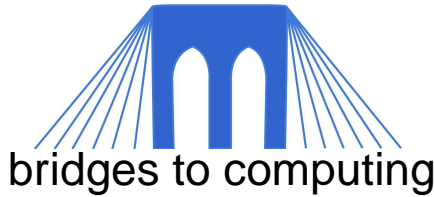


BROOKLYN



COLLEGE



bridges to computing
brooklyn college of the city university of new york

<http://bridges.brooklyn.cuny.edu>



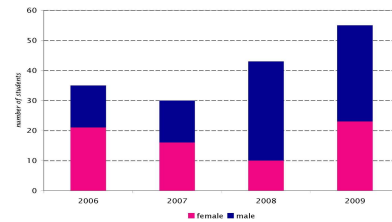
funding provided by the
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The **Bridges to Computing** project focuses on the transition years from high school to college, working to better inform students about and prepare them for careers in computing fields. **Bridges** involves academic and social components geared toward advanced high school students, and early and advanced college students.

The **primary activities** are: (1) a partnership with CUNY CollegeNow offering courses for **high school** credit to New York City public school students, including *Computing Prep* and *“Does It Compute?” Summer Workshop*; (2) hands-on, contextualized “flavors” of **undergraduate** computing courses: *Introductory Computing (“CS0”)*, *Introductory Programming (“CS1”)* and *Advanced Programming (“CS2”)*; and (3) **mentoring**, from high school students to undergraduate “Ambassadors” to doctoral students and faculty.

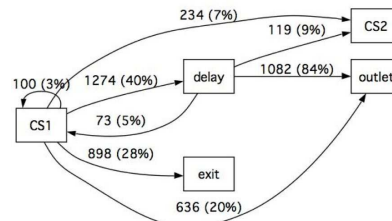
After four years, Bridges has reached more than 250 students from nearly 60 public high schools in Brooklyn and around New York City, over 1500 undergraduates through more than 70 sections of 17 newly developed or updated computing courses, and 21 advanced undergraduate Ambassadors. Participants are largely immigrants from all across Asia, the Caribbean and Eastern Europe. Most undergraduates work part-time while attending school full-time.

Project **evaluation** involves surveying participants and examination of enrollment data to monitor changes and trends.



High School Summer Workshop Attendance

Innovative data mining and visualization techniques are being developed for examining large sets of enrollment data.



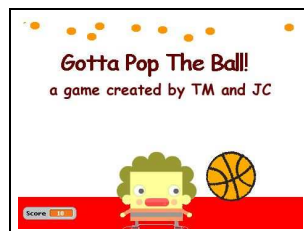
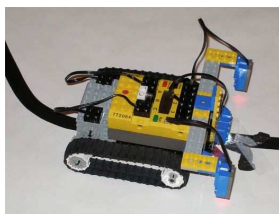
What do Students do after taking CS1?

Project **results** include the following highlights:

- Surveys show that undergraduates select class sections overwhelmingly based on schedule and professor, not according to a section’s particular flavor.
- Bridges sections of undergraduate CS1 courses have shown better than average retention to CS2 and into the major, as well as fewer students repeating CS1 and fewer students exiting computing.
- A new partnership between Bridges and **CollegeNow**, an established collaboration between the City University of New York and the New York City Department of Education (<http://collegenow.cuny.edu>), enables course offerings for credit and provides a sustainable model for the future, as well as possibilities to expand throughout the CUNY system.
- A new **Teacher Workshop**, in partnership with ACM CSTA (<http://csta.acm.org>), gives channels for course material dissemination and student recruitment.



The **academic portion** of the Bridges program emphasizes *computing within a context*, centering around interdisciplinary application areas and hands-on learning experiences.



“Flavored” versions of standard CS0, CS1 and CS2 undergraduate courses have been implemented. High school students are also exposed to each flavor. Flavors include: *biologically-inspired simulations*, *cryptography*, *e-business*, *geographic information systems*, *games*, and *robotics*.

For further information, please contact: Prof Elizabeth Sklar, PI (sklar@sci.brooklyn.cuny.edu). The Project Team includes: Professors Simon Parsons, Ira Rudowsky and Samir Chopra, Co-PIs; Matt Meyer, instructor; Chipp Jansen and Valerie Andrewlevich, project coordinators; and Dr Susan Lowes, project evaluator.