

## **RETENTION OF FIRST-YEAR COMPUTER SCIENCE MAJORS**

### ***PANEL DISCUSSION***

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### **ABSTRACT**

In recent years many Computer Science faculties have noticed a drop off in student quality. A healthy number of first-year students will enter CS1 as computer science majors only to find the demands of the course too exacting. These individuals exit CS1 with a grade of D, F, or W. One department reported that the total D, F, and W percentage in CS1 had risen from less than 40% in 1992 to more than 60% in 1995. This was obviously an enrollment problem for CS2. On the one hand, there was the concern about whether there would be enough students for the upper level courses. On the other hand, there was the concern about maintaining high standards--there is no advantage to letting unprepared students through to upper level courses, just to have them fail there.

In an attempt to address this problem, some departments are redesigning their CS1. One approach is to shift from open laboratories to closed laboratories. The belief is the students can be more successful in the first course if the class is held in a classroom/lab in which students can experiment with concepts as they are presented in lectures. They can also start the development of their own programs in the "comfort and safety" of a friendly and structured environment where the instructor can oversee and guide the programming process.