – 2023.

ECOOP – European Conference on Object-Oriented Programming – 2023.

ICFP – International Conference on Functional Programming – 2022, 2023.

PLDI – Programming Language Design and Implementation – 2022, 2023.

PPoPP – Principles and Practice of Parallel Programming – 2023.

SOSP – Symposium on Operating Systems Principles – 2023.

Extended Review Committee.

ECOOP Research Papers – 2023.

Reviewer **Journals.**

The Journal of Open Source Software.

Organizer **Committee Member.**

SERPL – The Southeast Regional Programming Languages Seminar – 2023.


Volunteer In-person student volunteer at CAV’23 and POPL’23 and SPLASH’22.


University Service

2023–2024 Vice President and founding member of ΔΔΔ student organization, *Augusta University*.

2021–2023 Member of The Graduate School’s Graduate Student Council, *Augusta University*.


Seminars & Schools


2023  Verification Mentoring Workshop (VMW), *CAV 2023 conference*, Paris, France, July 18, 2023.

2023  Twelfth Summer School on Formal Techniques (SSFT23) & the First Formal Methods in the Field Bootcamp, *on principles and practice of formal techniques*, Atherton, CA, USA, May 24–June 2, 2023.

2022  Programming Languages Mentoring Workshop, *PLMW @ PLDI 2022*, San Diego, CA, USA, June 13–14, 2022.

2021  Static Analyses of Program Flows: Types and Certificate for Complexity, *Dagstuhl Seminar 21453*, Schloss Dagstuhl, Germany, November 7–12, 2021.

2021  Oregon Programming Languages Summer School (OPLSS 2021), *on foundations of programming and security*, online, June 14–26, 2021.

2021  Midlands Graduate School, *in the foundations of computing science*, online, April 12–16, 2021.

Industry Experience

2020–2021 Senior Consultant, *Rural Sourcing Inc.*, Augusta, GA, front-end web application development.

2018–2019 Android Developer, *TaxSlayer*, Augusta, GA, mobile application design and development.

2014–2018 Software Developer, *TaxSlayer*, Augusta, GA, full stack web application design and development.

Awards

2023 Verification Mentoring Workshop scholarship, *by VMW 2023 organizers*, to attend verification mentoring workshop (VMW) and Computer Aided Verification (CAV’23) conference in Paris, France.

2022 Student Research Program, \$1,000, *by Augusta University Provost’s Office and the Translational Research Program of the Department of Medicine at Medical College of Georgia*, for dissertation research.

2022 Programming Languages Mentoring Workshop scholarship, *by ACM SIGPLAN*, to attend PLMW @ PLDI 2022 and the PLDI’22 conference, in San Diego, California, USA.

2022 Excellence in Research in Computer & Cyber Sciences, \$100, *by The Graduate School at Augusta University*, for presentation at Augusta University 37th Annual Graduate Research Day.

- 2021 VMCAI 2022 Student Travel Fellowship, \$1,500, *by VMCAI'22 organizers*, to attend the Verification, Model Checking, and Abstract Interpretation (VMCAI 2022) conference in Philadelphia, Pennsylvania, USA.
- 2015 Grace Hopper Scholarship, *by Georgia Institute of Technology*, to attend Grace Hopper Celebration of Women in Computing (GHC'15) conference in Houston, Texas, USA.
- 2014 Outstanding Computer Science Student Award, *by Augusta University*, for academic excellence, awarded annually to one graduating student.
- 2013 Savannah River Scholars Program (SRSP) Scholarship, \$7,800, *by Augusta University and funded by National Science Foundation*.

Languages

English, Finnish