

# Seniors Design

## Groundbreaking New Technologies

Next semester, anxious seniors will set up tables in the PKI atrium to put their hard work on display as part of the capstone design course, "Senior Thesis."



Dr. Hamid Sharif

Senior Thesis is the culmination of four years of coursework for students obtaining bachelor of science degrees in computer engineering or electronics engineering. Under the direction of Dr. Hamid Sharif and Dr. Bing Chen, the students work in groups to demonstrate the knowledge they've gained throughout the program by designing and implementing a project from start to finish—in one semester. The projects can create something new, modify something existing or solve industry problems, but all must show that the students have grasped the knowledge and gained the skills to qualify for a degree in computer or electronics engineering.

After the students present their projects to be graded, they are displayed in the Institute atrium for public viewing. The atrium is packed with students, parents, professors and businesspeople, all interested in the new ideas. While some are simply curious, many leaders from Omaha's top businesses examine the projects with a critical eye, knowing these new technologies could one day revolutionize their industries.

This year's Senior Thesis display consisted of 15 projects including "A Portable Doppler Guided Ultrasound Needle," "Bluetooth Enabled Flash-Disk RAID Array," and a "Smart Fridge." First place went to "Web Controlled Snow Blower," a snow thrower robot controlled via a wireless internet connection capable of sensing the driveway perimeter. Its creators were Donell Brown, Mark Huebner and Edward Dale. ▲



Web Controlled Snow Blower



Edward Dale



Donell Brown



Mark Huebner