

Curriculum Vitae

Mark Allan Gondree

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CURRENT POSITION

Associate Professor, Computer Science Department, Sonoma State University, Rohnert Park, CA

EDUCATION

- PhD 2009 University of California, Davis, Computer Science
Dissertation: Communication-Efficient Multiparty Oblivious Transfer and Applications
Research: Designing and modeling secure systems with special privacy requirements. Developing new methods of computing with encrypted data using secure interactive multiparty protocols.
Advisor: Dr. Matthew Franklin
- 2006 Fellow at UCLA's Institute for Pure and Applied Mathematics.
- 2004 Fulbright Scholar at the Independent University of Moscow.
- MS 2003 Case Western Reserve University, Computer Science
Research: Homomorphic encryption and database security.
Advisors: Dr. David Singer, Dr. Gultekin Ozsoyoglu
- BS 2003 Case Western Reserve University, Computer Science
Computer science major, Summa Cum Laude.

EMPLOYMENT HISTORY

- 2016–21 Sonoma State University, *Assistant Professor*, Computer Science Dept., Rohnert Park, CA.
- 2016–18 California Polytechnic State University, *Visiting Research Scholar*, San Luis Obispo, CA.
- 2012–16 Naval Postgraduate School, *Research Assistant Professor*, Computer Science Dept., Monterey, CA.
- 2009–11 Naval Postgraduate School, *Research Associate*, Computer Science Dept., Monterey, CA.
- 2008 DoD, *intern*, Laboratory for Telecommunications Sciences (LTS), College Park, MD.
- 2007 US Army, *intern*, AMC/C-E LCMC Software Engineering Center, Monmouth, NJ.
- 2004–09 University of California, Davis, *Research Assistant*, Computer Science Dept., Davis, CA.
- 2002–03 Case Western Reserve University, *Graduate Researcher*, EECS Dept., Cleveland, OH.

TEACHING

CS115: Programming I.

Programming I is an introductory course in computer programming, taken by computer science majors and non-majors. It emphasizes computational thinking, problem solving with computers and proficiency with elementary programming constructs (such as variables, operations, logical conditionals, definite and indefinite loops). It is a 4-credit, residential course, meeting twice a week for 150 minutes with a mandatory 3 hour laboratory and an optional 2-hour workshop (into which students may enroll for credit).

Sp 2019	Section 001/002 — 22 students: Freshman (4), Sophomore (11), Junior (3), Senior (3), Post-Bacc (1)
Sp 2019	Section 003 — 24 students: Freshman (10), Sophomore (9), Junior (4), Senior (2)
Sp 2019	Section 005/006 — 21 students: Freshman (6), Sophomore (5), Junior (7), Senior (3)
Sp 2019	Section 007 — 24 students: Freshman (15), Sophomore (8), Junior (1), Senior (0)
Sp 2019	CS115W-001 — 10 students: Freshman (3), Sophomore (4), Junior (2), Senior (1)
Sp 2018	Section 001/002 — 21 students: Freshman (8), Sophomore (5), Junior (4), Senior (4)
Sp 2018	Section 003 — 18 students: Freshman (13), Sophomore (3), Junior (0), Senior (2)
Sp 2018	CS115W-001 — 11 students: Freshman (1), Sophomore (9), Junior (1), Senior (0)
F 2017	Section 001/002 — 24 students: Freshman (14), Sophomore (6), Junior (3), Senior (1)
F 2017	Section 003 — 24 students: Freshman (16), Sophomore (7), Junior (1), Senior (0)
F 2017	Section 005 — 24 students: Freshman (14), Sophomore (3), Junior (3), Senior (3), Post-Bacc (1)
F 2017	Section 007 — 24 students: Freshman (18), Sophomore (2), Junior (3), Senior (1)
F 2017	CS115W-001 — 11 students: Freshman (4), Sophomore (3), Junior (1), Senior (2), Post-Bacc (1)
Sp 2017	Section 001/002 — 21 students: Freshman (5), Sophomore (7), Junior (4), Senior (4), Post-Bacc (1)
Sp 2017	Section 003 — 19 students: Freshman (4), Sophomore (10), Junior (2), Senior (3)
Sp 2017	Section 005 — 23 students: Freshman (10), Sophomore (7), Junior (3), Senior (2), Post-Bacc (1)
Sp 2017	Section 007 — 21 students: Freshman (7), Sophomore (6), Junior (8), Senior (0)
Sp 2017	CS115W-001 — 11 students: Freshman (2), Sophomore (3), Junior (4), Senior (1), Post-Bacc (1)

CS242: Discrete Structures.

Discrete Structures is an introduction to discrete mathematics for computer science majors, emphasizing computer science applications and mathematical tools foundational for success in later courses in the CS major (such as algorithms, automata, data structures). It emphasizes abstraction with, mathematically-sound reasoning about and application of predicate logic, proofs and combinatorics. It is a 3-credit, residential course, meeting twice a week for 100 minutes.

F 2018	Section 001 — 27 students: Freshman (1), Sophomore (14), Junior (7), Senior (5)
F 2018	Section 002 — 26 students: Freshman (3), Sophomore (11), Junior (9), Senior (3)
F 2016	Section 001 — 24 students: Freshman (3), Sophomore (10), Junior (8), Senior (3)
F 2016	Section 002 — 14 students: Freshman (1), Sophomore (5), Junior (3), Senior (5)

CS252: Introduction to Computer Organization.

Introduction to Computer Organization explores the interface between computer hardware and software by introducing computer organization and low-level programming. It applies concepts from CS242 (Discrete Structures) and CS215 (Programming II)—like Boolean algebra, counting systems, data types and procedural programming—to explore computers at a systems-level. It emphasizes data representation, digital logic, combinational and sequential circuits, computer system organization, the build chain, and assembly language programming. It prepares students for more advanced architecture concepts, acting as a pre-requisite for CS315 (Computer Architecture). It is a 3-credit course, meeting twice a week for 100 minutes, with a mandatory 3 hour laboratory.

Sp 2022	Section 001/002 — 25 students: Freshman (0), Sophomore (6), Junior (12), Senior (7)
F 2021	Section 001/002 — 15 students: Freshman (1), Sophomore (5), Junior (3), Senior (5), Post-Bacc (1)

F 2021 Section 003/004 — 8 students: Freshman (1), Sophomore (1), Junior (3), Senior (3)
 Sp 2021 Section 001/002 — 24 students: Freshman (0), Sophomore (7), Junior (12), Senior (5)
 F 2020 Section 001/002 — 22 students: Freshman (0), Sophomore (3), Junior (9), Senior (9), Post-Bacc (1)
 F 2020 Section 003/004 — 12 students: Freshman (0), Sophomore (5), Junior (5), Senior (2)
 Sp 2020 Section 001/002 — 12 students: Freshman (0), Sophomore (4), Junior (5), Senior (3)
 Sp 2020 Section 003/004 — 22 students: Freshman (0), Sophomore (8), Junior (8), Senior (6)

CS210: Introduction to Unix.

Introduction to Unix is a skill-building course that familiarizes students with the Unix environment and utilities, both of which are used throughout courses in the major. It emphasizes practical skills and best practices, to accomplish problem-solving with Unix tools. It is a 1-credit lab course, meeting once a week for 150 minutes. It is a co-requisite of CS215 (Programming II).

Sp 2018 Section 001 — 25 students: Freshman (3), Sophomore (15), Junior (3), Senior (3)
 F 2016 Section 002 — 23 students: Freshman (5), Sophomore (10), Junior (6), Senior (2)

CS340: Computer Security and Malware.

Computer Security and Malware exposes students to current methods for defining security and integrity, authenticating users and systems, protecting software products, preventing and dealing with crime. It includes discussion of recent technical, legal, and sociopolitical issues influencing computer security problems, with an emphasis on malware, cyber crime, and ethics. It is a 3-credit, residential course, meeting once a week for 110 minutes with a mandatory 2 hour laboratory.

Sp 2022 Section 001 — 25 students: Freshman (0), Sophomore (0), Junior (0), Senior (25)
 Sp 2021 Section 001 — 25 students: Freshman (0), Sophomore (0), Junior (0), Senior (24), Post-Bacc(1)
 F 2019 Section 001/002 — 24 students: Freshman (0), Sophomore (0), Junior (1), Senior (21), Post-Bacc(2)

CS349: Problem Solving in a Team Environment

Problem Solving in a Team Environment exposes students to working in teams to solve competition challenges. A particular focus is on rapid development of tools to solve problems using standard libraries and unix utilities. Students are given advanced problems—stack exploitation, binary analysis, web exploitation—requiring online research and synthesis of knowledge from multiple classes (programming, operating systems, architecture). Problems are taken from competitions and may be preparatory to students participating themselves in regional or national cybersecurity competitions. Different types of problems are selected each semester, and students may repeat the course for credit. It is a 1-credit, residential course, meeting once a week for 100 minutes.

Sp 2019 Section 001 — 22 students: Freshman (0), Sophomore (0), Junior (4), Senior (19)

CS365: Computer Networking & the Internet.

Computer Networking & the Internet introduces the theory and practice of computer networking, with coverage of key theories in data communication and how these theories relate to current practices. It is taken by computer science majors as an elective course. The course emphasizes how the Internet works, and focuses on programming applications using sockets and TCP/IP. It is a 3-credit, residential course, meeting once a week for 110 minutes with a mandatory 3 hour laboratory.

Sp 2018 Section 001/002 — 25 students: Freshman (0), Sophomore (0), Junior (2), Senior (22), Post-Bacc (1)

CS390: Computer Science Colloquium.

Computer Science Colloquium features a series of lectures showcasing computer science research and practice, by invited speakers. It is taken by computer science majors as an elective course. It is a 1-credit, residential course, meeting once a week for 50 minutes. It may be repeated for credit.

F 2021 Section 001 — 54 students: Freshman (1), Sophomore (4), Junior (8), Senior (41)

CS450: Operating Systems.

Operating Systems covers the fundamental concepts of operating system design and implementation, including the fundamentals of systems programming and the goals, methods and problems of concurrent programming. It is taken by computer science majors as a required course in the curriculum. The course emphasizes important systems programming concepts—resource management, scheduling, inter-process communication, memory management—common to many complex software systems. Topics are studied from both theoretical and practical perspectives. It is a 4-credit course, meeting twice a week for 100 minutes.

Sp 2022 Section 001 — 25 students: Freshman (0), Sophomore (0), Junior (2), Senior (23)

F 2021 Section 001 — 31 students: Freshman (0), Sophomore (0), Junior (0), Senior (31)

Sp 2021 Section 001 — 25 students: Freshman (0), Sophomore (0), Junior (1), Senior (24)

F 2020 Section 001 — 23 students: Freshman (0), Sophomore (0), Junior (2), Senior (20), Post-Bacc(1)

F 2020 Section 002 — 23 students: Freshman (0), Sophomore (0), Junior (2), Senior (21)

Sp 2020 Section 001 — 23 students: Freshman (0), Sophomore (0), Junior (1), Senior (22)

F 2019 Section 001 — 26 students: Freshman (0), Sophomore (0), Junior (1), Senior (24), Post-Bacc(1)

F 2019 Section 002 — 26 students: Freshman (0), Sophomore (0), Junior (1), Senior (25)

F 2018 Section 001 — 30 students: Freshman (0), Sophomore (0), Junior (4), Senior (23), Post-Bacc (3)

Instruction at prior institutions.

F 2016, F 2015, F 2014 Naval Postgraduate School, CS3040: Low-Level Programming.

F 2016, F 2015, Su 2012 Naval Postgraduate School, CS3600: Intro. to Computer Security.

W 2015, Sp 2014, W 2014 Naval Postgraduate School, CY4650: Cyber Data Management and Analytics.

W 2012, Su 2011 Naval Postgraduate School, CS2140: Low-Level Programming.

SCHOLARSHIP

Peer-reviewed Conferences, Workshops and Journals

1. Francisco Tacliad, Thuy D. Nguyen, and Mark Gondree. DoS exploitation of Allen-Bradley's legacy protocol through fuzz testing. In *Annual Industrial Control System Security (ICSS) Workshop*, Orlando, Florida, December 2017.
2. Peyton Price, Nicholas Leyba, Mark Gondree, Zachary Staples, and Thomas Parker. Asset criticality in mission reconfigurable cyber systems and its contribution to key cyber terrain. In *Hawaii International Conference on System Sciences (HICSS)*, Waikoloa Village, HI, 2017. <https://goo.gl/AFkbdg>.
3. Thuy D. Nguyen and Mark Gondree. Teaching industrial control system security using collaborative projects. In *Conference on Cybersecurity of Industrial Control Systems (CyberICS)*, pages 16–30, Vienna, Austria, 2015. http://doi.org/10.1007/978-3-319-40385-4_2.

4. Tanya Flushman, Mark Gondree, and Zachary N.J. Peterson. This is not a game: Early observations on using alternate reality games for teaching security concepts to first-year undergraduates. In *8th USENIX Workshop on Cyber Security Experimentation and Test (CSET'15)*, Washington, DC, 2015. USENIX. <https://goo.gl/jZwMFe>. Acceptance rate: 30.76%.
5. Timothy M. Peters, Mark Gondree, and Zachary N. J. Peterson. DEFY: A deniable, encrypted file system for log-structured storage. In *Network and Distributed System Security Symposium (NDSS)*, San Diego, CA, 2015. The Internet Society. <http://goo.gl/yTVtLI>. Acceptance rate: 16.9%.
6. Thuy D. Nguyen, Mark Gondree, Jean Khosalim, and Cynthia Irvine. Re-thinking kernelized MLS database architectures in the context of cloud-scale data stores. In *Engineering Secure Software and Systems (ESSoS)*, pages 86–101, Milan, Italy, 2015. Springer International Publishing. http://dx.doi.org/10.1007/978-3-319-15618-7_7.
7. Mark Gondree and Zachary N.J. Peterson. Valuing security by getting [d0x3d!]: Experiences with a network security board game. In *6th USENIX Workshop on Cyber Security Experimentation and Test (CSET'13)*, Washington, DC, 2013. USENIX. <https://goo.gl/OhcYcZ>. Acceptance rate: 31% (9/29).
8. Thuy D. Nguyen, Mark Gondree, Jean Khosalim, and Cynthia E. Irvine. Towards a cross-domain MapReduce framework. In *IEEE Military Communications Conference (MILCOM 2013)*, pages 1436–1441, San Diego, CA, USA, November 2013. <http://dx.doi.org/10.1109/MILCOM.2013.243>.
9. Mark Gondree and Zachary N.J. Peterson. Geolocation of data in the cloud. In *Proceedings of the Third ACM Conference on Data and Application Security and Privacy (CODASPY '13)*, pages 25–36, San Antonio, TX, 2013. ACM. <http://dx.doi.org/10.1145/2435349.2435353>. Acceptance rate: 22% (24/107).
10. Thuy D. Nguyen, Mark Gondree, Jean Khosalim, David J. Shifflett, Timothy Levin, and Cynthia E. Irvine. An approach for cross-domain intrusion detection. In *Proceedings of the 7th International Conference on Information Warfare and Security (ICIW 2012)*, pages 203–212, Seattle, WA, 2012. <http://calhoun.nps.edu/public/handle/10945/7175>. Acceptance rate: 30%.
11. Zachary N. J. Peterson, Mark Gondree, and Robert Beverly. A position paper on data sovereignty: The importance of geolocating data in the cloud. In *3rd USENIX Workshop on Hot Topics in Cloud Computing (Hot-Cloud'11)*, Portland, OR, 2011. USENIX. http://www.usenix.org/events/hotcloud11/tech/final_files/Peterson.pdf. Acceptance rate: 32% (23/72).
12. Thuy D. Nguyen, Mark Gondree, David J. Shifflett, Jean Khosalim, Timothy E. Levin, and Cynthia E. Irvine. A cloud-oriented cross-domain security architecture. In *IEEE Military Communications Conference (MILCOM 2010)*, pages 441–447, San Jose, CA, Oct 2010. <http://dx.doi.org/10.1109/MILCOM.2010.5680360>.
13. Cynthia E. Irvine, Thuy D. Nguyen, David J. Shifflett, Timothy E. Levin, Jean Khosalim, Charles Prince, Paul C. Clark, and Mark Gondree. MYSEA: The Monterey security architecture. In *Proceedings of the 2009 ACM Workshop on Scalable Trusted Computing*, pages 39–48, Chicago, IL, 2009. <http://doi.acm.org/10.1145/1655108.1655115>.
14. Mark Gondree and Payman Mohassel. Longest common subsequence as private search. In *Proceedings of the 8th ACM Workshop on Privacy in the Electronic Society (WPES'09)*, pages 81–90, Chicago, IL, 2009. ACM. <http://doi.acm.org/10.1145/1655188.1655200>. Full paper acceptance rate: 27%.
15. Matthew Franklin, Mark Gondree, and Payman Mohassel. Communication-efficient private protocols for longest common subsequence. In *Topics in Cryptology – CT-RSA 2009*, pages 265–278. Springer Berlin Heidelberg, 2009. http://dx.doi.org/10.1007/978-3-642-00862-7_18. Acceptance rate: 33% (31/93).
16. Matthew Franklin, Mark Gondree, and Payman Mohassel. Multi-party indirect indexing and applications. In *Proceedings of ASIACRYPT 2007*, pages 283–297, Kuching, Sarawak, Malaysia, 2007. Springer Berlin Heidelberg. http://dx.doi.org/10.1007/978-3-540-76900-2_17. Acceptance rate: 15% (33/223).
17. Matthew Franklin, Mark Gondree, and Payman Mohassel. Improved efficiency for private stable matching. In *Topics in Cryptology – CT-RSA 2007*, pages 163–177, San Francisco, CA, 2006. Springer Berlin Heidelberg. http://dx.doi.org/10.1007/11967668_11. Acceptance rate: 34% (25/73).

Peer-reviewed Open Educational Resources

18. Mark Gondree. Interrupts and syscalls. *POGIL Activity Clearinghouse*, 3(1), 2022. <http://pac.chem.pitt.edu/index.php/pac/article/view/217>.
19. Mark Gondree. Air quality index calculator. *ACM EngageCSEdu*, September 2018. <https://www.engage-csedu.org/find-resources/air-quality-index-calculator>.
20. Mark Gondree. Matching game, a CS1 project. *ACM EngageCSEdu*, September 2018. <https://www.engage-csedu.org/find-resources/matching-game-cs1-project>.

Refereed Technical Magazines and Publications

21. Briana Morrison, Michelle Craig, Mark Gondree, Rebecca Vivian, Chris Mayfield, Helen Hu, Cindy Arnold, Anastasia Kurdia, and Tzu-Yi Chen. EngageCSEdu: A collection of engaging assignments. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 2020.
22. Portia Pusey, Mark Gondree, and Zachary N.J. Peterson. The outcomes of cybersecurity competitions and the implications for underrepresented populations. *IEEE Computing Edge*, 3(2):22–27, February 2017 (reprint of *IEEE Security & Privacy* article).
23. Portia Pusey, Mark Gondree, and Zachary N.J. Peterson. The outcomes of cybersecurity competitions and the implications for underrepresented populations. *IEEE Security & Privacy*, 14(6):90–95, Nov–Dec 2016. <http://doi.org/10.1109/MSP.2016.119>.
24. Mark Gondree, Zachary Peterson, and Portia Pusey. Talking about talking about cybersecurity games. *USENIX ;login;*, 41(1):36–39, Spring 2016.
25. Mark Gondree. Capturing capture the flag: Further discussions. *USENIX ;login;*, 39(6):26–30, December 2014. <https://goo.gl/2UGnoS>.
26. Mark Gondree, Zachary N.J. Peterson, and Tamara Denning. Security through play. *IEEE Security & Privacy*, 11(3):64–67, May/June 2013. <http://dx.doi.org/10.1109/MSP.2013.69>.
27. Earl Barr, Matt Bishop, and Mark Gondree. Fixing federal e-voting standards. *Communications of the ACM*, 50(3):19–24, March 2007. <http://doi.acm.org/10.1145/1226736.1226754>.

Student Posters, Presentations and Mentorship

28. Jorge Calderon, Nicholas Keng, Garret Mook. Migrating Tibit’s MCMS to AWS. Spring 2022 Senior Research Project (CS496)
29. Maximillian Otto vonBlankenburg. SonomaCTF: Sonoma State’s first CTF. Spring 2022 Senior Research Project (CS496)
30. Kyle Drewes. Pilot platform for the Rising Waters project’s data collection. Spring 2022 Directed Study (CS495)
31. Marco Barragan Gomez, Max Lankford, Justin Weiner. Expanding the SSU CTF Corpus. Fall 2021 Senior Research Project (CS496).
32. Sean Callahan. Exposing PRNG test suites via Python. Spring 2021 Senior Research Project (CS496). Poster at the SSU Virtual Research Gallery.
33. Brandon Fong. Directed Readings in cryptography (CES 594). Spring 2021. Presentation at SSU CS Colloquium.
34. Dylan Curry. Using the Attack-defense CTF packet capture corpus. Fall 2020 Senior Research Project (CS496).
35. Dallas Womack. Natural language processing of cyber-outcomes from existing cybersecurity curricula, for evaluation of CTFs as extracurricular education. Fall 2020 Senior Research Project (CS496)

36. Jonas Bueno. Natural language processing of CTF write-ups for evaluation of CTFs as extracurricular education. Fall 2020 Senior Research Project (CS496)
37. Austin Erwin-Martinetti. Communication infrastructure security, special study (CS495). Fall 2020.
38. Grant Fonseca. Using the Attack-defense CTF packet capture corpus. Spring 2020 Senior Research Project (CS496). Poster at the SSU Virtual Research Gallery.
39. Isaac Florez. Using a PRNG test suite to evaluate biased PRNGs. Spring 2020 Senior Research Project (CS496). Poster at the SSU Virtual Research Gallery.
40. Dallas Womack. 2019-2020 ORSP Student Research Award project. Poster at the SSU Virtual Research Gallery.
41. Eduardo Roman. Expanding CTFd for use at SSU. Spring 2020 Senior Research Project (CS496). Poster at the SSU Virtual Research Gallery.
42. Gabriel Duarte. Curating the SSU Attack-defense CTF packet capture corpus. Fall 2019 Senior Research Project (CS496). Presentation at SSU CS Colloquium.
43. Jonathan Soto. Building tools to analyze the SSU Attack-defense CTF corpus. Spring 2019 Senior Research Project (CS496). Presentation at SSU CS Colloquium. Poster at the SSU Science Symposium.
44. Gabriel Duarte and Dylan Curry. Survey of network traffic data available from Capture the Flag competitions. Summer 2018 RSCAP project. Presented a poster at the SSU Science Symposium.
45. Cassia Lee. Investigating pseudo-random number generator test independence using type I and type II error behavior. Summer 2018 SSU/SCOE Summer High School Internship Program (SHIP) project.
46. William DeGroot. Evaluating pseudo-random number generator tests with biased generators. Summer 2018 SSU/SCOE Summer High School Internship Program (SHIP) project.
47. Liam Schroth. An empirical evaluation of PRNG test suites, presentation representing SSU at the 2018 CSU Research Competition (CSU Sacramento, May 4–5, 2018).
48. Dylan Curry, Carter Hamblin, Tyler Rice, and Liam Schroth. 2017–18 Koret Scholars project. An empirical evaluation of PRNG test suites. Presented a poster at the 2018 Consortium for Computing Sciences in Colleges (CCSC) Southwest Regional Conference (Harvey Mudd College, March 23–24, 2018), and recognized by an award for placing in the top-three posters in their session. Based on his research, Schroth was selected to represent SSU at the 2018 CSU Research Competition (CSU Sacramento, May 4–5, 2018); and Curry, Rice and Schroth presented a joint poster at the 2018 Consortium for Computing Sciences in Colleges (CCSC) Southwest Regional Conference (Harvey Mudd College, March 23–24, 2018), and were recognized by an award for placing in the top-three posters in their session.
49. Lulabel Seitz. Evaluating pseudo-random number generator tests. Summer 2017 SSU/SCOE Summer High School Internship Program (SHIP) project.
50. Grayson Blanks. Evaluation of a parallelized pseudo-random number generator test suite. Spring 2017 Senior Research Project (CS496). Presentation at SSU CS Colloquium.

Thesis Advising

51. Francisco Tacliad. ENIP FUZZ: a SCAPY-based EtherNet/IP fuzzer for security testing. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2016.
52. Zhibin Zhang. A multi-threaded cryptographic pseudorandom number generator test suite. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2016.
53. Derek Swenningsen. Automatic inference of cryptographic key length based on analysis of proof of tightness. Master's thesis, Naval Postgraduate School, Monterey, CA, June 2016. <http://calhoun.nps.edu/handle/10945/49395>.

54. Abdallah Bakir. Empirical analysis of using erasure coding in outsourcing data storage with provable security. Master's thesis, Naval Postgraduate School, Monterey, CA, June 2016. <http://calhoun.nps.edu/handle/10945/49341>.
55. Stephen Bremer. Cost comparison among provable data possession schemes. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2016. <http://calhoun.nps.edu/10945/48485>.
56. Peyton Price and Nicholas Leyba. Tactical key cyber terrain and its application in cyber situational awareness. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2016.
57. Joseph Vanbruaene. Large scale cross-drive correlation of digital media. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2016. <http://calhoun.nps.edu/10945/48487>.
58. Lawrence Keener. Evaluating the generality and limits of blind return-oriented programming attacks. Master's thesis, Naval Postgraduate School, Monterey, CA, December 2015. <http://calhoun.nps.edu/10945/47979>.
59. Katherine K. Sheridan-Barbian. A survey of real-time operating systems and virtualization solutions for space systems. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2015. <http://hdl.handle.net/10945/45256>.
60. Nathan Desso. Designing a machinery control system (MCS) security testbed. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2014. <http://hdl.handle.net/10945/43902>.
61. Edgar Jatho. A survey of distributed capability file systems and their application to cloud environments. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2014. <http://hdl.handle.net/10945/43930>.
62. Mark Javate. Study of adversarial and defensive components in an experimental machinery control systems laboratory environment. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2014. <http://hdl.handle.net/10945/43931>.
63. Sean Nelson. An architectural analysis of modern machinery control systems. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2014.
64. Brandon Pontius. Information security considerations for applications using Apache Accumulo. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2014. <http://hdl.handle.net/10945/43980>.
65. William Parker. Evaluation of data processing techniques for unobtrusive gait authentication. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2014. <http://hdl.handle.net/10945/41429>.
66. Vincent Nguyen. Authentication of smartphone users using RSSI geolocation. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2014. <http://hdl.handle.net/10945/41424>.
67. Nick Lange. A survey of client geolocation using Wi-Fi positioning services. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2014. <http://hdl.handle.net/10945/41409>.
68. Miguel Cueva. Impact study of machinery control system (MCS) data on U.S. Navy ships. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2014.
69. Jose Coria. Curriculum modules in support of tabletop cybersecurity games. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2013. <http://hdl.handle.net/10945/37604>.
70. Javon Burden, Deyan Dontchev, Rachel Doucet, and Thomas Leo Skoff. Big data analytics test bed. M.S. capstone project, Naval Postgraduate School, Monterey, CA, September 2013. <http://hdl.handle.net/10945/37615>.
71. Arthur L. Zepf. Cyber-security curricula for basic users. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2013. <http://hdl.handle.net/10945/37750>.
72. Krisztina Riebel-Charity. Developing a library for proofs of data possession in Charm. Master's thesis, Naval Postgraduate School, Monterey, CA, June 2013. <http://hdl.handle.net/10945/34728>.
73. Chua Kai Ping. Performance analysis of MYSEA. Master's thesis, Naval Postgraduate School, Monterey, CA, September 2012.
74. Avner Biblarz. Web syndication in a multilevel security environment. Master's thesis, Naval Postgraduate School, Monterey, CA, March 2012. <http://hdl.handle.net/10945/38482>.
75. Yeow Cheng Ng. An application for normal and critical operations in a tactical MLS system. Master's thesis, Naval Postgraduate School, Monterey, CA, December 2010.

Invited Talks

76. Invited panelist at the CSU Systemwide Virtual IT-Cybersecurity Roundtable, Jun. 17, 2022, online.
77. Invited speaker at MESA's Faculty Research/Dissertation Presentation at SSU, Apr. 14, 2022, online.
78. Invited panelist (panel titled "Online POGIL in Non-CS1 classes") at the CS-POGIL Workshop and BOF, July 9, 2020, online.
79. Invited panelist (panel titled "Online POGIL in Non-CS1 classes") at the CS-POGIL Workshop and BOF, July 9, 2020, online.
80. "Fuzzing Devices," speaker in the Sonoma State University Computer Science Department colloquium series, April 16, 2020, online.
81. "EngageCSedu: Air Quality Index Calculator CS1 assignment," invited talk at the ACM Special Interest Group on Computer Science Education (SIGCSE), March 13, 2020, Portland, OR (event cancelled due to COVID).
82. Invited speaker to CS class (talk on cryptography) at Terra Linda High School, Sept. 6, 2019, San Rafael, CA.
83. "Intro to Git," NomaHacks at Sonoma State University, Apr. 6–7, 2019, Rohnert Park.
84. Invited speaker to CS class (talk on cryptography) at Terra Linda High School, Jan. 28, 2019, San Rafael, CA.
85. Invited speaker to CS class (talk on cryptography) at Terra Linda High School, Oct. 30, 2017, San Rafael, CA.
86. Invited speaker to CS class (talk on cryptography) at Terra Linda High School, Jan. 30, 2017, San Rafael, CA.
87. Invited panelist (panel on security education) at the Annual Computer Security Applications Conference (AC-SAC), Dec. 8, 2016, Los Angeles, CA.
88. "Host and Data Geolocation in Adversarial Settings," Workshop on Political Space and Cyber Space at the Georgia Tech School of Public Policy, May 19, 2016, Atlanta, GA.
89. "Adding L^AT_EX to your Academic Toolset," Graduate Writing Center at the Naval Postgraduate School, Dec. 17, 2014, Monterey, CA.
90. "Secure TCB composition for trustworthy control systems," DHS 2014 R&D Showcase and Technical Workshop, Dec. 17, 2014, Washington, DC.
91. "Capturing Capture the Flag," Panel at USENIX 3GSE, Aug. 18, 2014, San Diego, CA.
92. "Problems with Geolocating Data in the Cloud," Rosenfield Program in Public Affairs, International Relations & Human Rights at Grinnell College, Nov. 25–27, 2013, Grinnell, IA.

Grants

93. Office of the Dean, School of Science and Technology at Sonoma State University Mini-grant. *Summer research internship on software security testing*. PI: Mark Gondree. 06/2022 – 08/2022. \$2,000.
94. Genentech Fellows Summer Undergraduate Research (SSU/MESA). *Summer project on computer organization*. PI: Mark Gondree. 06/2022 – 08/2022. \$6,000.
95. Research, Scholarship, and Creative Activity Program (RSCAP) Mini-grant (SSU). *Comparison of behavior between the TestU01 and PractRand PRNG test suites*. PI: Mark Gondree. 05/2020 – 05/2021. \$6,648.
96. Office of Research & Sponsored Programs 2019-20 Student Research Award (SSU). *Sonoma State CTFd Instance For the Development of Student Knowledge*. PI: Dallas Womack, with advisor Gondree. 02/2020 – 07/2020. \$750.
97. SSU Science & Technology Innovation and Strategic Priorities funding program. *Connecting students to students and students to alumni in tech at SSU*. PI: Mark Gondree, Suzanne Rivoire, Sara Kassis. 10/2018 – 06/2019. \$3,000.
98. Faculty Travel Grant (SIGCSE'19). *Mini-grant to attend the ACM SIGCSE Technical Symposium on CS Education in Minneapolis, MN*. PI: Mark Gondree. 02/2019 – 03/2019. \$500.

99. Research, Scholarship, and Creative Activity Program (RSCAP) Mini-grant (SSU). *A survey of network traffic data available from Capture the Flag competitions*. PI: Mark Gondree. 05/2018 – 05/2019. \$6,990.
100. Instructional Innovation Grant (SSU). *Pilot development of OER interactive digital lab manual for CS210*. PI: Mark Gondree. 05/2018 – 08/2018. \$1,500.
101. Student Travel Grants (IEEE S&P'18). *Mini-grants for four SSU undergrads to attend the IEEE Security & Privacy 2018 conference in San Francisco, CA*. 05/2018. \$4,000.
102. California State University. *CSU Course Redesign with Technology Grant for CS115*. PIs: Mark Gondree and Gurman Gill. 06/2017–06/2018. \$25,239.
103. Acquisition Research Program (NPS). *Analysis of the recurring costs of outsourced cloud-scale integrity audits*. PI: Mark Gondree. 05/2016 – 05/2017. \$71,192.
104. OPNAV Study Funding (NPS). *Cybersecurity Framework for Ship Industrial Control Systems*. Randy Maule (PI). Co-PI: Mark Gondree. 10/2015 – 12/2016. \$120,000.
105. Office of Naval Research. *Naval Machinery Control System (MCS) laboratory*. PI: Mark Gondree. 06/2015 – 01/2016. \$113,302.
106. National Science Foundation. *SEED Lab Extension and Parameterization*. Cynthia Irvine (PI). Co-PI: Mark Gondree. 06/2015 – 05/2017. \$422,498.00.
107. National Science Foundation. *Re-energizing K-12 Extramural Programs with Security Activities*. Mark Gondree (PI). Co-PI: Zachary N. J. Peterson. 06/2015 – 05/2017. \$259,976.00.
108. National Science Foundation. *This is not a Game: Using ARGs for Teaching Security Concepts to First-Year Undergraduates*. Zachary N. J. Peterson (PI). Co-PIs: Mark Gondree, Tanya Flushman. 09/2014 – 09/2016. \$196,073.
109. National Reconnaissance Office. *On-Phone Multimodal Continuous Authentication*. Craig Martell (PI). Co-PIs: Mark Gondree, Zachary Peterson. 11/2012 – 9/2013. \$383,458.
110. National Reconnaissance Office. *Security Foundations for Commercial Solutions for Classified (CSFC)*. Cynthia Irvine (PI). Co-PI: Mark Gondree. 11/2012 – 9/2013. \$299,350.
111. National Reconnaissance Office. *Scalable Distributed Datastore for an MLS Cloud*. Cynthia Irvine (PI). Co-PI: Mark Gondree. 11/2012 – 9/2013. \$479,580.
112. National Science Foundation. *Teaching Computer Security Concepts Through Interactive (Non-digital) Games*. Mark Gondree, Zachary N. J. Peterson (Co-PIs). 10/2012 – 9/2014. \$283,700.
113. National Science Foundation. *Cyber Corps Through Transformation - Renewal*. Cynthia Irvine (PI). Co-PIs: Mark Gondree, Zachary N. J. Peterson, Chris Eagle, Deborah Goshorn, Theodore Huffmire. 10/2012 – 9/2017. \$4,113,385.
114. National Reconnaissance Office. *Cloud Technologies for Automated Tagging and Cryptographic Binding*. Craig Martell (PI). Co-PIs: Mark Gondree, Zachary N. J. Peterson. 11/2011 – 9/2012. \$437,996.

Professional Development

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| 2022 | Excellence in Teaching Award, Sonoma State University. |
| 2022 | CS POGIL Activity Writing Program under the IntroCS-POGIL Project (NSF Award 1626765), Westminster College, Jan. 2 – Aug. 31, 2022. |
| 2022 | Attended “A Queer Endeavor: Inclusive K-12 Education,” NCWIT webinar series, May 18, 2022. |
| 2022 | Attended “Navigating the New Normal: Renewal, Allyship & Joy During Twin Pandemics,” NCWIT webinar series, May 17, 2022. |
| 2022 | Attended “Powertilt: Examining Power, Influence, and the Myth of Meritocracy,” NCWIT webinar series, May 16, 2022. |
| 2021 | Participant in the TIPS Towards Justice professional development workshop, Aug. 9 – 12, 2021 |

- 2021 Completed “Virtual Writers’ Retreat Workshop” course from *The POGIL Project*, July 11 – 12, 2021.
- 2021 Completed “Advanced QLT Course in Teaching Online” course from *California State University*, June 7 – 27, 2021.
- 2020 Completed “Promoting Active Learning Online” micro-credential course from the Association of College and University Educators (ACUE), July 6 – Aug. 17, 2020.
- 2020 Completed “Canvas Design Summer Institute” online course from Sonoma State University Center for Teaching & Educational Technology, June 22 – July 7, 2020.
- 2020 Completed “Introduction to Teaching Online using QLT” online course from *California State University*, June 8 – Jun 28, 2020.
- 2020 Attended “Teaching Cybersecurity in CSP (or Any CS Class): Introducing the Security Mindset” webinar from UC Berkeley, May 19, May 26, June 2, 2020.
- 2020 Attended “Conversations for Change: Fostering a Culture of Respect, Inclusion, and Engagement,” NCWIT webinar series, May 15, May 18, May 22, June 4, 2020.
- 2020 Attended “Going Beyond Canvas to Enhance E-Learning with Top Hat” webinar from Sonoma State University Center for Teaching & Educational Technology, June 3, 2020.
- 2020 Attended “HIPs and COVID-19: A Virtual Town Hall” webinar from High Impact Practices in the States, May 15, 2020.
- 2020 Attended “Assessing Student Learning Outcomes in Undergraduate STEM Courses,” webinar from the CSU STEM-NET series, June 10, 2020.
- 2019 Attended “Bay Area Fuzzing Meetup” workshop (Facebook, San Francisco, CA), Dec. 19, 2019.
- 2019 Attended “PUERTA Project workshop” (Sonoma State University), Aug. 15, 2019.
- 2019 Attended “Transformative Inclusion in STEM workshop” (Sonoma State University), June. 13, 2019.
- 2019 Attended “2019 Summer 3-day Workshop at Capital University” (Columbus, OH), July 22–24, 2019.
- 2019 Attended “LoboConnect Faculty Information Session” (Sonoma State University), Spring 2019.
- 2019 Attended “Cybersecurity Education Workshop 2019” (Santa Fe, NM), April 15–16, 2019.
- 2019 Attended Canvas On-site workshop series (Sonoma State University, Faculty Center), Jan. 14–16, 2019.
- 2018 Attended “2018 Northeast Regional POGIL Workshop” and “IntroCS POGIL Workshop” (Riverdale, NY), July 10–13, 2018.
- 2018–19 With Gurman Gill, became a member of 2018–2019 cohort for the “IntroCS POGIL Project,” an NSF-funded collaboration between Westminster College, Muhlenberg College, James Madison Univ. and Michigan State Univ.; goals are adoption of POGIL active learning into CS1 classes.
- 2018 Attended “CSU CRT Summer Capstone Event” (Long Beach, CA), June 25, 2018. Recognized, along with 11 others, for having an outstanding e-portfolio.
- 2017 Attended meetings on establishing an immersive learning program (Sara Kassis, SSU), Spring 2018.
- 2017–18 CSU Course Redesign with Technology (CRT) award for re-designing CS115 (co-PIs Gill and Gondree, \$25,239), and membership in CRT professional learning community for 2017–18 cohort.
- 2017 Member of SSU Faculty Center “X-Ray Analytics Program” cohort, Fall 2017.
- 2017 Member of SSU “Berkeley STEM Faculty Learning Program” (STEM-FLP) cohort, Spring–Fall 2017.
- 2017 Attended “Unintended Gender Bias Workshop” (Matthew Paolucci, SSU), Oct. 20, 2017.
- 2017 Attended UC Berkeley Learning Analytics Conference (UC Berkeley), Oct. 6, 2017.
- 2017 Completed “Applying the Quality Matters Rubric” online course from *Quality Matters*, Oct. 2–22, 2017.
- 2017 Attended “CSU CRT Summer Institute” (Sacramento, CA), June 26–30, 2017.

- 2017 Attended “Open Educational Resources (OER) Summer Teaching Institute” (Sonoma State University), May 23, 2017.
- 2017 Attended “Presenting Data and Information with Edward Tufte” (Palo Alto, CA), April 24, 2017.
- 2017 Member of Professors Open Source Software Experience (POSSE) cohort, online program with workshop at Google (San Francisco, CA), April 20–22, 2017.
- 2017 Completed “Safe Zone Training” (Sonoma State University), Feb. 8, 2017.
- 2016–17 Member of SSU “Effective Teaching Practices” cohort, Association of College and University Educators (ACUE), Fall 2016–Spring 2017.

SERVICE

Service to the Computer Science Department

- 2022 Member of Spring 2022 visiting assistant professor search committee.
- 2021–22 CS major advisor, supporting approximately 60 students.
- 2020–22 Women in Computer Science faculty advisor.
- 2020– CS department website content manager.
- 2020–21 CS major advisor, supporting approximately 50 students.
- 2020– Chair, CS Advising subcommittee
The Advising committee is a new, standing department committee charged with ensuring all CS majors and minors have advisors, through routine audits and making assignments.
- 2019–20 Migrated CS department website to Drupal.
- 2019–20 Member of Spring 2020 tenure-track search committee.
- 2019– CS Club faculty advisor.
- 2019–20 CS major advisor, supporting approximately 60 students.
- 2019 Created CS Alumni LinkedIn group (300+ alumni and students).
- 2019 Judge for NomaHacks, Sonoma county’s first 24-hour intercollegiate hackathon, hosted by SSU.
- 2018–21 Member, CS Space subcommittee.
The Space committee is an adhoc, 2-person committee charged to handle staff questions and provide feedback about CS spaces during the Stevenson remodel.
- 2018–19 CS major advisor, supporting approximately 65 students.
- 2017–18 CS major advisor, supporting approximately 50 students.
- 2017–20 National Center for Women & Information Technology (NCWIT) Academic Alliance Membership for SSU, faculty POC.
- 2017 Completed “GRAPE Camp” training (Jul. 13–31, 2017) to become MERLOT reviewer for CS OER.

Service to the School of Science and Technology

- 2022– STEM participant in Transformative Inclusion in Postsecondary STEM: Towards Justice (TIPS Towards Justice) program with CS department.
- 2020– Sonoma Mountain Connection team member, instructor and recruitment for SMC-CS.
- 2021–22 CS participant in Transformative Inclusion in Postsecondary STEM: Towards Justice (TIPS Towards Justice) program participant
- 2016– SST Professional Development Committee Member, CS representative.

Service to the University

- 2022–23 Chair, Academic Freedom Subcommittee (AFS) of the Faculty Standards and Affairs Committee (FSAC)
- 2022–25 Academic Freedom Subcommittee (AFS) of the Faculty Standards and Affairs Committee (FSAC), elected representative for SST
- 2022–25 General Education Subcommittee (GE) of the Educational Policies Committee (EPC), elected representative for SST)
- 2022–23 SST Elections Committee, elected representative.
- 2022–24 Treasurer, Sonoma Chapter of the California Faculty Association.
- 2020–24 University Standards Subcommittee of the Educational Policies Committee (EPC), elected representative for SST.
- 2020–22 Treasurer, Sonoma Chapter of the California Faculty Association.
- 2020 WSCUC (WASC) Special Visit Working Group, faculty representative.
- 2019–22 Academic Freedom Subcommittee (AFS) of the Faculty Standards and Affairs Committee (FSAC), elected representative for SST.
- 2019 University Standards Subcommittee of the Educational Policies Committee (EPC), interim replacement for Dr. Sollanek (SST, Kin)
- 2017–20 Information Security Steering Committee, faculty representative.
- 2018–19 Academic Freedom Subcommittee (AFS) of the Faculty Standards and Affairs Committee (FSAC), at-large one-year appointment.
- 2017 Academic Freedom Subcommittee (AFS) of the Faculty Standards and Affairs Committee (FSAC), interim replacement for Dr. Sollanek (SST, Kin).

Service to the Community

- 2022– Expanding Your Horizons (EYH), web chair.
- 2017– Expanding Your Horizons (EYH), fundraising chair.
- 2019 Alumni Judge, UC Davis ENG 003 Final Design Showcase (Spring 2019, Fall 2019).
- 2017 Expanding Your Horizons (EYH), volunteer.

Professional Service

- 2022 NSF Panel Reviewer.
- 2022 Program Committee, 9th International Conference on Information Systems Security and Privacy (ICISSP 2023).
- 2022– Committee member, Technical Meeting Request Committee, Technical & Conference Activities Board, IEEE Computer Society.
- 2021 NSF Panel Reviewer.
- 2021 Program Committee, 8th International Conference on Information Systems Security and Privacy (ICISSP 2022).
- 2021 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2022).
- 2021 Program Committee, USENIX Workshop on Cyber Security Experimentation and Test (CSET'21).
- 2020 Program Committee, 7th International Conference on Information Systems Security and Privacy (ICISSP 2021).

2020 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2021).

2020 Program Committee, USENIX Workshop on Cyber Security Experimentation and Test (CSET'20).

2019–20 Finance Chair, IEEE Symposium on Security and Privacy 2020 (IEEE S&P'20).

2019–20 Member, California Cybersecurity Four Year Education Program Workgroup for the California Governor's Cybersecurity Task Force (GCTF) Workforce Development and Education (WDE) Subcommittee.

2019 External reviewer, *Computers & Security* journal.

2019 Program Committee, 6th International Conference on Information Systems Security and Privacy (ICISSP 2020).

2019 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2020).

2018–19 General Chair, IEEE Symposium on Security and Privacy 2019 (IEEE S&P'19).

2018 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2019).

2018 Program Committee, International Conference on Security and Cryptography (SECRYPT 2018).

2017–18 Program Committee, 2018 USENIX Workshop on Advances in Security Education (ASE'18).

2017–18 Vice Chair, IEEE Symposium on Security and Privacy 2018 (IEEE S&P'18).

2017 Program Committee, Passive and Active Measurement Conference 2018 (PAM 2018).

2017 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2018).

2016–17 Organizer, 2017 USENIX Workshop on Advances in Security Education (ASE'17).

2016–17 Workshops Chair, IEEE Symposium on Security and Privacy 2017 (IEEE S&P'17).

2016 Program Committee, International Conference on Security and Cryptography (SECRYPT 2016).

2016 NSF Panel Reviewer.

2016 Program Committee, ACM SIGCSE Technical Symposium on CS Education (SIGCSE 2017).

2015–16 Organizer, 2016 USENIX Workshop on Advances in Security Education (ASE'16).

2015–16 Finance Chair, IEEE Symposium on Security and Privacy 2016 (IEEE S&P'16).

2015 Program Committee, International Conference on Emerging Security Information, Systems and Technologies (SECURWARE 2016).

2015 Program Committee, International Conference on Security and Cryptography (SECRYPT 2015)

2015 Organizer, USENIX Summit on Gaming, Games and Gamification in Security Education (3GSE'15)

2015 Program Committee, USENIX Workshop on Cyber Security Experimentation and Test (CSET'15).

2015 Finance Chair, IEEE Symposium on Security and Privacy 2015 (IEEE SP'15).

2014 Program Committee, USENIX Summit on Gaming, Games and Gamification in Security Education (3GSE'14)

2014 Program Committee, USENIX Workshop on Cyber Security Experimentation and Test (CSET'14).

2014 Program Committee, International Conference on Security and Cryptography (SECRYPT 2014)

2014 Co-Treasurer, IEEE Security and Privacy Workshops 2014 (IEEE SPW'14).

2013 Program Committee, Fourth International Workshop on Information Systems Security Engineering (WISSE'14).

2013 Program Committee, International Conference on Security and Cryptography (SECRYPT 2013)

2012 Program Committee, The International Conference on Cyber Security, CyberWarfare and Digital Forensic (CyberSec12)

2012 Program Committee, Summer FTRA International Symposium on Advances in Cryptography, Security and Applications for Future Computing (ACSA-Summer 2012)

2012 Program Committee, ASE/IEEE International Conference on Cyber Security (ICCS 2012)

2012 Program Committee, International Conference on Security and Cryptography (SECRYPT 2012)