John C. Kolesar

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🖰 johnckolesar.github.io

Education

Yale University	**New Haven, Connecticut**
Ph.D., Computer Science	*2020–2026 (anticipated)*

Advisor: Ruzica Piskac
Earned M.S. en route to Ph.D. in 2022

Cornell University	**Ithaca, New York**
Bachelor of Arts with Distinction in All Subjects	*2016–2020*

Majors:
- Mathematics (Magna cum Laude, Computer Science concentration)
- Classics (Latin concentration)

Minors:
- Computer Science
- Philosophy

Cumulative Grade Point Average: 3.97
Computer Science GPA: 4.02

Honors

Phi Beta Kappa	
Cornell University College of Arts & Sciences	*2020*
Nathan Hale Associates Fellow	
Yale Graduate School of Arts & Sciences	*2021*
Arts & Sciences Dean's List	
Cornell University	*All available semesters*

Graduate Course Work Performance

Grade of H (maximum grade for Yale GSAS) in all graded graduate courses

Research Interests

- Formal Methods
- Program Verification
- Symbolic Execution
- Automatic Program Repair
- Software-Defined Networking
- Cryptography
- Competitive Programming

Publications

- John C. Kolesar, Ruzica Piskac, William T. Hallahan. **Checking Equivalence in a Non-strict Language.** *OOPSLA*, 2022.
- Jialu Zhang, De Li, John C. Kolesar, Hanyuan Shi, Ruzica Piskac. **Automated Feedback Generation for Competition-Level Code.** *ASE*, 2022.

Industry Work Experience

Microsoft One Engineering System

Research Intern, Remote   *Summer 2022*
Supervisor: Josh Becker
Mentor: Grant Holliday

Aretec Inc.

Big Data Software Application Developer   *Summer 2018, Summer 2019*
Contractor for U.S. Securities and Exchange Commission
New York City (2018)
Washington, D.C. (2019)

Teaching Experience

Graduate Teaching Fellow at Yale University..

CPSC 458: Automated Decision Systems

Taught by Stephen Slade   *Spring 2024*

CPSC 323: Introduction to Systems Programming and Computer Organization

Taught by James Glenn and Jay Lim   *Fall 2023*

CPSC 484/584: Introduction to Human-Computer Interaction

Taught by Marynel Vázquez   *Spring 2023*

CPSC 435/535: Building an Internet Router

Taught by Robert Soule   *Fall 2022*

CPSC 433/533: Computer Networks

Taught by Anurag Khandelwal   *Spring 2022*

CPSC 323: Introduction to Systems Programming and Computer Organization

Taught by Ruzica Piskac and Rob Brunstad   *Fall 2021*

Undergraduate Teaching Assistant at Cornell University......................................

CS 3110: Data Structures and Functional Programming

Taught by Nate Foster   *Spring 2020*

CS 4820: Introduction to Analysis of Algorithms

Taught by Eva Tardos   *Fall 2019*

CS 3110: Data Structures and Functional Programming

Taught by Michael Clarkson   *Fall 2018*

CS 2112: Honors Object-Oriented Design and Data Structures

Taught by Dexter Kozen   *Fall 2017*

Other Work, Research, and Volunteering Experience

Cornell University   **Ithaca, New York**
Computer Science Research   *Fall 2019, Spring 2020*
Research Advisor: Nate Foster
Subject: Software-Defined Networking with P4

Tenley Achievement Program   **Washington, D.C.**
Office Manager   *Summer 2017*

Yale University Computer Science Department   **New Haven, Connecticut**
Graduate Student Advisory Committee Member   *2023–2024 Academic Year*

Yale University Computer Science Department   **New Haven, Connecticut**
New Ph.D. Student Mentor   *2023–2024 Academic Year*

National University of Colombia   **Manizales, Colombia (remote)**
Web Chair for LPAR 2023   *June 2023*

Squash Haven   **New Haven, Connecticut**
Volunteer Tutor (Computer Science, Mathematics)   *Spring 2023, Fall 2023*

Yale University Computer Science Department   **New Haven, Connecticut**
Website Manager for Formal Methods Meetup 2023   *October 2023*

Yale University Computer Science Department   **New Haven, Connecticut**
Ph.D. Student Buddy for Admitted Student Day   *Spring 2022*

Skills

- Proficiency in Java, C, C++, OCaml, Q, Haskell, Python
- Experience with JavaScript, TypeScript, Dafny, Coq, Standard ML, C#, Kusto
- Experience with SMT solvers, Excel, LaTeX, Unity, Blender, VirtualBox, Docker