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## ABOUT THE PROGRAM

Computers are now pervasive in everyday life, from embedded processors in cars and appliances to major data processing instruments used in universities, government and business. Computer science is the discipline that has made this entirely new way of life possible. The study of computer science will give you a broad and deep understanding of the fundamental concepts and principles underlying much of our world and our technological future. It also will enable you to discover and design algorithms, arrange information into complex data structures, use search and heuristics for artificial intelligence, and create fun computer games. A good computer science education is preparation for a job in the growing software industry or for graduate school in several subjects.

### What makes the program distinctive?

Brandeis offers B.A. and B.S. degrees in computer science, with small classes taught by faculty who are leaders in their field. After a set of

core courses, our electives span a wide range of computer systems, intelligent applications and other current research areas.

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### FAST FACTS

**Current number of majors and minors:** 68

**Number of faculty:** 12

**Can you minor in this program?** Yes

**Emphasis within the major:** artificial intelligence, biological-inspired computation, computational linguistics, database and storage systems

**Popular second majors:** economics, neuroscience

**Website:** [cs.brandeis.edu](http://cs.brandeis.edu)

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## ACADEMICS AND RESEARCH

### Academic collaboration

Brandeis hosts monthly meetings and guest speakers for the New England Database Society, which comprises approximately 50 New England-area database researchers and has been sponsored for the past nine years by Sun Microsystems. The department also runs a monthly colloquium series with speakers on all aspects of computer science.

### Student research projects

Recent projects include writing educational computer games for elementary students; developing a computer graphics program for brush-writing Chinese ideograms; developing programs for content-based image retrieval; and creating intelligent interfaces for mining large-scale RNAi-HCS image databases modeling drosophila eye development.

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## AWARDS AND RECOGNITION

### Distinguished faculty

Professors Olga Papaemmanouil and Mitch Cherniack received an EAGER award from the National Science Foundation to conduct research in interaction history management systems and their application to evidence-based practice of health care. Professor Pengyu Hong was given the National Institutes of Health's R01 award, which supports health-related research and development aimed at creating intelligent interfaces for interactive analysis of high-content cellular images. The National Science Foundation also honored professor Nianwen Xue for research in richer representations for machine translation.

### Student awards

The computer science department awards two Michtom Prizes to undergraduates each year, one for outstanding achievement and another for outstanding service. Computer science major Daniel Lazewatsky '09 was awarded a \$2,000 Schiff Undergraduate Fellowship from Brandeis to conduct academic research, which helped lead to his senior thesis, "An Averaging-Based Approach for Robust 3D Region of Interest Identification." Daniel Abadi '02 won a prestigious Churchill Fellowship and is now an assistant professor of computer science at Yale University.

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## BEYOND THE CLASSROOM

### Summer internships

Recent internship sites for students who took database courses include VoltDB (Max S., summer 2010) and Vertica (Charles H., summer 2010; David B., summer 2009; and Peter M., summer 2008).

### Other opportunities

In 2009, the Women in Computer Science group was formed on campus. Brandeis also organizes the New England Undergraduate Computing Symposium, which gives students an opportunity to present their research projects.

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## AFTER BRANDEIS

### Diverse career opportunities

Computer science graduates of Brandeis often go on to work for startup companies or frequently become employed at large corporations such as IBM, Google, Microsoft or Amazon.com. Other students continue on to graduate studies in computer science, computer engineering, materials science, neuroscience and cognitive science.

### Real jobs

Recent computer science graduates include Alexander Ganelis '95, founder of Worldwinner.com; Bonnie Berger '86, MIT professor; Harald Helfgott '98, professor of mathematics at the University of Bristol; Bela Labovitch '87, serial entrepreneur; Daniel Abadi '02, assistant professor of computer science at Yale University; and Peter Macko '08, Ph.D. student at Harvard University.

