David G. Sullivan, Ph.D.

Curriculum Vitae

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Mailing Address
Center for Computing and Data Sciences
Department of Computer Science, Boston University
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Education
Harvard University, Ph.D. in computer science, 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

2019–present	Director of Peer Education, Computer Science *Coordinate the department's use of undergraduate course assistants and teaching assistants in our foundational courses*
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
1991–1997	Teacher, St. John's Preparatory School, Danvers, MA

Honors
University Marshall at Matriculation, Boston University, 2021
Metcalf Award for Excellence in Teaching, Boston University, 2021
Neu Family Award for Excellence in Teaching, College of Arts & Sciences, 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 course, which provides non-majors with a data-centric introduction to computer science, and taught its first offering in Spring '07.*
   - *Taught Fall and Spring semesters until 2017, as well as Fall '18, Fall '19 and Fall '21*
   - *Shared materials with Olaf Hall-Holt at St. Olaf's College and Kevin Treu at Furman University for use in their 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.*
   - *In Fall '19, introduced the use of Gradescope for assignment submission, and wrote associated software that allows students to obtain preliminary feedback on their work.*
2. CS 111: Introduction to Computer Science I
   - *Taught in Fall '06, Fall '07, and all Fall and Spring semesters since 2008.*
   - *Coordinate all of the sections offered in a given semester.*
   - *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 a number of our foundational courses.*
   - *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.*
   - *Shared materials with Dan Potter at Brown for use in his course.*
   - *In Spring '19, introduced the use of Gradescope for assignment submission, and wrote associated software that allows students to obtain preliminary feedback on their work.*
3. CS 112: Introduction to Computer Science II
   - *Fall '06. Spring '18. Spring '20. Spring '21. Spring '22, Spring '23.*
   - *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) as well as peer instruction questions that enable an increased level of student engagement in lecture.*
   - *In Fall '19, assisted Christine Papadakis-Kanaris with the adoption of Gradescope for assignment submission. In Spring '20, created additional associated software that allows students to obtain preliminary feedback on their work.*
   - *Shared materials with David Smith of Indiana University (PA) for use in his course.*
4. CS 460: Introduction to Database Systems
   - *Fall '13. Spring '19, Fall '22, Fall '23, Spring '24.*
   - *Taught the co-offered graduate version (CS 660) in Fall '13.*
   - *In Spring '19, introduced the use of Gradescope for assignment submission, and wrote associated software that allows students to obtain preliminary feedback on their work. Also introduced the use of peer instruction to enable an increased level of student engagement in lecture.*

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-22 (formerly CSCI E-119): Data Structures, Harvard Extension School
   Spring '05, Fall '05, Spring '07-'08, Fall '09–22, Spring '24.

3. CSCI E-66 (formerly CSCI E-268): Database Systems, Harvard Extension School *Spring '06, Fall '06, Spring '11–23, Fall '23.*
4. CS 165: Information Management, Harvard University, Faculty of Arts and Sciences *Fall '06.*
5. CSCI E-50b: Introduction to Computer Science Using Java II, Harvard Extension School *Spring '04.*
6. CS 115: Database Systems, Tufts University. *Spring '07.*

Departmental and University Service

Lecturer Merit Review Committee, Computer Science, 2019, 2020, 2023 (chair), 2024
Member, search committees for full-time lecturers, Computer Science, 2013–present
Classroom observer for other lecturers, Computer Science, 2015–present
Department representative, Matriculation ceremony for first-year students, 2023
Guest lecturer, BU Artemis Program (summer CS program for high-school girls), 2011–present
Member, Faculty Teaching Awards Committee, Provost's Office, 2021-2022
Chair, Departmental Lecturer Promotion Committee, Computer Science, 2021
Coordinator of annual program assessments, Computer Science, 2019-2021
Member, Lecturer Promotion Committee, College of Arts and Sciences, 2019, 2021
Member, Ad-Hoc Curriculum Committee, Computer Science, 2019–2023
Advisor to Ph.D. students teaching computer science to high-school students, summer 2019
Coordinator, Undergraduate Course Assistant Program in Computer Science, 2012–2019
Member, Teaching Awards Committee, College of Arts and Sciences, 2019
Member, Premedical and Predental Advisory Board, Boston University, 2019
Chair, Ad-Hoc Committee on Tools for Teaching, Computer Science, 2018–2019
Member, Undergraduate Assessment Working Group, Provost's Office, 2016–2018
Member, Committee on Rethinking Entry Points to the CS Major, 2013–2015
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 undergrad course assistants and teaching assistants
Advisor/mentor to part-time and new full-time lecturers in the department
Advisor, Kilachand Keystone Project for Elizabeth James '20
Advisor to student researchers funded by a UROP Cross College grant, 2017–2019
Summer advisor for incoming students, 2008, 2009, 2011, 2015
Independent study advisor for Jason Abed '11, 2010
Thesis advisor for BU Academy students Daniel Housley (BUA '10) and Charles McGarey (BUA '14)

Invited Talks and Panels

Panelist, *Student-Faculty Engagement*, FY 103, First Year Experience Program, Boston University, October 2022 and March 2023.

Panelist, *Connecting with Faculty*, First Year Experience Program, Boston University, September 2022 and September 2023.

Panelist, *Crowdsourcing for Creating Community in Your Classes,* Faculty Forum, Boston University, May 16, 2022.

Peer Instruction, Computer Science Department, Boston University, October 26, 2018.

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. https://www.youtube.com/playlist?list=PLiwphLky56kA0uz5G3pR9VVrL1rNZsfOr

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

[3] David G. Sullivan. Pre-lecture videos for Computer Science 111, Boston University. 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

Advisor, Excel Academy Charter High School, East Boston. 2019–2020

Assisted Brad Lewis '14 and his colleagues in building a new computer science course.

Edits and revisions to the textbook *CS for All* (https://www.cs.hmc.edu/csforallbook)
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