David G. Sullivan, Ph.D.

Curriculum Vitae

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Office Address
Department of Computer Science
Boston University, College of Arts and Sciences
111 Cummington Mall
Boston, MA 02215
tel: 617-353-8919; *fax:* 617-353-6457
email: dgs@cs.bu.edu
web: http://cs-people.bu.edu/dgs

Education

Harvard University, Ph.D. in computer science, November 2003
Harvard University, S.M. in computer science, 1999
Emmanuel College, coursework in education, 1993-1994
Harvard College, A.B. in physics, 1991, cum laude in general studies

Professional Appointments

2018–present	Master Lecturer on Computer Science, Boston University, College of Arts and Sciences
2013–2018	Senior Lecturer on Computer Science, Boston University
2006–2013	Lecturer on Computer Science, Boston University
2000–present	Instructor, Harvard University, Division of Continuing Education
Spring 2007	Lecturer on Computer Science, Tufts University
Fall 2006	Lecturer on Computer Science, Harvard University, Faculty of Arts and Sciences
2000-2005	Consultant, Sleepycat Software (now part of Oracle Corporation)
1999	Summer research intern, BBN Technologies, Cambridge, MA
1997-2003	Research assistant/teaching fellow, Harvard University, Faculty of Arts and Sciences
1991-1997	Instructor, St. John's Preparatory School, Danvers, MA

Honors

Neu Family Award for Excellence in Teaching, Boston University, 2012
Teaching Commendations, Harvard University Extension School, numerous semesters
Certificate of Distinction in Teaching, Harvard University, 1999
USENIX Association Scholar, 1999
C.S. Gross Scholarship, Harvard Division of Engineering and Applied Sciences, 1998, 1999
Harvard Graduate National Scholarship, 1997-1999
Honorable Mention, NSF Graduate Fellowship Competition, 1998
Phi Beta Kappa, Harvard College, 1991
Detur Prize, Harvard College, 1987

Teaching at Boston University

1. CS 105: Introduction to Databases and Data Mining
   - *Developed this new course, which provides non-majors with a data-centric introduction to computer science, and taught its first offering in Spring '07.*
   - *Taught one section most semesters since then.*
   - *In Spring '13, shared materials with Olaf Hall-Holt at St. Olaf's College for use in his course.*
   - *In Spring '13 and Spring '15, shared materials with Kevin Treu at Furman University for use in his courses.*
   - *In Spring '17, introduced the use of peer instruction and developed a series of pre-lecture videos that enable an increased level of student engagement in lecture.*
2. CS 111: Introduction to Computer Science I
   - *Taught one section in Fall '06, and two sections each fall semester since then.*
   - *Taught one section Spring '08-'11, and two spring sections since Spring '12.*
   - *In Fall '10, introduced a new one-week unit at the start of the course in which students use a graphical programming language called Scratch to quickly learn key concepts. Wayne Snyder has since made use of this unit in the context of MA/CS 109.*
   - *In Spring '11, taught a special Honors Program section for Harleen Grewal '13.*
   - *In Spring '12, introduced a new undergraduate course assistant (CA) program, in which undergrads assist with the weekly labs and offer regular office hours. I have continued to coordinate this program, and I have worked with colleagues to extend it to CS 112.*
   - *In Fall '14, transitioned to a new breadth-first curriculum that is a revised version of the CS-for-All curriculum developed at Harvey Mudd College.*
   - *In Fall '14, introduced the use of peer instruction to enable an increased level of student engagement in lecture.*
   - *In Fall '15, developed a series of pre-lecture videos that facilitate the use of peer instruction, and that allow students to more easily visualize the key concepts.*
   - *In Spring '17, shared materials with Dan Potter at Brown for use in his course* (cs.brown.edu/courses/csci0040).
3. CS 112: Introduction to Computer Science II
   - *Fall '06. Spring '18.*
   - *Developed a series of pre-lecture videos that facilitate the transition from Python (the language used in CS 111) to Java (the language used in CS 112).*
4. CS 460/660: Introduction to Database Systems
   - *Taught one section in Fall '13. CS 460 is the undergraduate version of the course, and CS 660 is its graduate-credit counterpart.*

Other University Teaching (as the instructor of record)

1. CSCI S-111: Intensive Introduction to Computer Science, Harvard Summer School *2000-present. (Co-taught with Henry H. Leitner, Ph.D. until 2013.)*
2. CSCI E-50b: Introduction to Computer Science Using Java II, Harvard Extension School *Spring '04.*
3. CSCI E-22 (formerly CSCI E-119): Data Structures, Harvard Extension School *Spring '05, '07, '08. Fall '05, '09, '10, '11, '12, '13, '14, '15, '16, '17.*
4. CSCI E-66 (formerly CSCI E-268): Database Systems, Harvard Extension School *Spring '06, '11, '12, '13, '14, '15, '16, '17, '18. Fall '06.*
5. CS 165: Information Management, Harvard University, Faculty of Arts and Sciences *Fall '06.*
6. CS 115: Database Systems, Tufts University. *Spring '07.*

Departmental and University Service
Member, Undergraduate Assessment Working Group, Provost's Office, 2016-present
Coordinator, Undergraduate Course Assistant Program in Computer Science, 2012–present
Interviewer and evaluator of lecturers and lecturer candidates, 2013-present
Guest lecturer, BU Artemis Program (summer program in CS for high-school girls), 2011-present
Member, Committee on Rethinking Entry Points to the CS Major, 2013-2015
Member, Search Committee for Full-Time Lecturer, 2013
Member, Undergraduate Curriculum Committee, Computer Science, 2013
Member, Committee on CS Courses for Non-Majors, 2011
Member, Committee on Redesigning CS 101 (RULE Grant), 2010
Member, Committee on the Transition from CS 111 to CS 112, 2009-2010
Member, Committee on Courses for Non-Majors, Fall 2007

Advising
Supervisor/mentor to numerous teaching fellows at BU, including a number of novice teachers
Supervisor/mentor to numerous undergraduate course assistants for CS 111 and CS 112
Advisor/mentor to part-time and new full-time lecturers in the department
Summer advisor for incoming students, 2008, 2009, 2011, 2015
Independent study advisor for Jason Abed '11, Fall 2010
Thesis advisor for BU Academy students Daniel Housley (BUA '10) and Charles McGarey (BUA '14)

Invited Talks
Revamping the First Course for Majors: A Preliminary Report, Computer Science Department, University of Massachusetts, Boston, March 26, 2015.

Providing Students with Computational Tools for Working with Data, Boston University Center for Excellence and Innovation in Teaching, January 10, 2013.

Educational videos
[1] David G. Sullivan. Pre-lecture videos for Computer Science 112, Boston University, Spring 2018. https://www.youtube.com/playlist?list=PLiwphLky56kA0uz5G3pR9VVrL1rNZsfOr

[2] David G. Sullivan. Pre-lecture videos for Computer Science 105, Boston University, Spring 2017-Fall 2017. https://www.youtube.com/playlist?list=PLiwphLky56kCx_ir3wMiEbWSK6K6hklrd

[3] David G. Sullivan. Pre-lecture videos for Computer Science 111, Boston University, Fall 2015-present. https://www.youtube.com/playlist?list=PLiwphLky56kCtBEOTihpmm6GFJdB7_M3B

[4] David G. Sullivan. Video notes for Y. Daniel Liang's *Introduction to Programming Using Python* (Pearson, 2011).

Publications
[1] David G. Sullivan. A data-centric introduction to computer science for non-majors. In *Proc. of the 44th ACM Technical Symposium on Computer Science Education (SIGCSE '13)*, 2013, pp. 71-76.

[2] David G. Sullivan, Margo I. Seltzer, and Avi Pfeffer. Using probabilistic reasoning to automate software tuning. *ACM SIGMETRICS Performance Evaluation Review* 32(1): 404–405.

[3] David Gerard Sullivan. Using probabilistic reasoning to automate software tuning. Ph.D. thesis, Harvard University, September 2003.

[4] Barbara J. Grosz, Sarit Kraus, David G. Sullivan, and Sanmay Das. The influence of social norms and social consciousness on intention reconciliation. *Artificial Intelligence* 142(2002):147-177.

[5] David G. Sullivan and Margo I. Seltzer. Isolation with flexibility: a resource management framework for central servers. In *Proc. of the 2000 USENIX Annual Technical Conference*, 2000, pp. 337-350.

[6] David G. Sullivan, Barbara J. Grosz, and Sarit Kraus. Intention reconciliation by collaborative agents. In *Proc. of the 4th International Conference on Multi-Agent Systems*, 2000, pp. 293-300.

[7] David G. Sullivan, Alyssa Glass, Barbara J. Grosz, and Sarit Kraus. Intention reconciliation in the context of teamwork: an initial empirical investigation. In Klusch, M., Shehory, O., Weiss, G., eds., *Cooperative Information Agents III, Lecture Notes in Artificial Intelligence* 1652, 1999, pp. 149-162.

[8] David G. Sullivan, Robert Haas, and Margo I. Seltzer. Tickets and currencies revisited: extending multiresource lottery scheduling. In *Proceedings of the 7th Workshop on Hot Topics in Operating Systems*, IEEE Computer Society Press, 1999, pp. 148-152.

Other Relevant Experience/Credentials

Edits and revisions to the online textbook *CS for All* (https://www.cs.hmc.edu/csforall)
Textbook reviewer, Addison-Wesley, John Wiley & Sons, Pearson
Teaching consultant, Bok Center for Teaching and Learning, Harvard University, 1999-2002
Non-resident tutor, Pforzheimer House, Harvard University, 1999-2002
Co-moderator, First-Year Sexual Orientation Discussion Group, Harvard, 2000-2003
Massachusetts Educator's License, secondary-school mathematics and physics