Stephen C. Cooper

EDUCATION:

Syracuse University, Syracuse, NY Ph.D., August 1997
Major: Computer Science
Dissertation Area: Theoretical and applied work in functional and imperative programming.
Thesis:
https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=ea187eed5020384e2fd250f8010f9abe207e4655
"On linear types and imperative update"
Thesis advisor: Peter O'Hearn
Syracuse University, Syracuse, NY M.S., December 1991
Major: Computer Science
Cornell University, Ithaca, NY B.A., May 1988
Major: Mathematics and Chemistry

EXPERIENCE:

UNIVERSITY OF NEBRASKA – LINCOLN
Lincoln, NE January 2016 – present
Chancellor's Professorship (1/16 – present)
Faculty Director, Jeffrey S. Raikes School of Computer Science and Management (8/25 – present)
Executive Director, Jeffrey S. Raikes School of Computer Science and Management (1/16 – 8/25)
Professor, School of Computing (8/21 – present)
Associate Professor, Computer Science and Engineering Department (1/16 – 7/21)
Executive Director, Raikes School: Increased four-year student graduation from less than 60% to greater than 90%. Increased student applications from 130 to 300+. Increased number of students receiving 2+ summer internships from 60% to 99%. Converted $300,000 annual budget deficit to $600,000 annual surplus. Grew endowment from $14,000,000 to greater than $30,000,000. Grew faculty/staff from 0/5 to 6/10. Added required three-course data science sequence. Created entrepreneurship/startup course, and startup version of Design Studio capstone.

STANFORD UNIVERSITY
Stanford, CA Sept. 2010 – December 2015
Associate Professor (teaching), Department of Computer Science.
Associate Professor, School of Education (by courtesy).

PURDUE UNIVERSITY
West Lafayette, IN August 2009 – August 2010
Professor of STEM education, Computer Graphics Technology.
Professor, Computer Science (by courtesy).

NATIONAL SCIENCE FOUNDATION
Arlington, VA August 2007 – August 2009
Program Director, Division of Undergraduate Education, Education and Human Resources Directorate: Responsible for recommending grant proposals in the Course, Curriculum and Laboratory Improvement (CCLI) levels 1, 2, and 3, Advanced Technological Education (ATE), Federal Cyber Service: Scholarships for Service (SFS), National Science, Technology, Engineering, and Mathematics Education Digital Library (NSDL), Cyber-Enabled Discovery and Innovation (CDI), and NSF Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) programs. Managed a portfolio of nearly $60,000,000 worth of projects. Served as co-lead for the SFS program. Led the effort to redefine the Centers for Academic Excellence in information assurance education. Re-wrote the SFS program solicitation and worked with others to re-write the CCLI program solicitation. Ran numerous grant-writing workshops for more than 200 faculty members from dozens of schools and worked with colleagues in the Computer and Information Science and Engineering Directorate on supporting projects of joint interest. Assisted in running the Federal Cyber Service: Scholarships for Service 2008 and 2009 Annual Job Fairs and Symposia. Served on Cyber-learning task force and on the SFS Interagency Coordinating Committee. Co-founder and co-organizer of Computational Thinking brown bag lunch group.

SAINT JOSEPH'S UNIVERSITY
Philadelphia, PA August 1999 – August 2009
Assistant/Associate Professor: Taught 4-6 classes per year. Worked on developing a pre-CS1 course and text for CS majors with weak backgrounds. Advised students. Created and ran PAthways to Careers in Mathematics And Computer Science (PACMACS), an outreach program for attracting minority Philadelphia public school students to careers in mathematics and computer science. Tenured and promoted to associate professor: March 2003. University-wide merit award for teaching: December 2003. Temporary assignment at the National Science Foundation: August 2007 – August 2009.
Director, Center for Visualization (September 2005 – August 2009): Along with B. Conover, project manager, administered several NSF grants, coordinated and taught several national Alice workshops, and helped university, community college, and K-12 faculty with integrating Alice into their curricula. Our Alice materials have been used in more than 500 colleges, and over 1000 high/middle schools.

RIVIER COLLEGE
Nashua, NH August 1997 – July 1999
Assistant Professor, Director of Computer Science programs: Taught 5 courses per year. Doubled the size of the graduate computer science program in two years (from 43 FTEs, full time equivalents, to 92 FTEs). Modified undergraduate curriculum to meet the ACM's 1991 standard, by adding some courses, and removing outdated ones. Designed an

undergraduate certificate program in modern computer technologies to be offered off-campus and piloted the program with 15 employees from a local high technology industry. Created a graduate certificate program in database technologies. Modernized the graduate curriculum by adding new courses and removing outdated ones. Won a $30K grant to build a new PC lab on campus. Trained and hired several adjunct faculty. Co-advised 150 graduate students and 65 undergraduates. Designed and implemented a new service-learning option for undergraduate computer science majors. Served on numerous academic committees.

SYRACUSE UNIVERSITY
Syracuse, NY September 1992 - May 1996
Graduate Teaching Assistant: See teaching section for description.
Graduate Student Organization Representative: (Fall 1992 – Spring 1993): Represented School of Computer and Information Science to graduate school student government.

INTERNATIONAL BUSINESS MACHINES
Poughkeepsie, NY July 1988 – August 1997
Architect, MVS Component Broker Department (1/97-8/97): Worked on designing a System 390 implementation of the CORBA Object Transaction Service specification. Coordinated overall project strategy with architects from other CORBA implementation teams.
Programmer, MVS JES3 Department (5/96-12/96): Wrote test plan and automated test cases for one release of the MVS operating system's Job Entry Subsystem 3.
Programmer, MVS Interactive Department (7/88-9/92): Designed, developed, function tested, and serviced code written in assembler and in IBM's internal high-level language for the Time Sharing Option of IBM's MVS/ESA operating system. Worked on many small programming teams and team led several projects. Served as IBM's liaison for two vendor code contracts.
Promoted to Associate Programmer, 1/89. Promoted to Senior Associate Programmer, 1/92. Promoted to staff programmer 1/97. Awards for excellence 2/90, 6/92. Cost effectiveness recognition 2/91. On unpaid leave of absence to obtain Ph.D. 9/92-5/96.

TEACHING: **University of Nebraska – Lincoln**

RAIK 183H: CS1 (4 credits): Fall 2019. Taught the Raikes School's introductory computing course, on behalf of a colleague who was out on maternity leave.

RAIK 186H: Leadership 2 (1 credit): Spring 2023, Spring 2024, Spring 2025. Developed a case study approach towards teaching leadership. Worked with Management Department to include adequate management content so students would not need to take a separate management course.

RAIK 196H: Innovation Processes (3 credits): Fall 2017, Fall 2018, Fall 2019. Introduced design thinking and lean startup as an approach to solving ill-formed problems.

RAIK 372H: Business Law and Ethics (3 credits): Spring 2018, Spring 2019, Spring 2020. Created this course as a technology law and ethics course.

Stanford University

CS105: Introduction to Computing (5 units): Fall 2010, Winter 2012, Winter, 2013, Winter 2014, Winter 2015. Modified this class to use Alice programming (rather than programming in Python, as had been done previously). In later iterations, used PHP as the programming component of the course. Incorporated the use of clicker questions to better engage this 200-student non-major class. In the winter 2013 offering, flipped the programming portion of the class, replacing lecture with paired laboratory exercises.

CS106A: Programming Methodology (5 units): Winter 2011, Spring, 2013. Taught this introductory CS1 class. Replaced the Yahtzee assignment (teaching one and two-dimensional arrays) with chess.

CS106B: Programming Abstractions (5 units): Spring 2011. CS2.

CS181(W): Computer Ethics and Public Policy (4 units): Fall, 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015. Changed the content of this course to increase focus on intellectual property and privacy. Increased the focus on information security as a theme through which to study other ethical and policy issues.

CS242: Programming Languages (4 units): Fall 2012.

CS198 (1 unit): Fall 2014. Along with S. Grover, created this reading class, focused on computer science education.

Purdue University

Tech 621: Research Applications of Visualization in STEM Education (3 credits): Spring 2010. Designed and developed this doctoral seminar. The course introduces theories of learning as well as visualization and examines how visualization tools may and may not improve STEM education at the K-12 level.

Saint Joseph's University

Courses numbered 1xxx and 2xxx are undergraduate level. Courses numbered 4xxx and 5xxx are master's level.

CSC1301: Virtual Worlds and Robots (3 credits): Fall 2001, Spring 2002, Fall 2002, Spring 2004, Fall 2005, Spring 2007. Designed and developed

this class to teach non-majors and students who wish to be CS majors but have had a weak background in mathematics/computer science. Used Alice, a 3D interactive, animation environment for building virtual worlds, to teach students, with program visualization, basic object-oriented programming concepts.

CSC1401: Introduction to programming in Java (4 credits): Fall 1999, Fall 2000, Fall 2001, Fall 2002, Fall 2003, Fall 2004 (CSC1405 - university college), Fall 2005, Fall 2006. (Course taught in C++ 1999.) Created 14 weekly lab assignments and 7 programming assignments.

MAT 1571: Discrete Mathematics (3 credits): Spring 2005.
Added a programming in mL component to the course. Created several mL related assignments.

CSC1601: Intermediate programming in Java (4 credits): Spring 2000, Spring 2001. (Course taught in C++ 2000.) Created 14 weekly labs and 4 projects.

CSC2011: Computer organization and architecture (3 credits): Fall 1999.

CSC2301: Data Structures (3 credits): Spring 2005.
Added a weekly lab component to the course. Created the laboratories.

CSC2371: Formal Languages and Compiler Construction (3 credits): Spring 2007.

CSC2481: Software engineering (3 credits): Spring 2003, Spring 2004, Fall, 2004, Fall 2006. Modeled this course after CSC4085.

CSC2811: Program verification (3 credits): Spring 2006.

CSC2901: Computer Science Project (3 credits): Spring 2006.

CSC4015: Algorithms (3 credits): Spring 2000.

CSC4025: Operating systems (3 credits): Fall 2000, Spring 2001.

CSC4085: Software engineering (3 credits): Fall 1999, Spring 2000, Spring 2001, Spring 2002, Fall 2002, Spring 2004.
Designed a semester-long team project with several deliverables.

CSC5125: Program verification (3 credits): Spring 2003.

Rivier College
S202: Programming in C part I: Fall 1997, Fall 1998. Redesigned this course from a lecture class to a lecture, lab, and project class. Reduced the drop out rate of computer science students.

CS203: Programming in C part II: Spring 1998, Spring 1999.
CS550: Formal languages (graduate): Fall 1997.
CS235: GUI programming using Visual Basic: Spring 1998. Designed and developed this class, focussing on the technical issues involved in GUI design.
CS699: Professional seminar (graduate): Spring 1998, Fall 1998, Spring 1999. Changed the format of this final class in the master's program from a lecture to a seminar style. Supervised students' final projects.
CS445/CS585: Object-Oriented programming in Java: Summer 1998.
CS455: Programming in C and C++: Fall 1998.

Syracuse University
CIS193: An introduction to programming in Fortran: Fall 1992, Spring 1993.
CIS197: An introduction to programming in Pascal: Fall 1993, Fall 1994, Fall 1995.
CIS333: The UNIX operating system and the internet: Summer 1995.
CIS700: Graduate seminar in mathematical logic: Together with F. Dushin and R. Irwin, designed and developed this two-semester class, and prepared and led a portion of the lectures and discussions.
CIS252: Introduction to computer science II (Scheme): Teaching assistant for Spring 1994, Spring 1995. Responsible for running weekly labs, grading examinations and projects, holding weekly review sessions (in addition to office hours), and some lecturing.

MOOCS CREATED: Introduction to Programming and Animation with Alice. 2020. With S. Rodger. Coursera. https://www.coursera.org/learn/introtoalice

PUBLICATIONS:
JOURNAL:

1) Zhang, M., Cooper, S., and Luxton-Reilly, A. 2019. Report on the first acm global computing education conference (CompEd). *SIGCSE Bulletin*, 51 (3), 4-6.

2) Soh, L.K. and Cooper, S. 2018. Guest editorial special issue on computing in engineering. *IEEE Transactions on Education*, 6:3, 165-166.

3) Grover, S., Pea, R. and Cooper, S. 2015. Designing for deeper learning in a blended computer science course for middle school students. *Computer Science Education*, 25:2, 199-237.

4) Blikstein, P., Worsley, M., Piech, C., Sahami, M., Cooper, S. and Koller, D. 2014. Programming pluralism: Using learning analytics to detect patterns in the learning of computer programming. *The Journal of the Learning Sciences*, 23 (4), 561-599.

5) Adamo-Villani N., Oania M., and Cooper, S. 2012. Using a serious game approach to teach secure coding in introductory programming:

Development and initial findings. *Journal of Educational Technology Systems*, 41(2), 107-131.

6) Utting, I., Cooper, S., Kölling, M., Maloney, M. and Resnick, M. 2010. Alice, greenfoot, and scratch -- A discussion. *Trans. Comput. Educ.* 10, 4, Article 17 (November 2010), 11 pages.

7) Cooper, S. 2010. The design of alice. *Trans. Comput. Educ.* 10, 4, Article 15 (November 2010), 16 pages.

8) Cooper, S., Nickell, C., Piotrowski, V., Oldfield, B., Abdallah, A., Bishop, M., Caelli, B., Dark, M., Hawthorne, E. K., Hoffman, L., Pérez, L. C., Pfleeger, C., Raines, R., Schou, C., and Brynielsson, J. 2010. An exploration of the current state of information assurance education. *SIGCSE Bull.*, 41, 4 (Jan. 2010), 109-125.

9) Tenenberg, J., Fincher, S., Blaha, K., Bouvier, D., Chen, T., Chinn, D., Cooper, S., Eckerdal, A., Johnson, H., McCartney, R., Monge, A., Mostrom, J., Petre, M., Powers, K., Ratcliffe, M., Robins, A., Sanders, D., Schwartzman, L., Simon, B., Stoker, C., Tew, A., and VanDeGrift, T. 2005. Students designing software: a multi-national, multi-institutional study. *Informatics in Education*, 4(1), 143-162.

10) Cooper, S., Dann, W., and Pausch, R. 2003. Using animated 3D graphics to prepare novices for CS. In *Computer Science Education*, 13(1).

11) Naps, T., Cooper, S., Koldehofe, B., Leska, C., Rößling, G., Dann, W., Korhonen, A., Malmi, L., Rantakokko, J., Ross, R. J., Anderson, J., Fleischer, R., Kuittinen, M., and McNally, M. 2003. Evaluating the educational impact of visualization. In *Working Group Reports From ITiCSE on innovation and Technology in Computer Science Education* (Thessaloniki, Greece, June 30 - July 02, 2003). D. Finkel, Ed. ITiCSE-WGR '03. ACM, New York, NY, 124-136.

12) Dougherty, J. P., Dececchi, T., Clear, T., Richards, B., Cooper, S., and Wilusz, T. 2002. Information technology fluency in practice. In *Working Group Reports from ITiCSE on innovation and Technology in Computer Science Education* (Aarhus, Denmark, June 24 - 28, 2002). ITiCSE-WGR '02. ACM, New York, NY, 153-171.

PROFESSIONAL SOCIETY MAGAZINES:

1) Bockmon, R. and Cooper, S. 2022. What's your placebo? The dangers of participation bias. *Communications of the ACM*, 65, 10, 31-33.

2) Yadav, A. and Cooper, S. 2017. Fostering creativity through computing. *Communications of the ACM*, 60, 2, 31-33.

3) Cooper S. and Dann, W. 2015. Programming: a key component of computational thinking in cs courses for non-majors. *ACM Inroads*, 6, 1 (February 2015), 50-54.

4) Cooper, S., Grover, S., Guzdial, M., and Simon, B. 2014. A future for computing education research. *Communications of the ACM*, 57, 11 (October 2014), 34-36.

5) Cooper, S., Grover, S., and Simon, B. 2014. Building a virtual community of practice for k-12 cs teachers. *Communications of the ACM*, 57, 5 (May 2014), 39-41.

6) Cooper, S. and Sahami, M. 2013. Reflections on Stanford's MOOCs. *Communications of the ACM*, 56, 2 (February 2013), 28-30.

7) Cooper, S., Pérez, L., and Rainey, D. 2010. K--12 computational learning. *Communications of the ACM* 53, 11 (November 2010), 27-29.

8) Cooper, S. and Cunningham, S. 2010. Teaching computer science in context. *ACM Inroads*, 1, 1 (Mar. 2010), 5-8.

9) Dann, W. and Cooper, S. 2009. Alice3: Concrete to abstract. *Communications of the ACM*, 52(8), 27-29.

REFEREED CONFERENCE PROCEEDINGS:

1) Harper, C., Mohammed, K., and Cooper, S. 2025. A conceptual metaphor analysis of recursion in a cs1 course. In *Proceedings of the 56th ACM Technical Symposium on Computer Science Education*, 457-463.

2) Werum, R., Hill, P.W., Jochman, J.C., Johnson, A., Pérez, L.C., and Cooper, S. 2024. Institutional context matters: Linking characteristics of universities to the gender composition of engineering and computer science programs. In *2024 ASEE Annual Conference & Exposition*.

3) Harper, C., Tran, K., and Cooper, S. 2024. Conceptual metaphor theory in action: Insights into student understanding of computing concepts. In *Proceedings of the 55th ACM Technical Symposium on Computer Science Education*, 463-469.

4) Harper, C., Rance, J., Owens, P., and Cooper, S. 2024. Tool-driven scaffolding of student-generated analogies in cs1. In *Proceedings of the 8th Conference on Computing Education Practice (CEP24)*, 5-8.

5) Jain, A., Bockmon, R., Bourke, C., and Cooper, S. 2023. Validating a language-independent cs1 learning outcomes assessment. In *Proceedings*

of the ACM Conference on Global Computing Education Vol 1 (CompEd 2023), 78-83.

6) Harper, C., Bockmon, R., and Cooper, S. 2023. Investigating themes of student-generated analogies. In *Proceedings of the ACM Conference on Global Computing Education Vol 1 (CompEd 2023)*, 64-70.

7) Gopal, B., and Cooper, S. 2023. A comparison of peer instruction and process oriented guided inquiry learning-like pedagogies in teaching software testing and devops. In *2023 IEEE Frontiers in Education Conference (FIE)*, 1-9.

8) Gopal, B., and Cooper, S. 2023. Process oriented guided inquiry-based learning-like pedagogy (POGIL-like) in online software testing and devops – A replication study. *2023 IEEE International Conference on Software Testing, Verification and Validation Workshops (ICSTW)*, 438-445.

9) Gopal, B., and Cooper, S. 2022. POGIL-like learning in undergraduate software testing and dev ops: A pilot study. In *Proceedings of the ACM/IEEE 44th International Conference on Software Engineering: Software Engineering Education and Training*, 199-204.

10) Gopal, B., and Cooper, S. 2022. Peer instruction in online software testing and continuous integration: A replication study. In *Proceedings of the 27th annual acm conference on innovation and technology in computer science education (ITiCSE '22)*, 484-490.

11) Gopal, B., Cooper, S., and Bockmon, R. 2021. Industry partners' reflections on undergraduate software engineering students: An exploratory pilot qualitative study. *PPIG 2021 - 32nd Annual Workshop*.

12) Gopal, B., and Cooper, S. 2021. Peer instruction in online synchronous software engineering – Findings from fine grained clicker data. *Frontiers in Education*, 1-8.

13) Gopal, B., Cooper, S., Olmanson, J., and Bockmon, R. 2021. Student difficulties in unit testing, integration testing and continuous integration: An exploratory pilot qualitative study. *PPIG 2021 - 32nd Annual Workshop*.

14) Gopal, B., and Cooper, S. 2021. Peer instruction in software testing and continuous integration. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*. ACM, New York, NY.

15) Gopal, B., and Cooper, S. 2021. Peer instruction in software engineering – Findings from fine grained clicker data. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*. ACM, New York, NY.

16) Bockmon, R., Cooper, S., Gratch, J., Zhang, J., and Dorodchi, M. 2020. Can students' spatial skills predict their programming abilities? *Proceedings of the 2020 conference on Innovation & technology in computer science education (ITiCSE '20)*. ACM, New York, NY, USA, 446-451.

17) Bockmon, R., Cooper, S., Koperski, W., Gratch, J., Sorby, S., and Dorodchi, M. 2020. A cs1 spatial skills intervention and the impact on introductory programming abilities. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE '20)*. ACM, New York, NY, USA, 766-772.

18) Bockmon, R., Cooper, S., Gratch, J. and Dorodchi, M. 2020. Validating a cs attitudes instrument. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE '20)*. ACM, New York, NY, USA, 899-904.

19) Bockmon, R., Cooper, S., Gratch, J., and Doroodchi, M. 2019. (Re)Validating cognitive introductory computing instruments. In *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE '19)*. ACM, New York, NY, USA, 552-557.

20) Grover, S., Pea, R., and Cooper, S. 2016. Factors influencing computer science learning in middle school. In *Proceedings of the 47th ACM Technical Symposium on Computer Science Education (SIGCSE '16)*. ACM, New York, NY, USA.

21) Cooper, S., Wang, K., Israni, M., and Sorby, S. 2015. Spatial skills training in introductory computing. In *Proceedings of the eleventh annual International Conference on International Computing Education Research (ICER '15)*. ACM, New York, NY, USA, 13-20.

22) Cooper, S., Rodger, S., Schep, M., Stalvey, R., and Dann, W. 2015. Growing a k-12 community of practice. In *Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE '15)*. ACM, New York, NY, USA, 290-295.

23) Grover, S., Cooper, S., and Pea, R. 2014. Assessing computational learning in k-12. In *Proceedings of the 2014 conference on Innovation & technology in computer science education (ITiCSE '14)*. ACM, New York, NY, USA, 57-62.

24) Grover, S., Pea, R., and Cooper, S. 2014. Remedying misperceptions of computer science among middle school students. In *Proceedings of the 45th ACM technical symposium on Computer Science Education (SIGCSE '14)*. ACM, New York, NY, USA.

25) Cooper, S., Nam, Y-J., and Si, L. 2012. Initial results of using an intelligent tutoring system with alice. In *Proceedings of the 17th Annual Conference on innovation and Technology in Computer Science Education* (Haifa, Israel, July 3 - 5, 2012).

26) Adamo-Villani, N., Oania, M., Brown, J. Whittinghill, D., and Cooper, S. 2012. Building a serious game to teach secure coding in introductory programming courses. Proc. of Eurographics 2012 - Educators, Cagliari, Italy, May 13-18, 2012.

27) Dann, W., Cosgrove, D., Slater, D., Culyba, D., and Cooper, S. 2012. Mediated transfer: Alice 3 to java. In *Proceedings of the 43rd ACM technical symposium on Computer Science Education* (SIGCSE '12). ACM, New York, NY, USA, 141-146.

28) Piech, C., Sahami, M., Koller, D., Cooper, S. and Blikstein, P. 2012. Modeling how students learn to program. In *Proceedings of the 43rd ACM technical symposium on Computer Science Education* (SIGCSE '12). ACM, New York, NY, USA, 153-160.

29) Pérez, L., Cooper, S., Hawthorne, E., Wetzel, S., Brynielsson, J., Gökce, A., Impagliazzo, J., Khmelevsky, Y., Klee, K., Leary, M., Philips, A., Pohlmann, N., Taylor, B., and Upadhyaya, S. 2011. Information assurance education in two- and four-year institutions. In *Proceedings of the 16th annual conference reports on Innovation and technology in computer science education - working group reports* (ITiCSE-WGR '11), Liz Adams and Justin Joseph Jurgens (Eds.). ACM, New York, NY, USA, 39-53.

30) Cooper, S., Dann, W., Lewis, D., Lawhead, P., Rodger, S., Schep, M., and Stalvey, R. 2011. A pre-college professional development program. In *Proceedings of the 16th annual joint conference on Innovation and technology in computer science education* (ITiCSE '11). ACM, New York, NY, USA, 188-192.

31) Simon, B., Bales, E., Griswold, W., and Cooper, S. 2011. Case study: Faculty professional development workshops for innovation diffusion. In *Proceedings of the 42nd ACM technical symposium on Computer science education (SIGCSE '11)*. ACM, New York, NY, USA, 673-678.

32) Heersink, D., Moskal, B., Dann, W., Harriger, A. & Cooper, S. 2010. Investigating high school students' computing beliefs. In *Proceeding of the Annual Meeting of the American Society for Engineering Education*, Louisville, KY.

33) Cooper, S., Nickell, C., Pérez, L., Oldfield, B., Brynielsson, J., Gökce, A., Hawthorne, E., Klee, K., Lawrence, A., and Wetzel, S. 2010. Towards information assurance (IA) curricular guidelines. In *Proceedings of the*

2010 ITiCSE working group reports (ITiCSE-WGR '10), Alison Clear and Lori Russell Dag (Eds.). ACM, New York, NY, USA, 49-64.

34) Cooper, S., Dann, W., and Harrison, J. 2010. A k-12 college partnership. In *Proceedings of the 41st SIGCSE Technical Symposium on Computer Science Education* (Milwaukee, WI, USA, March 10 - 13, 2010). SIGCSE '10. ACM, New York, NY.

35) Rodger, S., Cooper, S., Dann, W., Slater, D., Lopez, M., Hayes, J., Lezin, G., Qin, H., Nelson, D., and Tucker, R. 2009. Engaging middle school teachers and students with alice in a diverse set of subjects. In *Proceedings of the 40th SIGCSE Technical Symposium on Computer Science Education* (Chattanooga, TN, USA, March 4 - 7, 2009). SIGCSE '09. ACM, New York, NY.

36) Hutchinson, A., Moskal, B., Dann, W. and Cooper, S. 2008. The impact of the Alice curriculum on community college students' attitudes and learning with respect to computer science. In *Proceedings of the annual meeting of the American Society for Engineering Education*, (Pittsburgh, PA), 13 pages.

37) Moskal, B., Behrens, N., Guzdial, M., Tew, A., Dann, W. & Cooper, S. 2007. Computer science assessment instrument development: Evaluating attitudes and outcomes. In *Proceedings of the National STEM Assessment Conference*, Washington DC, 194-201.

38) Hutchinson, A., Moskal, B., Dann, W. and Cooper, S. 2006. The alice curriculum: Impact on women in programming courses. In *Proceedings of the annual meeting of the American Society for Engineering Education* (Chicago, Illinois).

39) Smith, C., Tacelosky, D., Cooper, S., Heil, P., and Forman, S. 2005. A computational model of actin-dependent transport in fish retinal pigment epithelial (RPE) cells. In *Proceedings of the 2005 Annual Meeting of the American Society for Cell Biology* (San Francisco, CA).

40) Chen, T., Cooper, S., McCartney, R., and Schwartzman, L. 2005. The (relative) importance of software design criteria. In *Proceedings of the 10th annual SIGCSE conference on Innovation and technology in computer science education* (Lisbon, Portugal). ITiCSE '05. ACM, New York, NY, 34-38.

41) Hutchinson, A., Moskal, B., Dann, W., and Cooper, S. 2005. Formative assessment: An illustrative example using alice. In *Proceeding of the annual meeting of the American Society for Engineering Education,* (Portland, Oregon).

42) Fincher, S., Petre, M., Tenenberg, J., Blaha, K., Bouvier, D., Chen, T., Chinn, D., Cooper, S., Eckerdal, A., Johnson, H., McCartney, R., Monge, A., Mostrom, J., Powers, K., Ratcliffe, M., Robins, A., Sanders, D., Schwartzman, L., Simon, B., Stoker, C., Tew, A., and VanDeGrift, T. 2004. A multi-national, multi-institutional study of student-generated software designs. In *Kolin Kolistelut – Proceedings of the Fourth Finnish/Baltic Sea Conference on Computer Science Education* (Finland), 20-27.

43) Moskal, B., Lurie, D., and Cooper, S. 2004. Evaluating the effectiveness of a new instructional approach. In *Proceedings of the 35th SIGCSE Technical Symposium on Computer Science Education* (Norfolk, Virginia, USA, March 3 - 7, 2004). SIGCSE '04. ACM, New York, NY, 75-79.

44) Hasson, P. and Cooper, S. 2004. A case study involving the use of z to aid requirements specification in the software engineering course. In *Proceedings of the 17th Conference on Software Engineering Education and Training* (Norfolk, VA).

45) Cooper, S., Dann, W., and Zaccone, R. 2003. Using 3d animation programming in a core engineering course seminar. In *Frontiers in Education* (Boulder, CO).

46) Dann, W., Dragon, T., Cooper, S., Dietzler, K., Ryan, K., and Pausch, R. 2003. Objects: Visualization of behavior and state. In *Proceedings of the 8th Annual Conference on innovation and Technology in Computer Science Education* (Thessaloniki, Greece, June 30 - July 02, 2003). D. Finkel, Ed. ITiCSE '03. ACM, New York, NY, 84-88.

47) Cooper, S., Dann, W., and Pausch, R. 2003. Teaching objects-first in introductory computer science. In *Proceedings of the 34th SIGCSE Technical Symposium on Computer Science Education* (Reno, Nevada, USA, February 19 - 23, 2003). SIGCSE '03. ACM, New York, NY, 191-195. Paper chosen as one of the top 10 most significant papers from the first 50 years of SIGCSE.

48) Dann., W. Cooper, S. and Pausch, R. 2002. Using 3D interactive animation to provide program visualization as a gentle introduction to programming in preparing students for cs1. In *Proceedings of the second program visualization workshop, Mordechai Ben-Ari (Editor)*. Available as PB-567, University of Århus, Department of Computer Science, www.daimi.au.dk/PB/567/PB-567.ps.gz

49) Dann, W., Cooper, S., and Pausch, R. 2001. Using visualization to teach novices recursion. In *Proceedings of the 6th Annual Conference on innovation and Technology in Computer Science Education* (Canterbury, United Kingdom). ITiCSE '01. ACM, New York, NY, 109-112.

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51) Cooper, S., Dann, W. and Pausch, R. 2000. Making the connection: Programming with animated small worlds. In *Proceedings of the 5th annual SIGCSE/SIGCUE ITiCSE conference on Innovation and technology in computer science education* (Helsinki, Finland). ITiCSE '00. ACM, New York, NY, 41-44.

52) Cooper, S., Dann, W., and Pausch, R. 2000. Alice: An introductory tool for teaching programming concepts. In *Proceedings of the fifth annual CCSC northeastern conference on the journal of computing in small colleges* (Ramapo, NJ), 107-116.

OTHER REFEREED CONFERENCE ACTIVITY:

1) Barker, L., Cooper, S., McGettrick, A., Thatcher, J. and Topi, H. 2015. Towards grand challenges in computing education across disciplines. In *Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE '15)*. ACM, New York, NY, USA, 438-439.

2) Grover, S., Pea, R., and Cooper, S. 2014. Expansive framing and preparation for future learning in middle-school computer science. *11th International Conference of the Learning Sciences (2014)*, Boulder, CO.

3) Stephenson, C., Cooper, S., Gal-Ezer, J., and Owens, B. 2012. The new csta k–12 computer science standards. In *Proceedings of the 17th Annual Conference on innovation and Technology in Computer Science Education (Haifa, Israel, July 3 - 5, 2012)*.

4) Domik, G., Ebert, D., Kohlhammer, J., Rushmeier, H., Cooper, S., et al. 2012. Visualization curriculum panel or the changes we have made to our visualization courses over the last 10 years. *Eurographics 2012 - Education Papers*, 1-2.

5) Taylor, B., Bishop, M., Burley, D., Cooper, S., Dodge, R., and Seacord, R. 2012. Teaching secure coding: report from summit on education in secure software. In *Proceedings of the 43rd ACM technical symposium on Computer Science Education (SIGCSE '12)*. ACM, New York, NY, USA, 581-582.

6) Boustedt, J., McCartney, R., Tenenberg, J., Cooper, S., Garcia, D., Hutton, M., Parlante, N., and Richards, B. 2011. It seemed like a good idea at the time. In *Proceedings of the 42nd ACM technical symposium on*

Computer science education (SIGCSE '11). ACM, New York, NY, USA, 163-164.

7) Walker, H., Erkan, A., Guzdial, M., and Cooper, S. 2011. Role and value of quantitative instruments in gauging student perspectives in a computing curriculum. In *Proceedings of the 42nd ACM technical symposium on Computer science education* (SIGCSE '11). ACM, New York, NY, USA, 321-322.

8) Fincher, S., Cooper, S., Kölling, M., and Maloney, J. 2010. Comparing alice, greenfoot & scratch. In *Proceedings of the 41st SIGCSE Technical Symposium on Computer Science Education* (Milwaukee, WI, USA, March 10 - 13, 2010). SIGCSE '10. ACM, New York, NY.

9) Goldweber, M., Barr, J., Cooper, S., and Walker, H. 2010. What everyone needs to know about computation. In *Proceedings of the 41st SIGCSE Technical Symposium on Computer Science Education* (Milwaukee, WI, USA, March 10 - 13, 2010). SIGCSE '10. ACM, New York, NY.

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11) Cooper, S., Peckham, J., and Taylor, H. 2009. Exploring nsf funding opportunities in ehr and cise. In *Proceedings of the 40th SIGCSE Technical Symposium on Computer Science Education* (Chattanooga, TN, USA, 2009). SIGCSE '09. ACM, New York, NY.

12) Russell, I., Bailey, D., Cooper, S., and Moskal, B. 2008. Panel Session – NSF panels: A reviewer's perspective. In *Proceedings of the 38th Frontiers in Education Conference* (Saratoga Springs, NY, USA, 2008). F1G.

13) Cooper, S., Fossum, T., and Taylor, H. 2008. Exploring nsf funding opportunities. In *Proceedings of the 39th SIGCSE Technical Symposium on Computer Science Education* (Portland, OR, USA, 2008). SIGCSE '08. ACM, New York, NY.

14) Caristi, J., Cooper, S., and Mullins, J. 2007. Alice frenzy: An interactive group activity. In *Proceedings of the 38th SIGCSE Technical Symposium on Computer Science Education* (Covington, KY, USA, 2007). SIGCSE '07. ACM, New York, NY, 394.

15) Verno, A., Cooper, S., Cortina, T. J., Ericson, B., and Madden, B. 2007. Developing resources to support a national computer science curriculum for k-12. In *Proceedings of the 38th SIGCSE Technical Symposium on Computer Science Education* (Covington, Kentucky, USA, March 07 - 11, 2007). SIGCSE '07. ACM, New York, NY, 377-378.

16) Powers, K., Gross, P., Cooper, S., McNally, M., Goldman, K. J., Proulx, V., and Carlisle, M. 2006. Tools for teaching introductory programming: What works? In *Proceedings of the 37th SIGCSE Technical Symposium on Computer Science Education* (Houston, Texas, USA, March 03 - 05, 2006). SIGCSE '06. ACM, New York, NY, 560-561.

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TECHNICAL REPORTS:

1) Cooper, S. 2014. Future directions in computing education summit part two: Institutional challenges to supporting and growing computing education research. Stanford University, March 24-25, 2014. Technical Report CS-TR-14-0324-SC, Stanford University, 2014.

2) Cooper, S., Bookey, L., and Gruenbaum, P. 2014. Future directions in computing education summit part one: Important computing education research questions. Orlando, FL, January 8-9, 2014. Technical Report CS-TR-14-0108-SC, Stanford University, 2014.

3) Cooper, S., Grover, S., Pea, R., and Bookey, L. 2013. Building a virtual community of practice: A report from a working meeting in support of the cs10k community. Stanford University, November 7-8, 2013. Technical Report: CS-TR-13-1107-SC, Stanford University, 2013.

4) Fincher, S., Petre, M., Tenenberg, J., Blaha, K., Bouvier, D., Chen, T., Chinn, D., Cooper, S., Eckerdal, A., Johnson, H., McCartney, R., Monge, A., Mostrom, J., Powers, K., Ratcliffe, M., Robins, A., Sanders, D., Schwartzman, L., Simon, B., Stoker, C., Tew, A., and VanDeGrift, T. (2004). Cause for alarm? A multi-national, multi-institutional study of student-generated software designs. Technical Report No. 16-04, University of Kent, Canterbury: Computing Laboratory.

OTHER PAPERS/ REPORTS:

1) Cooper, S., Forbes, J., Fox, A., Hambrusch, S., Ko, A., and Simon, B. 2016. The importance of computing education research. White paper prepared for the Computing Community Consortium of the Computing Research Association. Available from: http://cra.org/ccc/wp-content/uploads/sites/2/2015/01/CSEdResearchWhitePaper2016.pdf

2) Cooper, S. 2012. Planning CS workshops. *CSTA Voice*, 8(2), 3-4.

3) Cooper, S. 2010. National Science Foundation Grants: Power in Partnering. *CSTA Voice*, 5(6), 4-5.

4) Madden, B., Verno, A., Carter, D., Cooper, S., Cortina, T., Cudworth, R., Ericson, B., and Parys, E. 2007. A Model Curriculum for K-12 Computer Science Level III Objectives and Outlines.

5) Adrion, R., Aiken, B., Bernat, A., Brown, J., Cooper, S., Dunn, M., Finlay, M., Giles, R., Gries, D., Keleman, C., Krishnamurthi, S., Kumar, D., Kurose, J., Lawrence, A., Masi, L., McCracken, D., Merritt, S., Murtagh, T., Plotkin, J., Prey, J., Ryder, B., Siraj, R., Stein, L., Tao, L., Teller, V., Thomas, J., Topi, H., Sutner, K., Shaw, M., and Wolz, U. 2005. Report of the NSF Workshop on Integrative Computing Education and Research - Northeast Workshop. Available from: http://www-net.cs.umass.edu/nsf_icer_ne/

BOOKS/ CHAPTERS:

1) Ericson, B, Cooper, S., and Dann, W. 2009. Exploring Wonderland: Java Programming Using Alice and Media Computation. Prentice Hall. ISBN: 0136001599.

2) Hutchinson, A., Moskal, B., Dann, W., Cooper, S., & Navidi, W. 2008. The Alice curricular approach: A community college intervention in introductory programming courses. Innovations 2008: World Innovations in Engineering Education and Research. International Network for Engineering Education & Research. Begell House Publishing, Chapter 15, ISBN: 978-0-9741252-8-2 (p. 157-176).

3) Dann, W., Cooper, S., and Pausch, R. 2006. Learning to Program with Alice Brief edition. Prentice Hall. ISBN: 0-13-239775-7

4) Dann, W., Cooper, S., and Pausch, R. (2005, 2008, 2009, 2011) Learning to Program with Alice. Prentice-Hall. ISBN: 0-13-142420-3 (beta ed), 0-13-187289-3 (1st ed), 0-13-208516-X (2nd ed), 978-7-111-27462-9 (Chinese ed), 0-13-212247-2 (3rd ed).

KEYNOTE ADDRESSES:

1) "*Spatial skills and performance in introductory computing courses*". International Workshop on Computer Science Education (IWCSE 2019), Changsha, Hunan, China.
2) *"It's a feature, not a bug: Some thoughts on teaching*". New faculty teaching workshop, San Diego, Ca., August 2018.
3) *"Alice"*. Presented at the Consortium for Computing Sciences in Colleges – Northwest (CCSC-NW) 10th Annual Conference, Ashland, OR, October 2008.

4) *"Introduction to Alice"*. Presented at the Consortium for Computing Sciences in Colleges – East (CCSC-E) 23rd Annual Conference, Pachogue, NY, October 2007.
5) *"Seeing Computing Through our Students' Eyes"*. Presented at the Consortium for Computing Sciences in Colleges Midwest (CCSC-MW) 14th Annual Conference, Cincinnati, OH, September 2007.
6) *"Learning to Program with Alice"*. Presented at the Consortium for Computing Sciences in Colleges Southeast (CCSC-SE) 19th Annual Conference, Hickory, NC, November 2005.

TALKS:

1) Lu, J., Chen, J., Prey, J., Cooper, S., Luxton-Reilly, A., & Becker, B. 2019. "*Panel: Computer education research.*" SIGCSE-CHINA @ TURC 2019, May 2019, Chengdu, Sichuan, China.
2) Garcia, D., Becker, B., Luxton-Reilly, A., Cooper, S., Zhang, M., Chen, J., and Xiao, S. 2019. *"Panel: Combination of academic research and computer science education."* International Workshop on Computer Science Education (IWCSE 2019), May 2019, Changsha, Hunan, China.
3) Song, T., Zhang, M., Xiao, X., and Cooper, S. *"Panel: MOOC and big data education."* International Workshop on Computer Science Education (IWCSE 2019), May 2019, Changsha, Hunan, China.
4) Cooper, S. 2019. *"Machine learning"*. Power lunch series at UNL's College of Business, May 2019, Lincoln, NE.
5) Cooper, S. 2017. *"Alice: Work with students and teachers (1998-2017)"*. Berea College, October 2017, Berea, KY.
6) Cooper, S. 2017. *"Spatial skills and introductory computing"*. Berea College, October 2017, Berea, KY.
7) Cooper, S. and Pressler, A. 2017. *"Preparing students for elite college admission"*. Annual CAPS meeting, June 2017, Kansas City, KS.
8) Cooper, S. 2017. *"Teaching with Alice in K-12: Reflections from an 11-year NSF project"*. Duke Alice Symposium, June 2017, Durham, NC.
9) Cooper, S. 2017. *"Creative coding and campus collaboration"*. Inaugural Carson Conversation, May 2017, Lincoln, NE.
10) Cooper, S. 2016. *"Undergraduate computer science in 2016: Increasing enrollments and decreasing faculty"*. Montana State University, Bozeman, MT, April 2016.
11) Grover, S., Pea, R., and Cooper, S. 2015. *"'System of assessments' for deeper learning of computational thinking in K-12"*. Annual meeting of the American Educational Research Association, Chicago, IL.
12) *"Incorporating Cybersecurity Education into the CS curriculum"*, TRUST Center Conference, November 2011, Washington, D.C.
13) *"Programming is Easy with Alice"*. Grace Hopper Celebration of Women in Computing, Atlanta, GA, October 2010.
14) "*Translating National Security Priorities into Academic Pursuits – Information Assurance Training Standards*". CNSS 2010 Annual Conference, March 2010. Co-presenters: A. Richmond, A. Caufield, and R. Caslow.

15) *"Alice: Past, Present and Future"*. Duke University, October 2009, Durham, NC.
16) *"Computational Thinking: On weaving IT into the K-12 classroom"*. NECC 2009, Washington, DC. Co-presenters: J. Peckham and H. Taylor.
17) *"Partnering with local colleges to get grants"*. Computer Science and Information Technology Symposium, June 2009, Washington, DC.
18) *"Transitioning from Alice to Java"*. Computer Science and Information Technology Symposium, June 2009, Washington, DC.
19) "*Problem solving with Alice: Past, present and a peek into the future*". University of California – San Diego Distinguished Lecture Series, November 2008, La Jolla, CA.
20) *"Writing effective proposals for DUE in NSF"*. Conference for Information Technology, October 2008, Salt Lake City, UT. Co-presenter: E. Chang.
21) *"NSF's DUE: Funding opportunities for community colleges and partnerships"*. Conference for Information Technology, October 2008, Salt Lake City, UT. Co-presenter: E. Chang.
22) *"3D animation with Alice"*. Computer Science and Information Technology Symposium, June 2008, San Antonio, TX.
23) *"Alice: Using 3D animation to teach introductory programming"*. Computer Science and Information Technology Symposium, June 2007, Atlanta, GA.
24) *"Learning computing with Alice"*. Haverford College Computer Science Education Summer Institute (for K-12 teachers), June 2007, Haverford, PA.
25) *"Alice: Innovation in programming and problem solving"*. Drexel University College of Information Science and Technology, May 2007, Philadelphia, PA.
26) *"Tackling the next problem: Using design to problem-solve"*. Presented at the Community College Computer Consortium of New Jersey Spring Meeting. April 2007.
27) *"Teaching programming and problem solving with Alice"*. Duke computer science lecture series, March 2007, Durham, NC.
28) *"Using program visualization to teach object-oriented programming concepts"*. Widener University Science Seminar, February 2007, Chester, PA.
29) *"Innovative approach to computer science: Using 3D animation"*. Co-presenters: W. Dann and R. Pausch. AP Annual Conference, July 2006, Orlando, FL.
30) *"3D Animation – An innovative approach to introductory programming"*. Co-presenter: W. Dann. Computer Science and Information Technology Symposium, July 2006, San Diego, CA.
31) *"Using Alice software in middle schools"*. (Part of the Mathematics and Popular Culture Session). Joint AMS-MAA mathematics meetings. San Antonio, TX. January 2006. Co-presenters: A. Dean, B. Moskal, and W. Dann.
32) *"Alice"*. Presented at the Philadelphia Area Computer Science Educators Fall Meeting, October 2005.

33) *"Learning to program with Alice".* Co-presenter: C. Herbert. Presented at the Conference for Information Technology, Dallas, TX, October 2005.
34) *"Teaching fundamental programming concepts using Alice."* Co-presenters: W. Taylor and A. Wright. Presented at the 11th Annual Technology and Learning Conference, Montgomery County Community College, October 2005.
35) *"Using Alice to teach introductory (object-oriented) programming concepts".* Presented to the computer science faculty at Purdue University, West Lafayette, IN, October 2005. Talk was repeated the next day to the computer science faculty at Indiana University, Bloomington, IN.
36) *"Teaching with Alice.*" Presented at the Alice Boot Camp, Camden County College, Camden, NJ, July 2005.
37) *"Using Alice to teach fundamental programming concepts"*. Co-presenters: W. Taylor and R. Boiano. Presented at the New Jersey County of Community Colleges Best Practices Conference, April 2005.
38) *"A hands-on introduction to programming with Alice"*. Presented at the Prentice Hall Information Technology conference, PA, April 2005.
39) *"Computational model of actin-dependent transport in fish retinal pigment epithelial (RPE) cells (Poster)"*. Co presenters: D. Tacelosky, P. Heil, S. Forman, and C. King Smith. Presented at the 16th Annual Saint Joseph's University Sigma Xi Student Research Symposium, April 2005.
40) *"Programming with Alice"*. Co-presenter: R. Zaccone. Presented at OOPSLA, Educator's forum, Vancouver, BC, October 2004.
41) *"An introduction to Alice: Teaching introductory programming with virtual reality"*. Presented at the Conference for Information Technology, Tampa, FL, November 2004.
42) *"Teaching programming concepts with Alice"*. Presented to engineering education faculty, Virginia Polytechnic Institute, July 2004.
43) *"Introduction to programming in Alice"*. Presented at the Community College Computer Consortium of New Jersey Spring Meeting. Co-presenter: W. Taylor. May 2004.
44) *"Learning to program with Alice"*. Presented at the Prentice Hall Information Technology conference, Philadelphia, PA, April 2004.
45) "*Teaching 3-dimensional high school geometry with animation*". Joint AMS-MAA mathematics meetings. Phoenix, AZ. January 2004. Co-author: K. Dietzler.
46) *"Introduction to programming: Using Alice"*. Presented to computer science faculty at the Colorado School of Mines. April 2003.
47) "*Pathways to Careers in Mathematics and Computer Science (PACMACS)"*. Presented at Project Kaleidoscope regional meeting. Bryn Mawr College, Bryn Mawr, PA, April 2002.
48) "*Pathways to Careers in Mathematics and Computer Science (PACMACS) for urban minority students. Preliminary report*". Joint AMS-MAA mathematics meetings. San Diego, CA. January 2002. Co-authors: D. Lurie and E. Terry.
49) *"Preparing to program: An animated approach using Alice*". Colloquium speaker, Villanova University, Villanova, PA. September 2001.

50) *"Using Alice as a tool for teaching fundamental programming concepts"*. ESCCC 2000 tutorial. Scranton, PA, 2000.
51) *"Programming with Alice"*. Sigma Xi speaker, Saint Joseph's University. March 2000.
52) *"Introducing Alice"*. A presentation given to Philadelphia Fels cluster group leaders. Philadelphia, PA. March 2000.
53) *"Y2K and U: What can U do?"* Guest speaker at the Peterborough, NH Chamber of Commerce Breakfast Series, January 1999.
54) *"Looking forward, looking back: Implications of the Y2K problem"*. Guest speaker at the Nashua, NH Chamber of Commerce Breakfast Series, November 1998.
55) *"Doing destructive update in a purely functional language using a multiplicative fragment of linear logic"*. Presented to faculty and graduate students at Queen Mary and Westfield College of the University of London, London, England, March 1996.
56) *"Towards a steadfast system of types"*. Presented to faculty and graduate students at Queens University, Kingston, Ontario, February 1996.
57) *"An automated testing strategy"*. Co-authors: S. Polgrean and L. Horner. Presented at 1990 IBM Test Interdivisional Liaison Conference, Santa Clara, CA, August 1990.

WORKSHOPS:

1) "Machine Learning". One-day workshop given to Kiewit corporate leaders, San Francisco, CA, March 2019. Co-presenter: C. Lee.
2) Annual summer outreach workshop run to teach programming to rising high school seniors. Two-week, residential. July 2017 - present.
3) "Future Directions for Computer Science Education Research – part 3" 25-person summit run at Stanford, January 2015.
4) "Future Directions for Computer Science Education Research – part 2" 35-person summit run at Stanford, March 2014.
5) "Future Directions for Computer Science Education Research – part 1" 50-person summit run in Orlando, FL, January 2014.
6) "Building a virtual community of practice to support NSF's 10K teacher project." 60-person workshop run at Stanford, November 2013.
7) "Experimenting with and integrating Alice 2.3 into many disciplines". SIGCSE 2013, Denver, CO., March 2013. Co-presenters: S. Rodger and W. Dann.
8) "CE21 Repository Workshop", CS21 Annual Meeting, Washington, DC, February 2012. Co-presenters: M. Bienkowski, L. Cassel, & N. Brown.
9) "Teaching secure programming in introductory computing courses", Red Rocks Community College, February 2012. Co-presenter: J-A. Ashton.
10) "Alice 3", Omar Dengo Foundation of the Ministry of Education, San Jose, Costa Rica, November 2011. Co-presenters, W. Dann and D. Slater.
11) *"Exploring Wonderland: Teaching with Alice and Media Computation"*. SIGCSE 2010, Milwaukee, WI, March 2010. Co-presenters: B. Ericson and W. Dann.

12) *"Alice 3 and Java for CS1 & AP CS"*. SIGCSE 2010, Milwaukee, WI, March 2010. Co-presenters: W. Dann and D. Slater.
13) Five-day NSF-supported Alice Symposium presented at Duke University. June 2009. (Two 2-day workshops: Alice and Alice & Media Computation. See: http://www.cs.duke.edu/csed/aliceSymposium2009/ for details.
14) *"Writing more effective NSF proposals"*. SIGCSE 2009, Chattanooga, TN, March 2009. Co-presenters: T. Fossum and V. Piotrowski.
15) *"Exploring wonderland: Teaching with Alice and Media Computation"*. SIGCSE 2009, Chattanooga, TN, March 2009. Co-presenters: B. Ericson and W. Dann.
16) *"Alice 3 and Java for CS 1 & AP CS"*. SIGCSE 2009, Chattanooga, TN, March 2009. Co-presenters: W. Dann and D. Slater.
17) Alice: tutorial presentation. *J. Comput. Small Coll.* 24, 2 (December 2008), 74-74.
18) *"Alice and Media Computation"*. Four-day workshop presented in Las Vegas, NV (July 2008) and Orlando, FL (August 2008). Co-presenter: B. Ericson.
19) *"Alice"*. Two-week ITEST-supported workshops presented in Oxford, MS (May 2008), Durham, NC (June 2008), Charleston, SC (June 2008), San Jose, CA (July 2008), and Denver, CO (July 2008). Co-presenters: W. Dann, D. Slater, P. Lawhead, S. Rodger, R. Stalvey, M. Schep, C. Skokan, and D. Lewis.
20) *"Learning to Program with Alice"*. SIGCSE 2008, Portland, OR, March 2008. Co-presenter: W. Dann.
21) *"Writing more effective NSF proposals"*. SIGCSE 2008, Portland, OR, March 2008. Co-presenter: T. Fossum.
22) *"Alice".* Presented at the Girl Scouts Science and Technology Expo, Saint Joseph's University, PA, November 2007. Workshop given to middle school girls.
23) *"Alice and Media Computation"*. Three-day workshop presented at Georgia Institute of Technology, Atlanta, GA, August 2007. Co-presenters: B. Ericson and W. Dann.
24) *"Alice"*. Three-day workshop presented at California State University – Dominguez Hills, CA, August 2007. Co-presenters: W. Dann and D. Slater.
25) "*Learning to program with Alice*". Five-day workshop presented at the CMU 2007 Summer Institute, Pittsburgh, PA, July 2007. Co-presenters: W. Dann and D. Slater.
26) *"Alice and Media Computation"*. Three-day workshop presented at Roger Williams University, Bristol, RI, July 2007. Co-presenters: W. Dann and B. Ericson.
27) *"Alice and animation"*. Science & Theatre Magic Program, Villanova University, Villanova, PA, July 2007.
28) *"Alice and Scratch: Using animation to teach computing concepts"*. NECC 2007, Atlanta, GA, June 2007. Co-presenter: B. Ericson.
29) *"Teaching Alice"*. Two-day workshop presented at Nassau County College, May 2007.

30) *"Alice"*. Presented to the Presidential Awardees for Excellence in Math and Science Teaching (PAEMST), Washington, DC, May 2007.
31) *"Teaching with Alice"*. Montclair State University, May 2007.
32) "*Learning to program with Alice"*. SIGCSE 2007, Covington, KY, March 2007. Co-presenter: W. Dann.
33) *"Teaching with Alice and Media Computation"*. Presented at SIGCSE 2007, Covington, KY, March 2007. Co-presenter: B. Ericson.
34) *"Programming with Alice".* Presented at the Girls Go Tech IBM sponsored Girl Scouts Science and Technology Expo, Villanova University, PA, March 2007. Workshop given to middle school girls.
35) "*Learning to program with Alice*". Five-day workshop presented at the CMU 2006 Summer Institute, Pittsburgh, PA, July 2006. Co-presenters: D. Slater and W. Dann.
36) *"Alice".* Presented as part of the CISE Workshop for Young Women, Gainesville, FL, July 2006. Workshop given to high school girls.
37) *"Learning to program with Alice"*. Five-day workshop presented to the Virginia Beach School District, Virginia Beach, Va., June, 2006. A follow-on workshop on preparing curricular materials for teaching with Alice was presented in August 2006.
38) Three-day NSF-supported Alice Symposium presented at Duke University. June 2006. See: http://www.cs.duke.edu/csed/aliceworkshop/ for details.
39) *"Alice"*. Presented to the Presidential Awardees for Excellence in Math and Science Teaching (PAEMST), Washington, DC, May 2006.
40) *"Programming with Alice".* Presented at the Girls Go Tech IBM sponsored Girl Scouts Science and Technology Expo, Bluebell, PA, April 2006. Workshop given to middle school girls.
41) *"Learning to program with Alice"*. Presented at SIGCSE 2006, Houston, TX, March 2006. Co-presenter: W. Dann.
42) *"Techniques and strategies for teaching with Alice"*. Presented at SIGCSE 2006, Houston, TX, March 2006. Co-presenter: W. Dann.
43) *"Alice"*. Presented at the Borough of Manhattan Community College, January 2006.
44) *"Learning to program with Alice"*. Presented at the 11th Annual Technology and Learning Conference, Montgomery County Community College, October 2005.
45) Two-day NSF supported workshops on Alice: Presented at The University of Mississippi (May 2005), Duke University (June 2005), and Haverford College (June 2005).
46) *"Learning to program with Alice"*. Presented at New Jersey City University, March 2005.
47) *"Programming with Alice"*. Presented at SIGCSE 2005, St. Louis, MO.
48) *"Using Alice for engineers"*. Presented at Virginia Polytechnic Institute, July 2004. Co-presenter: W. Dann.

POSTERS:

1) Falkner, N., Clear, T., Malmi, L., Cooper, S., and Duran, R. 2025. The role of Doctoral Consortia in the post-2025 Computer Science Education Landscape. ACM CompEd 2025, Gabarone, Zimbabwe.

2) Cooper, S., Rodger, S.H., Isbister, K., Schep, M., Stalvey, R., and Perez, L. 2017. K-12 Teachers Experiences with Computing: A Case Study. In *Proceedings of the 2017 ACM Conference on Innovation and Technology in Computer Science Education* (ITiCSE '17). ACM, New York, NY, USA, 360-360.

3) Grover, S., Pea, R. and Cooper, S. 2014. Promoting Active Learning & Leveraging Dashboards for Curriculum Assessment in an OpenEdX Introductory CS Course for Middle School. Learning@Scale, Atlanta, GA.

4) Cooper, S. 2006. Alice. ATE Principal Investigator's Conference. Washington, DC.

5) Tew, A., and Cooper, S. 2006. Collaborative Research: Assessing Concept Knowledge and Attitudes in Introductory Computer Science Courses. ASA Principal Investigator's Conference. Washington, DC.

6) Craig, J.P., and Cooper, S. 2005. Alice's Footsteps. Consortium for Computing Sciences in Colleges (CCSC) 19th Annual Southeastern Conference, Hickory, NC.

7) Fasy, B., and Cooper, S. 2005. Expanding Alice. Consortium for Computing Sciences in Colleges (CCSC) 19th Annual Southeastern Conference, Hickory, NC.

8) Tacelosky, D., King Smith, C., Forman, S., and Cooper, S. 2005. Computational Model of Actin-Dependent Organelle Transport in Fish Retinal Pigment Epithelial Cells. Gordon Conference: Motile and Contractile Systems, Colby-Sawyer College.

9) Tacelosky, D., King Smith, C., Forman, S., and Cooper, S. 2005. Computational model of actin-dependent transport in fish retinal pigment epithelial (RPE) cells. 16th Annual Saint Joseph's University Sigma Xi Student Research Symposium, Philadelphia, PA.

10) Cooper, S. 2005. Alice. CCLI Principal Investigator's Conference. Washington, DC.

11) Cooper, S. 2004. Alice. ATE Principal Investigator's Conference. Washington, DC.

12) Cooper, S. 2003. Alice. ATE Principal Investigator's Conference. Washington, DC.

GRANTS:

1) Department of Agriculture-NRCS/Colorado State University. Co-investigator. G-40773-03. Climate-Smart Advances in Ag Performance. $539,202. 9/23 – 9/26.

2) Nebraska Department of Environment and Energy. Co-Principal Investigator. With C. Burr (PI) and M. Stockton. University of Nebraska-Lincoln Virtual Testing Ag Performance Solutions (VTAPS) & Curriculum Development. $300,000. 8/1/23 – 7/31/26.

3) NSF-EHR-DUE. Principal Investigator. With J. Zhang and M. Dorodchi. 1711830. Collaborative Research: Spatial skills and success in introductory computing. $200,000. 8/15/2017 – 7/31/2020.

4) NSF-EHR-DUE. Principal Investigator. With B. Simon (lead PI), M. Guzdial, L. Porter, and C. Lee. 1432815 Collaborative Research: A new computer science faculty teaching workshop. $87,555. 1/1/2015 – 6/30/2018.

5) Anonymous. Principal Investigator. Democratizing CS Education. Project to offer professional development to teachers, and study various interventions with under-represented students from varied backgrounds. $519,000. 11/2013.

6) NSF-CISE-CNS. Principal Investigator. With M. Guzdial and B. Simon. 1332686 Future Directions for Computer Science Education: A Workshop Proposal. $172,855. 9/15/2013 - 9/14/2015.

7) NSF-CISE-CNS. Co-Principal Investigator. With R. Pea (PI). 1343227 EAGER: Foundations for Advancing Computational Thinking (FACT): Learning and Assessment through an Online Middle School Curriculum. $252,656. 10/1/2013 - 9/30/2015.

8) NSF-EHR-DUE. Principal Investigator. With L. Perez (lead PI) and S. Sorby. 1323146/1640604 Collaborative Research: A Chautauqua Program for the 21st Century. $145,285. 10/1/2013 - 9/30/2018.

9) Google. Principal Investigator. CS4HS: Two-day professional development workshop for teachers. $13,000. 5/2013 – 8/2013.

10) Anonymous. Principal Investigator. Geek Girls. A summer introductory programming workshop for women and under-represented minorities who are rising 12th graders with strong math and science skills but with no previous programming experience. $80,000. 5/2013.

11) NSF-EHR-DRL-ITEST. Principal Investigator. With S. Rodger (lead PI) and W. Dann. 1031351 Collaborative Research: Scaling up an Innovative Approach for Attracting Students to Computing. $2,005,339. 6/1/2011 – 5/31/2018.

12) NSF-EHR-DUE-TUES2. Principal Investigator. With N. Adamo-Villani. 1022557 Building a serious game to teach secure coding in introductory programming. $493, 712. 10/1/2010 – 9/30/2014.

13) NSF-EHR-DUE-TUES2. Principal Investigator. With L. Si. 1021975 Adding an Intelligent Tutoring System to Alice. $348,089. 9/1/2010 – 8/31/2014.

14) NSF-CISE-CNS-CPATH. Principal Investigator. With M. Sahami and P. Blikstein. 1057270 Addressing the Shortcomings of Digital Libraries of Educational Materials. $100,000. 9/1/2010 – 8/31/2013.

15) NSF-EHR-DUE-SFS. Principal Investigator. With M. Dark. 1023963 ITiCSE 2010 Information Assurance Working Group. $32,200. 7/1/2010 – 6/30/2011.

16) NSF-EHR-DRL-DRK-12. Co-principal Investigator. With C. Stephenson (PI). 0733379 Capacity Building in Computer Science. Grant to run workshops to create local leaders for CSTA chapters. $199,800. 1/1/2008 – 12/31/2009.

17) NSF-EHR-DUE-CCLI Principal Investigator. With W. Dann and D. Slater. 0736697 Alice += Java. Integrating Alice 3.0 into a CS1 course using Java. $50,636. 2/1/2008 – 8/31/2009.

18) NSF-CISE-CNS. Principal Investigator. With W. Dann. 0724890 Alice Workshop 2007, Southwestern US. $24,000. 7/1/2007 – 6/30/2008.

19) NSF-EHR-S-STEM. Principal Investigator. With D. Lurie and E. Terry. 0630842 PACMACS Bridge Program. $460,000. 8/1/2007 – 7/31/2011.

20) NSF-EHR-DUE-CCLI. Principal Investigator. With M. Guzdial, W. Dann, and B. Moskal. 0618461 Collaborative Research: Alice and Media Computation. $224,397. 1/1/2007- 8/31/2008.

21) NSF-EHR-ESIE-ITEST. Principal Investigator. With W. Dann, B. Moskal, C. Skokan, D. Lewis, F. Triefenbach, P. Lawhead, and S. Rodger. 0624654 An innovative approach for attracting students to computing: A comprehensive proposal. Collaborative grant to run professional development workshops for, and to partner with six school districts from around the country in introducing Alice in high school and middle school. $622,902. 2/1/2007-12/31/2009.

22) NSF-EHR-DUE-CCLI-ASA. Principal Investigator. With B. Moskal (lead PI), M. Guzdial, and W. Dann. 0511940 Collaborative Research: Assessing Concept Knowledge and Attitudes in Introductory Computer Science Courses. Grant to develop and validate a set of assessment instruments for measuring outcomes in introductory computing courses. $27,028. 8/1/2005-7/31/2008.

23) NSF-EHR-DUE-CCLI. Principal Investigator. With W. Dann, B. Moskal, R. Pausch. 0339734 Program Visualization Using Virtual Worlds. Project grant to expand Alice use to many four-year schools using different curricular models. $454,977. 6/1/04-8/31/07. (0532711 $7,050 supplement awarded, 6/2005)

24) NSF-DUE-ATE. Principal Investigator. With W. Dann, B. Moskal, W. Taylor, & E. Howd. 0302542 JABRWOC -- Java-based Animation: Building viRtual Worlds for Object-oriented programming in Community colleges. Grant to modify and develop materials for the use of Alice in different courses at the community college level. $1,056,855. 8/1/2003-6/30/2007.

25) NSF-DUE-CSEMS. Co-Principal investigator. With E. Terry (PI), D. Lurie, A. Rash, and B. Forouraghi. 0220499 PAthways to Careers in MAthematics and Computer Science (PACMACS) Bridge Program. $288,500. 9/1/2002-6/30/2006.

26) NSF EHR-DUE-CCLI. Principal Investigator. With W. Dann. 0126833 Decreasing Attrition Using Animated Virtual Worlds. Grant to develop curricular materials for a pre-CS1 class using the Alice programming environment. $75,000. 1/1/2002-8/31/2003.

27) Saint Joseph's University. Summer grant to work on Alice textbook. $4,000. 6/1/2002-8/15/2002.

28) Davenport Foundation. Principal Investigator. With D. Lurie and E. Terry. Grant to cover tuition, supplies, and transportation for 10 minority Philadelphia public high school students to take 4 mathematics and computer science classes at Saint Joseph's University as part of PACMACS. $57,800. 8/1/2001-8/15/2003. (A Saint Joseph's University match enabled the program to run through 8/15/2007.)

CONFERENCE REVIEWER:

ITiCSE: 2001 - present.
SIGCSE: 2002 - present.
CCSCNE: 2003.
ICER: 2013 – 2017, 2022 – present.
ACE: 2010.

OTHER CONFERENCE ACTIVITY:

ITiCSE program chair: 2026-2027
SIGCSE Doctoral Consortium steering committee: 2025 – present
ICER Senior Program Committee: 2025
SIGCSE Virtual program chair: 2024
CompEd Doctoral Consortium chair: 2023
ITiCSE Doctoral Consortium chair: 2022, 2023, 2024, 2025
CompEd program chair: 2019
SIGCSE session chair on visualization: 2002
Visualization workshop session chair: 2002
SIGCSE Birds of a Feather coordinator: 2003
SIGCSE judge for undergraduate research competition: 2003

SIGCSE doctoral discussant: 2005, 2015, 2016.
SIGCSE NSF CCLI Project showcase presenter: 2003, 2005, 2006.
SIGCSE Birds of a Feather co-facilitator: Teaching with Alice: 2007, 2008, 2009, 2010, 2011, 2012, 2013.
SIGCSE Birds of a Feather co-facilitator: The Changing Face of Computing: Bringing Security into Traditional Computer Science Courses: Challenges and Support: 2013.
SIGCSE Birds of a Feather co-facilitator: Building partnerships across the CS education spectrum: 2012.
SIGCSE TS Associate program chair: 2013, 2016-present.
SIGCSE Panels and Special Sessions coordinator: 2014.
SIGCSE Evaluations coordinator: 2015.
ITiCSE Working Group leader: Addressing Information Assurance Education Standards: 2009.
ITiCSE Working Group leader: Towards information assurance (IA) curricular guidelines, 2010.
ITiCSE Working Group co-leader: Information assurance education in two- and four-year institutions, 2011.
Alice Symposium at Duke Chair: 2006, 2009, 2013, 2017 (co-chair).
Future Directions in Computer Science Education Research Summit: Chair: 2014.

BOOK REVIEWS:

Fortran, 6th ed. by E. Koffman.
(4/2002) Computer Ethics by H. Tavani.
(9/2002) Program Live by Gries and Gries.
(10/2002) Operating Systems by Nutt.
(1/2005) An Introduction to Programming using Alice by Herbert.
(4/2006) Object-Oriented Programming in Python by Goldwasser and Letscher.
(11/2011) Java Programming, 1st edition, by Schildt.

WEBSITE: http://cse.unl.edu/~scooper

PROFESSIONAL MEMBERSHIPS: ACM (including SIGCSE)

OTHER PROFESSIONAL ACTIVITIES:

Co-editor, Special issue on computing in education, IEEE Transactions on Education (with L.-K. Soh), 61(3), August 2018.
Chair, search committee to identify the editor(s) for ACM Transactions on Computing Education journal, 2015.
Chair, CRA Computing Community Consortium committee to write a white paper framing the challenges and opportunities for CS education research, 2015.

Program review for computer science and entrepreneurship BS degree program, UNH – Manchester, November 2013.
Invited participant for the Interdisciplinary Computing Workshop, Washington, DC, November 2011.
National Visiting Committee Chair, ATE Cyber Security Education Center, 2010-2011.
Associate editorial board, ACM Inroads: 2010 – 2015.
Invited participant for the AP Computer Science Colloquium, Chicago, IL, October 2008.
Invited participant for the AP Computer Science Advisory meeting, Atlanta, GA, September 2008.
AP CS Reader, NJ, June 2007.
Invited participant for the NSF Northeast Workshop on Integrative Computer Education & Research, Boston, MA, November 2005. C. Keleman organizer.
Participant in NSF funded CS Educator's Scaffolding Workshop, Seattle, WA, June 2003, and June 2004.
National Science Foundation proposal reviewer for: ATE, CCLI/TUES, CE21, CSEMS/S-STEM, DR K-12, GRK-12, GRFP, ITWF, IUSE:CUE, SaTC, SFS, STEM-C, STEP
Department of Education proposal reviewer for: FIPSE
Computer Science Teachers Association (CSTA): Board of Directors
University Faculty Representative, 2006 – 2008
Vice President, 2008 – 2011
Chair, 2011 – 2013
Past-chair: 2013 - 2014
The Alice e-Newsletter: Editor, 2005-2011. Copies of this bi-monthly newsletter sent to our 2500+ member Alice educator community
Journal reviewer:
ACM Transactions on Computing Education
Canadian Journal of Administrative Sciences
Computer Science Education
IEEE Transactions on Emerging Topics in Computing
IEEE Transactions on Education
IEEE Transactions on Visualization and Computer Graphics
Inroads
JERIC
Journal for Research in Mathematics Education

HONORS:

ITiCSE Outstanding Senior Program Committee member: 2025.
SIGCSE Outstanding Associate Program Chair: 2025.
UNL Parent's Recognition Award: 2020.
ACM Distinguished Educator: 2012.

PHD STUDENTS:

Current:
1) Rachel Michaela Mettenbrink (advisor), CS, University of Nebraska-Lincoln, 2024-present.

2) Alex Enersen (co-advisor), CS, University of Nebraska-Lincoln, 2024-present.
3) Mohammad Fahim Shahriar (advisor), CS, University of Nebraska-Lincoln, 2025-present.
4) Azin Sabzian (advisor), CS, University of Nebraska-Lincoln, starting in 2026.

Graduated:
5) Colton Harper (advisor), CS, University of Nebraska-Lincoln, 2021-2025. Currently: postdoc at the University of Maryland.
6) Bhuvana Gopal (advisor), CS, University of Nebraska-Lincoln, 2018-2022. Currently: assistant professor of practice, University of Nebraska-Lincoln (https://cse-apps.unl.edu/facdb/users/94/details).
7) Ryan Bockmon (advisor), CS, University of Nebraska-Lincoln, 2017 – 2022. Currently: assistant teaching professor, Roux Institute, Northeastern University (https://roux.northeastern.edu/people/ryan-bockmon/).
8) Shuchi Grover (co-advisor), Education, Stanford University, 2011 - 2014. Currently: independent consultant.

PHD STUDENT COMMITTEES:

1) Allison Tew, 2010 (Georgia Institute of Technology, CS, Mark Guzdial advisor).
2) Wanda Kunkle, 2010 (Drexel University, CS, Bob Allen advisor).
3) Christian Chesanek (UNL, music).
4) Marcus Gubanyi, 2025 (UNL, CS, Leen-Kiat Soh advisor).
Committee Chair:

a) Susan Biancani, Stanford, Education, 2015.
b) Helen Craig, Stanford, Physics, 2015.
c) Brian Edgar, Stanford, Education, 2014.
d) David Kamran, UNL, Music, 2017.

STUDENT PROJECTS SUPERVISED:

Undergraduate:

1) Bethany Barnwell (Spring 2024). Student attitudes and introductory programming.
2) Savan Patel (Fall 2022, Spring 2023). Predicting Formula One winners.
3) Bethany Hage (Fall 2018, Spring 2019). Analysis and comparison of multiple approaches for software development management as applied to a design studio project.
4) Brandon Azad (Winter 2015). Developing a semantics for ASN.1.
5) Maya Israni (Summer 2014). CURIS. Integrating the teaching of spatial skills into introductory computing classes.
6) Karen Wang* (Summer 2014). CURIS. Integrating the teaching of spatial skills into introductory computing classes.
7) Lisa Wang* (Summer 2014). CURIS. Using real world examples to motivate students in CS2.

8) Reggy Long (Summer 2014). CURIS. Teaching a test-first approach in CS1.
9) Fraser Brown (Summer 2013, Fall 2013). CURIS. Finding bugs in concurrent programs.
10) Aaron Acosta (Fall, 2013). Secure Coding.
11) Anna Saplitski (Summer 2013). CURIS. Building an intelligent tutor for Alice.
12) April Yu (Summer 2013). CURIS. Secure Coding.
13) Sophia Westwood (Spring 2013). Web RTC.
14) Bree Burge (Spring, 2013). Web RTC.
15) Joe Gasparetti (Spring, 2013).Web RTC.
16) Pam Martinez (Winter 2013). Secure coding.
17) Ali Fauci (Winter 2013). Secure coding.
18) Feross Aboukhadijeh (Winter 2013). CDNs.
19) Nisha Garamilla (Winter 2013). Designing a social service organization project.
20) Sophi Newman (Winter 2013). User interfaces.
22) Rupa Shankar (Summer, 2012, Fall, 2012). CURIS. Building parse trees for Alice programs.
22) David (Wei) Jia (Summer 2012, Fall 2012). A distributed list-making tool.
23) Frank Chen (Spring, 2012). Coursera.
24) Yifan Mai (Spring, 2012). Coursera.
25) Zach Galant (Spring, 2012). Building a framework to teach online CS1.
26) Patrick Costello (Fall 2011, Fall, 2012). Building a serious game engine.
27) Dawson Zhou (Fall 2011, Fall, 2012). Building a serious game engine.
28) Yoon Jae Nam (Summer 2011). CURIS. Intelligent tutors and Alice.
29) Victoria Kwang (Summer 2011). CURIS. Building an interface for a digital library.
30) Su Hyun Kim (Summer 2011). CURIS. Designing secure coding modules.
31) John-Ashton Allen (Spring 2011). Designing secure coding modules.
32) Graham Herrli (Fall 2010). Building a middle school Scratch curriculum.
33) Jon Romvary (Fall 2007 – Spring 2008). IP law and software engineering (senior year-long honors thesis).
34) Jeff Knauss (Fall 2007). GUIs and software engineering.
35) Desmond Broxton (Summer 2007). Digital libraries.
36) Jennifer Mung'Au (Summer 2007). Alice 3.0.
37) Brittany Fasy (Spring 2007). Algorithms and computability.
38) Julia Fox (Spring 2007). Algorithms and computational group theory.
39) Chris Kessler (Spring 2007 – co-advisor: George Grevera). 3D game engines.
40) Brian O'Neill (Spring 2007 – co-advisor: Jonathan Hodgson). Alloy and software requirements specification.
41) Sam Wissler (Spring 2007). Designing user interfaces.
42) Matt Wurst (Spring 2007). Software engineering for web applications.
43) Josh Wilvert (Spring 2006). Test-driven development.

44) Kristen Gerner (Spring 2005). Agile methodology for software engineering.
45) Evan Shea (Spring 2005). Design patterns.
46) Joe Correnti (Spring 2005). Software maintenance metrics.
47) Dan Henry (Spring 2005). Software engineering risk management.
48) Brittany Fasy (Summer 2004, Summer 2005)*. Using Alice to visualize data structures.
49) John-Paul Craig (Summer 2004, Summer 2005)*. Reviewing non-traditional introductory CS teaching tools.
50) Joe Flannick (Fall 2003). Window managers.
51) Kevin Conaway (Fall 2003). File systems and security.
52) Kevin Dietzler (Summer 2003)*. Using Alice to teach geometry.
53) Robert Sciaraffo (Spring 2003). Z.
54) Steve Del Fra (Spring 2003). 3D graphics.
55) Kathleen Ryan* (Summer 2002). Alice.
56) Kevin Dietzler* (Summer 2002). Alice.
57) Jodi Holmes (Fall 2000). Designing user interfaces.

Graduate (MS):

1) Rachel Michaela Bradley (2022-2024). Autism and CS.
2) Casey Lafferty (Spring 2019). Games in education.
3) Patrick Costello (Spring 2013). Game design.
4) Dawson Zhou (Spring 2013). Game design.
5) John Hiesey (Spring 2013). Functional reactive programming.
6) Nikil Viswanathan (Spring 2012). Designing an iPhone app.
7) Bill Rowan (Fall 2011). Shaders and Webgl in Javascript.
8) Will Ito (Winter 2011). Alice 2 modifications.
9) Bipin Suresh (Fall 2010)*. Building the infrastructure for a digital library.
10) Robb Cutler (Spring 2010). Introductory programming environments.
11) Wesley Flake (Spring 2007). Software testing for OO systems.
12) Baladitya Voleti (Spring 2007). Design patterns.
13) Patricia Hasson (Summer 2003). Case study using Z for software engineering requirements.
14) David Wei (Summer 2003). Software engineering architecture models.
15) Supachai Saewong (Spring 2003). Metrics for object-oriented software engineering.
16) Avinash Raghupathy (Summer-Fall 2001). User interfaces.
17) Sangeetha Narasimhan (Summer 2000). XML parsers.
18) Jun Ni (Spring 2000). Multimedia.
19) Jeiying Xiang (Spring 2000). Human-computer interactions.

* - research supported by various NSF grants

UNIVERSITY/ COLLEGE/ DEPARTMENTAL COMMITTEES:

University of Nebraska-Lincoln:

College of Engineering Retooling of the Technical Writing Course: 2025-present
College of Engineering Ad Hoc Promotion & Tenure Criteria Committee: 2022-2024
Big Ten Academic Alliance Academic Leadership Program Fellow: 2022-2023
President's Excellence Awards committee: 2017-2019
CSE Raikes Curriculum subcommittee member: 2016 – 2018
Raikes School Associate Director of Academic Affairs: 2016-2018
Big Ten Academic Alliance Department Executive Officers Fellow: 2016-2017

Stanford University:
CS Department curriculum committee: 2010 – 2013
CS Department Awards committee: 2012 - 2015
CS Department MS admissions committee: 2010 – 2015
CS Department "seed funding" grant review: 2011
CS Department Online Education Committee: 2012
University-wide Breadth Governance Board: 2012 – 2014
University-wide Office of Community Standards faculty panelist: 2014 - 2015

Purdue University:
Limited submission proposal review: 2009 – 2010
College of Technology Strategic Plan Implementation Team for Discovery with Delivery – Research Areas and Funding: 2009 – 2010
CGT Graduate Curriculum Committee: 2009 – 2010

Saint Joseph's University:
Faculty Policies and Procedures: 2006-2007
Intellectual Property Draft Review Committee: 2003-2004
College Council Executive Committee: 2005-2006
Saint Joseph's University Math/CS Departmental:
- Hiring Committee: 2001-2005
- PACMACS: 2000-2007
- Student recruitment and retention: 2003-2006