KEVIN A. ANGSTADT

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ACADEMIC INTERESTS

I have a passion for teaching and mentoring undergraduate students and am particularly interested in developing learning environments that welcome, assimilate, and challenge all students.

My research combines computer architecture, software engineering, and programming languages to improve programming support for emerging hardware technologies. My work develops both new programming models as well as automated techniques for adapting existing software.

ACADEMIC APPOINTMENTS

2026–present **Associate Professor of Computer Science**
St. Lawrence University (Canton, NY)

2022–2026 **Assistant Professor of Computer Science**
St. Lawrence University (Canton, NY)

2020–2022 **Visiting Assistant Professor of Computer Science**
St. Lawrence University (Canton, NY)

EDUCATION

2020 **Ph.D., Computer Science and Engineering**
University of Michigan (Ann Arbor, MI)
Thesis: Improving Programming Support for Hardware Accelerators Through Automata Processing Abstractions
Advisor: Westley Weimer
Committee: Reetuparna Das, Jean-Baptiste Jeannin, Kevin Skadron (UVA), Westley Weimer (chair)

2016 **Master's Degree in Computer Science**
University of Virginia (Charlottesville, VA)
Thesis: RAPID Programming of Pattern-Recognition Processors
Advisors: Westley Weimer, Kevin Skadron
Committee: Andrew Grimshaw, Baishakhi Ray, Gabriel Robins (chair), Kevin Skadron, Westley Weimer

2014 **B.S., Computer Science, Mathematics, and German Studies**, Summa Cum Laude
St. Lawrence University (Canton, NY)
Thesis: Accelerating Database Joins Using a General Purpose GPU
Advisors: Edwin Harcourt, Daniel Look, Ingrid Stipa

PROFESSIONAL DEVELOPMENT

2020 **Graduate Teaching Certificate**
Center for Research on Learning and Teaching, University of Michigan (Ann Arbor, MI)

TEACHING EXPERIENCE

CS 3017 (SLU) **Intro to Web Design**—introductory course introducing students to design principles, website development, and styling with HTML, CSS, and JavaScript

- **Fall 2025**: 23 students enrolled, Mean Evaluation: 6.3/7, University Average: 6.0/7

CS 140 (SLU) — **Intro to Computer Programming**—introductory course introducing students to programming in a high-level language

- **Spring 2025**: 22 students enrolled, Mean Evaluation: 6.5/7, University Average: 6.1/7
- **Fall 2023**: 44 students enrolled, Mean Evaluation: 6.8/7 (Sec. 01), 6.3/7 (Sec. 02), University Average: 6.1/7
- **Spring 2023**: 24 students enrolled, Mean Evaluation: 6.9/7, University Average: 6.2/7
- **Fall 2022**: 50 students enrolled, Mean Evaluation: 6.5/7 (Sec. 01), 6.7/7 (Sec. 02), University Average: 6.1/7
- **Spring 2022**: 49 students enrolled, Mean Evaluation: 6.6/7 (Sec. 01), 6.7/7 (Sec. 03), University Average: 6.2/7
- **Fall 2021**: 24 students enrolled, Mean Evaluation: 6.8/7, University Average: 6.1/7
- **Summer 2021**: 18 Students enrolled, Mean Evaluation: 6.7/7, University Average: 6.2/7
- **Spring 2021**: 29 students enrolled, Mean Evaluation: 6.8/7, University Average: 6.1/7
- **Fall 2020**: 25 students enrolled, Mean Evaluation: 6.1/7, University Average: 5.9/7

CS 141 (SLU) — **Intro to Microcontrollers**—introductory course introducing students to embedded systems and programming

- **Spring 2026**: 14 students enrolled

CS 220 (SLU) — **Computer Organization**—intermediate-level required course focusing on low-level systems programming, design considerations, and security in computer systems

- **Spring 2025**: 31 students enrolled, Mean Evaluation: 6.6/7, University Average: 6.1/7
  Co-taught with Dr. Ed Harcourt

CS 256 (SLU) — **Data Structures**—intermediate-level required course focusing on data representation and asymptotic complexity

- **Spring 2026**: 6 students enrolled
- **Fall 2025**: 16 students enrolled, Mean Evaluation 6.7/7, University Average: 6.0/7
- **Fall 2024**: 23 students enrolled, Mean Evaluation 6.8/7 (Sec. 01), 6.6/7 (Sec. 02), University Average: 6.1/7
- **Spring 2023**: 18 students enrolled, Mean Evaluation: 6.9/7, University Average: 6.2/7
- **Fall 2022**: 36 students enrolled, Mean Evaluation: 6.7/7, University Average: 6.1/7
- **Fall 2021**: 16 students enrolled, Mean Evaluation: 6.8/7, University Average: 6.1/7
- **Fall 2020**: 22 students enrolled, Mean Evaluation: 6.4/7, University Average: 5.9/7

CS 332 (SLU) — **Web Programming**—upper-level elective introducting students to modern web development langauges and practices

- **Fall 2023**: 28 students enrolled, Mean Evaluation: 6.6/7, University Average: 6.1/7
- **Fall 2021**: 13 students enrolled, Mean Evaluation: 6.7/7, University Average: 6.1/7

CS 340 (SLU) — **Software Engineering**—upper-level elective focusing on soft skills, processes, and ethics for industrial software development

- **Spring 2026**: 30 students enrolled
- **Spring 2023**: 30 students enrolled, Mean Evaluation: 6.6/7, University Average: 6.2/7

- **Summer 2021**: 4 students enrolled, 1 student auditing, Mean Evaluation: 7/7, University Average: 6.2/7

CS 364 (SLU) — **Programming Languages**—upper-level elective focusing on functional programming and the implementation of an interpreter for an object-oriented programming language

- **Fall 2024**: 13 students enrolled, Mean Evaluation: 6.7/7, University Average: 6.1/7
- **Spring 2022**: 11 students enrolled, Mean Evaluation: 6.8/7, University Average: 6.2/7
- **Spring 2021**: 16 students enrolled, Mean Evaluation: 6.6/7, University Average: 6.1/7

CS 450 (SLU) — **Senior Year Experience (SYE) Seminar**—capstone seminar for computer science majors with a significant project component

- **Spring 2025**: 13 students enrolled, Mean Evaluation: 7.0/7, University Average: 6.1/7
  Topic: Operating Systems from Boot to Binary

EECS 281 (U-M) — **Data Structures and Algorithms**—intermediate-level required course focusing on data representation, asymptotic complexity, and algorithmic design

- **Winter 2019**: 638 students enrolled (48 enrolled in Angstadt's section), Angstadt Median Evaluation: 4.8/5, Engineering Median: 4.3/5
- **Winter 2018**: 685 students enrolled (79 enrolled in Angstadt's section), Angstadt Median Evaluation: 4.69/5, Engineering Median: 4.5/5

EECS 398 (U-M) — **Practical Skills for Teaching Computing**—upper-level elective seminar introducing teaching assistants to skills needed to be successful as well as the basics of curriculum design

- **Fall 2019**: 9 students enrolled, Median Evaluation: 5.0/5, Engineering Median: 4.7/5

CS 4610 (UVA) — **Programming Languages**—upper-level elective focusing on functional programming and the implementation of an interpreter for an object-oriented programming language

- **Spring 2017**: 31 students enrolled, Mean Evaluation: 4.80/5 (0.45 std. dev.), Engineering Average: 4.35/5 (0.90 std. dev.)

CS 4640 (UVA) — **Programming Languages for Web Applications**—condensed summer course introducing students to 3-tier architectures, client-server design, and associated languages and features

- **Summer 2017**: 9 students enrolled, Mean Evaluation: 4.80/5 (0.45 std. dev.), Engineering Average: 4.35/5 (0.90 std. dev.)
- **Summer 2016**: 15 students enrolled, Mean Evaluation: 4.83/5 (0.41 std. dev.), Engineering Average: 4.36/5 (0.84 std. dev.)

GUEST LECTURES

Winter 2018 (U-M) — **EECS 483 (Compiler Construction)**, Lexical Analysis Foundations and Lexical Analyzer Generators (1.5 hour lecture, 59 students enrolled)

Fall 2017 (U-M) — **EECS 590 (Advanced Programming Languages)**, Designing and Presenting Programming Languages in the Broader Research Community (1.5 hour lecture, 19 students enrolled)

Spring 2016 (UVA) — **CS 4501-005 (Compilers Practicum)**, Data-Flow Analysis (1 hour lecture, 16 students enrolled)

Spring 2016 (UVA) — **CS 6354 (Computer Architecture)**, Accelerating Pattern Searches with Hardware (1.25 hour lecture, 29 students enrolled, supplied question for final exam)

Fall 2015 (UVA) — **CS 6610 (Programming Languages)**, Designing and Presenting Programming Languages in the Broader Research Community (1.25 hour lecture, 16 students enrolled)

PUBLICATIONS

20 publications: 10 conference (including ASPLOS, HPCA, ICCPS, ISCA, ITiCSE, MICRO), 3 journal (including CAL, TPDS), 4 workshop (including APR; CCSW, DSN-W, WAX), 1 invited (including CODES), 2 technical reports and patents; 7 publications (including submissions) with undergraduate co-authors

† Undergraduate Co-author

CONFERENCE PROCEEDINGS (10 PEER-REVIEWED)

ICCPS '24 Cailani Lemieux Mack†, Kevin Leach, and **Kevin Angstadt**. Sensor Data Transplantation for Redundant Hardware Switchover in Micro Autonomous Vehicles. In *Proceedings of the 15th ACM/IEEE International Conference on Cyber-Physical Systems*, Hong Kong, 2024. IEEE. (28.2% acceptance rate)
https://doi.org/10.1109/ICCPS61052.2024.00019

PROMISE '22 Hammad Ahmad, Colton Holoday, Ian Bertram†, **Kevin Angstadt**, Zohreh Sharafi, and Westley Weimer. LOGI: An Empirical Model of Heat-Induced Disk Drive Data Loss and its Implications for Data Recovery. In *Proceedings of the 18th International Conference on Predictive Models and Data Analytics in Software Engineering*, Singapore, 2022. ACM. (56% acceptance rate)
https://doi.org/10.1145/3558489.3559071

ISSRE '22 Kevin Leach, Christopher S. Timperley, **Kevin Angstadt**, Anh Nguyen-Tuong, Jason Hiser, Aaron Paulos, Partha Pal, Patrick Hurley, Carl Thomas, Jack W. Davidson, Stephanie Forrest, Claire Le Goues, and Westley Weimer. A Framework for Trusted and Resilient Autonomous Vehicles. In *Proceedings of the 33rd IEEE International Symposium on Software Reliability Engineering*, Charlotte, North Carolina, 2022. IEEE. (29% acceptance rate)
https://doi.org/10.1109/ISSRE55969.2022.00018

ITiCSE '21 Fee Christoph†, Westley Weimer, and **Kevin Angstadt**. The Early Bird Gets the Worm: Major Retention in CS3. In *Proceedings of the 2021 ACM Conference on Innovation and Technology in Computer Science Education*, Virtual Event, Germany, 2021. ACM. (31% acceptance rate)
https://doi.org/10.1145/3430665.3456335

ASPLOS '20 **Kevin Angstadt**, Jean-Baptiste Jeannin, and Westley Weimer. Accelerating Legacy String Kernels via Bounded Automata Learning. In *Proceedings of the 25th International Conference on Architectural Support for Programming Languages and Operating Systems*, Lausanne, Switzerland, 2020. ACM. (18% acceptance rate)
https://doi.org/10.1145/3373376.3378503

ASPLOS '19 Matthew Casias†, **Kevin Angstadt**, Tommy Tracy II, Kevin Skadron, and Westley Weimer. Debugging Support for Pattern-Matching Languages and Accelerators. In *Proceedings of the 24th International Conference on Architectural Support for Programming Languages and Operating Systems*, Providence, Rhode Island, 2019. ACM. (21% acceptance rate)
https://doi.org/10.1145/3297858.3304066

MICRO 51 **Kevin Angstadt**, Arun Subramaniyan, Elaheh Sadredini, Reza Rahimi, Kevin Skadron, Westley Weimer, and Reetuparna Das. ASPEN: A Scalable In-SRAM Architecture for Pushdown Automata. In *Proceedings of the 51st Annual IEEE/ACM International Symposium on Microarchitecture*, Fukuoka, Japan. 2018. IEEE. (21% acceptance rate)
https://doi.org/10.1109/MICRO.2018.00079

HPCA '18 Jack Wadden, **Kevin Angstadt**, and Kevin Skadron. Characterizing and Mitigating Output Reporting Bottlenecks in Spatial Automata Processing Architectures. In *Proceedings of the 24th IEEE International Symposium on High-Performance Computer Architecture*, Vienna, Austria, 2018. IEEE. (21% acceptance rate)
https://doi.org/10.1109/HPCA.2018.00069

ASPLOS '16 **Kevin Angstadt**, Westley Weimer, and Kevin Skadron. RAPID Programming of Pattern-Recognition Processors. In *Proceedings of the 21st International Conference on Architectural Support for Programming Languages and Operating Systems*, Atlanta, Georgia, 2016. ACM. (22% acceptance rate)
https://doi.org/10.1145/2872362.2872393

HPC '15 **Kevin Angstadt** and Ed Harcourt. A Virtual Machine Model for Accelerating Relational Database Joins using a General Purpose GPU. In *Proceedings of the High Performance Computing Symposium*, Alexandria, VA, 2015. Society for Computer Simulation International.
https://dl.acm.org/citation.cfm?id=2872615

JOURNAL MANUSCRIPTS (3 PEER-REVIEWED)

MICRO '22 **Kevin Angstadt**, Tommy Tracy II, Kevin Skadron, Jean-Baptiste Jeannin, and Westley Weimer. Synthesizing Legacy String Code for FPGAs Using Bounded Automata Learning. In *IEEE MICRO*, vol. 42, no.5, pp. 70-77, 1 Sept.-Oct. 2022. IEEE. (2.821 journal impact factor)
https://doi.org/10.1109/MM.2022.3178037

TPDS '19 **Kevin Angstadt**, Jack Wadden, Westley Weimer, and Kevin Skadron. Portable Programming with RAPID. In *Transactions on Parallel and Distributed Systems*, vol. 30, no. 4, pp. 939-952, 1 April 2019. IEEE. (4.181 journal impact factor)
https://doi.org/10.1109/TPDS.2018.2869736

CAL '18 **Kevin Angstadt**, Jack Wadden, Vinh Dang, Ted Xie, Dan Kramp†, Westley Weimer, Mircea Stan, and Kevin Skadron. MNCaRT: An Open-Source, Multi-Architecture Automata-Processing Research and Execution Ecosystem. In *Computer Architecture Letters*, vol. 17, no. 1, pp. 84-87, Jan.-June 1 2018. IEEE. (~24% acceptance rate)
https://doi.org/10.1109/LCA.2017.2780105

WORKSHOP PROCEEDINGS (4 PEER-REVIEWED)

CCSW '20 Yujun Qin†, Samuel Gonzalez†, **Kevin Angstadt**, Xiaowei Wang, Stephanie Forrest, Reetuparna Das, Kevin Leach, and Westley Weimer. MARTINI: Memory Access Traces to Detect Attacks. In *Proceedings of the 2020 Cloud Computing Security Workshop*, Virtual Event, USA, 2020. ACM. (30% acceptance rate)
https://doi.org/10.1145/3411495.3421353

APR '20 Yu Huang, **Kevin Angstadt**, Kevin Leach, and Westley Weimer. Selective Symbolic Type-Guided Checkpointing and Restoration for Autonomous Vehicle Repair. In: *Proceedings of the First International Workshop on Automated Program Repair*, Seoul, Republic of Korea, 2020.
https://doi.org/10.1145/3387940.3392201

WAX '18 Sihang Liu, **Kevin Angstadt**, Mike Ferdman, and Samira Khan. ARMOR: Towards Restricted Approximation with a Worst-Case Guarantee. In: *Proceedings of the 2018 Workshop on Approximate Computing Across the Stack*, Williamsburg, VA, 2018.
http://approximate.computer/wax2018/papers/wax2018-paper10.pdf

DSN-W '16 Kate Highnam†, **Kevin Angstadt**, Kevin Leach, Westley Weimer, Aaron Paulos, and Patrick Hurley. An Uncrewed Aerial Vehicle Attack Scenario and Trustworthy Repair Architecture. In *Proceedings of the 46th International Conference on Dependable Systems and Networks*, Industrial Track, Toulouse, France, 2016. IEEE.
https://doi.org/10.1109/DSN-W.2016.63

INVITED PAPERS

CODES '16 Ke Wang, **Kevin Angstadt**, Chunkun Bo, Nathan Brunelle, Elaheh Sadredini, Tommy Tracy, II, Jack Wadden, Mircea Stan, and Kevin Skadron. An overview of Micron's Automata Processor. In *Proceedings of the Eleventh IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis*, Pittsburgh, PA, 2016. ACM.
http://doi.org/10.1145/2968456.2976763

PATENTS AND TECHNICAL REPORTS

Jack Wadden and **Kevin Angstadt**. Systems and Methods for Disjoint Report Merging. US Patent No. 11,055,257 B2, Filed May 9, 2017, Issued July 6, 2021.
http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=11055257

Kevin Angstadt, Jack Wadden, Westley Weimer, and Kevin Skadron. MNRL and MNCaRT: An Open-Source, Multi-Architecture State Machine Research and Execution Ecosystem. Technical Report CS-2017-01, Department of Computer Science, University of Virginia, May 2017.
https://doi.org/10.18130/V3FN18

PRESENTATIONS AND POSTERS

2025 **The Science of Autonomous Flight: How Drones Work**, SOAR North Country, Potsdam, New York (*public outreach*)

2025 **A quantitative analysis of microplastic ingestion in northern New York bivalves**, Joint 60th Annual Northeastern/59th Annual North-Central Section Meeting, Geological Society of America, Erie, Pennsylvania
Poster with Margaret Mooney, Dr. Judith Nagel-Myers, and Dr. Amanda Oldacre
https://doi.org/10.1130/abs/2025NE-408627

2025 **Breaking Bivalves: Measuring Microplastic Contamination in Northern New York and Adirondack Freshwater Clams**, Celebration of Faculty Scholarship, St. Lawrence University, Canton, New York
Co-presented with Dr. Judith Nagel-Myers and Dr. Amanda Oldacre

2024 **Math & Cybersecurity**, Math and Everything Day, Department of Mathematics, Computer Science & Statistics, St. Lawrence University, Canton, New York

2024 **Software Quality, AI Models, and Human Operators: New Ideas and Emerging Results**, Griffiss Institute, Rome, New York
Co-presented with Dr. Kevin Leach (Vanderbilt) and Dr. Westley Weimer (Michigan)

2024 **Mitigating Stereotype Threat and Implicit Bias by Encouraging a Growth Mindset**, Future Professoriate Program Annual Conference, Syracuse University, Hamilton, New York

2024 **Ten Years and Two Million Users: The Success of StatKey**, Celebration of Faculty Scholarship, St. Lawrence University, Canton, New York
Co-presented with Dr. Ed Harcourt, Dr. Robin Lock, and Dr. Patti Frazer Lock

2023 **Embracing Artificial Intelligence (AI)**, Laurentians Learn, St. Lawrence University, Canton, New York
Co-presented with Dr. Jennifer Hansen (St. Lawrence) (*public outreach*)

2022 **Protecting Drones from Themselves and Others**, Clarkson University Science Café, Canton and Potsdam, New York (*public outreach*)

2021 **Every Computing Thing: Supporting and Securing the Systems of Tomorrow**, St. Lawrence University, Canton, New York

2019 **All Computers Great and Small: Supporting and Securing the Systems of Tomorrow**, St. Lawrence University, Canton, New York

2018 **MNRL and MNCaRT: An Open-Source, Multi-Architecture State Machine Research and Execution Ecosystem**, GOMACTech 2018, Miami, Florida

2016 **START: UAVs—Software Techniques for Automated Resiliency and Trustworthiness in Uncrewed Aerial Vehicles**, Thornton Society Reception, University of Virginia (*public outreach*)

2016 **RAPID: Accelerating Pattern Search Applications with Reconfigurable Hardware**, TECHCON 2016, Austin, Texas (Best in Session, selected from among 5 presentations)

2016 **RAPID Programming of Pattern-Recognition Processors**, Center for Automata Processing Webinar Series, University of Virginia

2016 **Quadcopter Basics: Opportunities and Challenges**, Rivanna Radio Control Club, Charlottesville, Virginia
Presented overview of quadcopter software and resiliency research to group of 15 club members (*public outreach*)

2016 **Self-Healing Autonomous Vehicles: Increasing System Resiliency with Automated Program Repair**, Public Days, University of Virginia (*public outreach*)

2016 **Getting Started with the Micron Automata Processor**, Center for Automata Processing Webinar Series, University of Virginia

2016 **Self-Healing Autonomous Vehicles: Increasing System Resiliency with Automated Program Repair**, 14th Annual Jefferson Fellows Symposium, Jefferson Scholars Foundation (*public outreach*)

2014 **Accelerating Database Joins Using a General Purpose GPU**, Festival of Science, St. Lawrence University

2012 **Developing Interactive Web Tools for Statistics Students**, Honors Reception, St. Lawrence University (*public outreach*)

FUNDING AND GRANTS

2022–2026 **SHF: Medium: Near-Hardware Program Repair and Optimization** **$1,199,997**
National Science Foundation *SLU portion: $99,998*
Co-PI with Westley Weimer (Michigan) and Stephanie Forrest (Arizona State)
The project will address the challenges of using automated techniques in near-hardware optimization, repair, and synthesis, including: automated optimization of GPU software, automatically fixing bugs in hardware designs, and efficiently synthesizing hardware descriptions from legacy software.

2024 **A New Major in Cybersecurity at St. Lawrence University** **$4,000**
St. Lawrence University
Co-PI with Ed Harcourt, Jennifer Hansen, Choong-Soo Lee, and Lisa Torrey
We propose to investigate the feasibility of offering a new major in cybersecurity by drafting a preliminary major proposal. This major builds on current strengths, articulates clear career pathways, fosters curricular collaborations, makes use of opportunities made possible by emerging technologies, and differentiates SLU from other SLACs. Activities included: preparing a detailed seven year schedule, meeting with campus stakeholders, revising course prerequisites and material, developing major requirement and learning outcomes.

2018–2020 **Diverse Voices in Computer Science Speaker Series** **$30,000**
University of Michigan
Rackham Faculty Allies and Student Ally Diversity Grants, included 50% department matching funds. Responsibilities included: writing proposal and reports, selecting candidate speakers, organizing visitor schedules and meetings, and collecting student feedback to improve program.

SOFTWARE TOOLS AND HARDWARE

StatKey Web-based statistics tools associated with *Statistics: Unlocking the Power of Data* by Robin Lock, Patti Lock, Kari Lock Morgan, Eric Lock, Dennis Lock. Wiley, 2013 (developed with

Ed Harcourt, Rich Sharp and the authors of the book). Usage (as of 2025-05-13): **2,526,828 users** and 51,399,599 page views.
http://www.lock5stat.com/statkey

snail The Strings Numbers Arrays and Inheritance Language (snail) is a dynamically typed, expression-based, object-oriented programming language that is simple enough to be implemented in a one-semester course.
https://snail-language.github.io

ARC86 An IBM-like computer (built around the Intel 80C88 processor) and associated BIOS capable of booting MINIX, designed for teaching students about computer architecture, operating systems, and low-level programming.
https://github.com/kevinaangstadt/ARC86-512
https://github.com/kevinaangstadt/ARC86-BIOS

AutomataSynth Automatically synthesize finite automata from C code.
https://github.com/kevinaangstadt/automata-synth

hscompile An extension to the Hyperscan regular expression processing engine to support direct loading and execution of finite automata.
https://github.com/kevinaangstadt/hscompile

MNRL Specification language and API for finite state machines.
https://github.com/kevinaangstadt/mnrl

MNCaRT An end-to-end ecosystem for research on, and execution of, finite automata across multiple computing architectures (developed with Jack Wadden, Vinh Dang, Ted Xie, Dan Kramp, Westley Weimer, Mircea Stan, and Kevin Skadron).
https://github.com/kevinaangstadt/MNCaRT

RAPID A C- or Java-like language for specifying inexact pattern matches in sequences of input data.
https://github.com/kevinaangstadt/rapid

START Automated software framework for diversification, repair, and monitoring of autonomous vehicle control systems (developed with Kevin Leach, Christopher Timperley, Aaron Paulos, Zech Bertilson, Anh Nguyen-Tuong, and Jonathan Dorn).

VASim-dpda An engine for execution and transformation of pushdown automata for large-scale automata processing applications (developed with Jack Wadden [author of original VASim]).
https://github.com/kevinaangstadt/VASim/tree/dpda

STUDENT MENTEES

30 undergraduate students: 2 current; 7 students with associated manuscripts

† Associated Publication or Submitted Manuscript

2025–present **Oleg Efimov** (SLU '26) Mentored on a project to analyze common regular expression patterns and use statistical techniques to help generate and repair regular expressions.

2025 **Nikolai Edkov** (SLU '27) Mentored on a project to develop a web application to help students find others to eat with on campus.

2024–2025 **Brandon Dickson** (SLU '25) Mentored on project to re-implement the StatKey statistical software to use modern design practices and web technology. Moved on to Datadog.

2023–2025 **Peyton Hamilton** (SLU '25) Mentored on a project to adapt reinitialization and restart of rover control software to quadcopter platforms, including the development of safety equipment for testing.

2024–2025 **Jack Hulsey** (SLU '25) Mentored on a project to apply graph-theory- and linear-algebra-based analyses to football records to predict team rankings.

2023–2025 **Tye Royal** (SLU '25) Co-mentored project to build a replica of an Enigma encryption machine.

2024–2025 **Anja Simic** (SLU '25) Mentored on a project to implement a Serbian tourism social media web application. Moved on to Veoci.

2024 **Carter Banks** (SLU '26) Mentored on a project to learn various fabrication tools software to build a useless machine.

2024 **Lisa Ngayungi** (SLU '26) Mentored on a project to build a 3D printer from scratch.

2024 **Zijian Zhang** (SLU '25) Mentored on project to apply model learning to generate Mealy Machines from C or Python source code using Angluin-style learning.

2023 **Georgios Bizimis** (SLU '26) Mentored on a project to develop a visualizer for state machines encoded in the MNRL language.

2023 **Jack Cowan** (SLU '24) Mentored a senior honors thesis that explored the correlation in stock prices between publicly traded companies and interlocking boards of directors.

2022–2023 **Cody Bryan** (SLU '23) Mentored an honors SYE project to develop a web-based fractal generation and exploration tool. Moved on to IBM and then PhD Program at CSU Boulder.

2022–2023 **Charlie Reinhardt** (SLU '23) Mentored an honors SYE project to develop an interactive debugger for the snail programming language. Moved on to Amazon.

2022–2023 **Molly Sullivan** (SLU '25) Mentored on projects to develop color-following LEDs for TV screen and a maze computer game.

2021–2023 **Cailani Lemieux Mack**† (SLU '23) Mentored on independent research, honors SYE project, and published conference manuscript (ICCPS '24) to allow for reinitialization and restart of quadcopter control software mid-flight. Moved on to PhD program at Vanderbilt University.

2022 **Glendalys Medina** (SLU '24) Mentored on project studying the emergence of bias in computational systems.

2021 **Kimberly Merchant** (SLU '22), Mentored on project to improve the accessibility of the online StatKey statistics software. Moved on to Veoci.

2019–2021 **Fee Christoph**† (U-M '21), Mentored and collaborated on a published conference manuscript (ITiCSE '21) studying archival academic data to determine relationships between academic program retention, performance in intermediate Computer Science courses, and demographics.

2019–2020 **Ian Bertram**† Collaborated on a published conference manuscript (PROMISE '22) involving capturing and modeling damage patterns in disk drives.

2019–2020 **Michael Flanagan** (U-M '21), Collaborated on project involving capturing and modeling damage patterns in disk drives. Moved on to Wolverine Trading.

2018–2019 **Samuel Gonzalez**† (U-M '20), Mentored and collaborated on a published workshop paper (CCSW '20) that leverages hardware acceleration to detect malicious software behavior. Moved on to Accurate Technologies.

2018–2019 **Linh Le** (U-M '19), Mentored undergraduate research project to understand if memory traces could be used differentiate programs. Moved on to JPMorgan Chase & Co.

2018–2019 **Yujun Qin**† (U-M '20), Mentored and collaborated on a published workshop paper (CCSW '20) that leverages hardware acceleration to detect malicious software behavior. Moved on to Masters program at Carnegie Mellon University.

2018 **Aniruddh Agarwal** (U-M '19), Mentored undergraduate research project modeling hard disk failure patterns. Moved on to Squarepoint Capital.

2016–2017 **Emma Fass** (UVA '18), Mentored undergraduate research project for running surface detection using wearable sensors. Moved on to Pariveda Solutions.

2016–2017 **Luke Merrick** (UVA '18), Mentored undergraduate research project for running surface detection using wearable sensors. Moved on to Fiddler Labs.

2016–2017 **Joe Tidwell** (UVA '18), Mentored undergraduate research project for running surface detection using wearable sensors. Moved on to Peace Corps.

2016–2018 **Matthew Casias**† (UVA '19), Mentored and collaborated on human study of an interactive debugger for a domain-specific language resulting in published conference paper (ASPLOS '19). Moved on to Capital One.

2015–2016 **Kate Highnam**† (UVA '16), Mentored and collaborated on autonomous quadcopter project resulting in published workshop paper (DSN-W '16). Moved on to Capital One and now PhD student at Imperial College London.

SERVICE

2024–present **President, Phi Beta Kappa**, St. Lawrence University
Served as the president of the New York Lambda chapter of the Phi Beta Kappa academic honor society.

2024–present **Faculty Handbook Working Group**, St. Lawrence University
Served on a working group to revise and reformat the faculty handbook for St. Lawrence University.

2022–present **Information Technology Committee**, St. Lawrence University
Served as faculty chair and one of three faculty members of the tripartite committee on campus information technology.

2022–present **Website and Social Media Sub-Committee**, Department of Math, Computer Science & Statistics, St. Lawrence University
Assist department in maintaining web and social media presence.

2020–present **Computer Science Graduate Student Job Guide Maintainer**
Co-maintainer of the Computer Science Graduate Student Job Guide, a resource for graduate students in computer science and related fields. The guide includes information on job search strategies, application materials, and interview preparation.
https://csguides.github.io/grad-job-guide

2024 **Workshop Facilitator, New Faculty Orientation**, St. Lawrence University
Served as one of four facilitators for a course syllabus workshop for new faculty.

2023–2024 **Makerspace Affinity Group**, Consortium of Liberal Arts Colleges
Served as university representative to CLAC affinity group discussing the development, implementation, operations, and governance of makerspaces on liberal arts college campuses.

2023 **Presenter, New Faculty Orientation**, St. Lawrence University
Served on a faculty panel for "Who Are Our Students and What is it Like to Teach at SLU?"

2023 **Presenter, May College**, St. Lawrence University
Served on a faculty panel for "This Works Great for Me" sharing teaching ideas that have worked well for engaging students.

2022–2023 **Dean's Working Group on Student Registration**, St. Lawrence University
Provided faculty and technical input on the redesign of the student registration process. Collaborated with IT to develop a stress testing framework to evaluate and ensure a successful registration in Spring and Summer 2023.

2021 **LMS Transition Team**, St. Lawrence University
Served on faculty advisory committee to support Information Technology's transition from Sakai to Canvas.

2020 **Workshop Presenter**, Faculty Development Series, St. Lawrence University
Developed and presented three (3) workshop on Gradescope (online assignment submission and grading). Attendees included colleagues from NY6 institutions.

2019–2020 **Engineering Teaching Consultant**, Center for Research on Learning and Teaching in Engineering, University of Michigan
Consult with and mentor undergraduate and graduate teaching assistants for the College of Engineering. Responsibilities include: conducting classroom observations, one-on-one consultations, and professional development.

2019–2020 **Diversity Workshop Facilitator**, Computer Science and Engineering Division, Department of Computer Science and Electrical Engineering, University of Michigan
Developed and facilitated 90 minute workshops for over 200 student instructors in core CS courses. Topics included stereotype threat, implicit bias, and impostor syndrome.

2017 **Co-Chair, Graduate Student Group**, Department of Computer Science, University of Virginia
Attended and participated in Computer Science faculty meetings to represent student interests within the department.

2015–2017 **Tea Time Tsar**, Department of Computer Science, University of Virginia
Organized and oversaw weekly social gathering for graduate students and faculty

2015 **Summer Camp Instructor**, LEAD Computer Science Program, University of Virginia
Co-led computer science and programming classes for week-long camp for middle- and high-school students.

HONORS AND AWARDS

2024 20 under 40: Northern New York's Emerging Leaders, NNY Business, Watertown Daily Times (One of only three awardees from St. Lawrence County, nomination only)

2017 Graduate Student Award for Outstanding Teaching, UVA Department of Computer Science (One award among 150 graduate students, voted on by faculty)

2017 Graduate Student Award for Outstanding Service, UVA Department of Computer Science (Two awards among 150 graduate students, voted on by faculty)

2014–2017 Olive B. and Franklin C. Mac Krell Fellow, Jefferson Scholars Foundation (3 fellowships awarded among 394 offers of admission to graduate programs in the School of Engineering and Applied Science at the University of Virginia; nomination only)

2014–2015 Virginia Commonwealth Fellowship, School of Engineering and Applied Science, University of Virginia (nomination only)

2008 Eagle Scout, BSA Troop 162, Latham, NY

PROFESSIONAL AND HONORARY SOCIETIES

Member (SIGMICRO, SIGCSE), Association for Computing Machinery (ACM)

Phi Beta Kappa (NY-Lambda)

Tau Beta Pi (MI-Gamma)

Pi Mu Epsilon (NY-Epsilon, Honorary National Mathematics Society)

Delta Phi Alpha (Eta Omicron, National German Honor Society)

Ives Music Honorary Society (St. Lawrence University)

MISCELLANEOUS

Languages Native English, Proficiency in German

Citizenship United States

REFERENCES

Available upon request.

Canton, New York, 2. March 2026