**Eight Students Will Compete in International 2.70**

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rounds last night.

The items did not count if they were touching the contestant's machine; this was occasionally a problem when machines fell into the bins. If neither machine put an item in the bin during a round, both were eliminated from the contest.

**International Competition**

The 2.70 contest concept has spread around the world. University students from Japan, England, Germany, and for the first time from Korea and Brazil are holding similar competitions in their respective countries. This year's winner from around the world will meet in Tokyo this July for an international design competition.

The eight students who will represent MIT in Japan this year include the four semifinalists and four others selected by judges from industry and MIT. The sixth round determined that Cho, Kendrick C. Boardman '95, who came in second, Arthur Fong '95, and Mukund C. Venkatram '95 would definitely be going to Japan. Professor Harry West PhD '70, who teaches 2.70, later announced that they would be joined by Andrea L. Jensen '95, Rhonda K. Howard '95, Alfed Hernandez '95, and Dean L. Franck '95.

The international competition is not of the same format as AlFePETE. Instead, students from the different countries will form teams and work on a design project together. It is an exercise in communication, "seeing what it is like to design with people from other countries," said Assistant Professor Kevin Oho, who teaches two sections of 2.70.

Before the contest began, West emphasized that the course's primary function is educational, not merely "a show." He said he wanted his students to learn that the design process is and to experience the satisfaction of building a functioning machine. He added humorously that if you do not win it is "not because you're a bad person, it's because of physics analysis in design.

**Design strategies**

Joseph P. Feehan G, who is a 2.70 teaching assistant, classified most designs as pushers, elevators, and ramps with various modifications. The pushers included wheel-burrows and bulbulowers and were "probably safer," less risky designs, he said. In addition, there were two machines that grabbed objects and tried to throw them into the bins, he said. "The ramp ones are interesting to watch because there's a lot of action," Feehan added.

Most of the machines were pushers, whose strategy was to remain on the flat top of the U and collect the bottles. Cho's winning machine was based on a ramp strategy.

During the contest, Ott predicted that the machines that are fast and stay on the flat top of the playing field, gathering as many of the pink bottles as possible, would win. "The better are worth a lot, and the fast ones is too much of a mess," he said.

John M. Feland III '94, a 2.70 teaching assistant, found the game plan "more exciting and interactive" than last year's project. It allowed students "more creativity in design," he said.

Cho said his ramp machine was designed to "beat the dump trucks." He knew that his design would be vulnerable to machines with an arm that will "beat the dump trucks," or "pushers," as Feehan called them. Cho said that it was "mostly luck," because most of his competitor's machines were dump trucks. He added that during the final round, his ramp was broken, so he changed his strategy.

Cho is looking forward to the contest in Japan. "It's great - it's where the action is," he said.

Venkatram, one of the other semifinalists, said, "I can't believe this thing worked!"

West said that there were "very high quality machines this year." He was thankful for this year's motor donations from Ford and BGAM because the better motors "helped all the students succeed."

**High school students involved**

Three teams of high school students from Cambridge Rindge and Latin and Boston Latin also competed against each other in an exhibition match during last night's contest. Students from two high schools had built machines for a similar, smaller contest with the help of MIT students. This was the first year that high school students participated, and the outreach program will be expanded next year, West announced.

"What was so interesting was having high school students up here," West said. He hopes to assimilate them more because these "skills are so fundamental" and should be taught to them. The program will continue to expand, he said.

During breaks before the final rounds, artistic placebos made by local design firms and former 2.70 students were demonstrated before the crowd. Also, Arthur Ganson, a local kinetic sculptor, showed off his machine-sculpture which gave a short performance.

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**Financial Aid Deadlines**

Undergraduate renewal financial aid applications for the 1993-94 academic year are due in the Student Financial Aid Office today (Friday, April 23, 1993) in order to receive a financial aid decision before the first Bursar's bills are issued (July 17, 1993).

Applications will be accepted after this date, but applicants will be responsible for making arrangements to pay any Bursar charges until a financial aid decision can be made. Applicants will also be responsible for payment of any financial charges or late fees incurred on unpaid balances.

Applications completed after October 8, 1993 (fall term Add Date) will be designated as late. The consequence of applying late may be a reduced grant eligibility. Students unable to meet these deadlines because of extinguishing circumstances should notify the Student Financial Aid Office as soon as possible. The final deadline for students registered for only the spring term is March 4, 1994 (spring term Add Date).