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Professor excels with robotics

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Photo courtesy of Shimon Nof ROBOTIC: Professor Shimon Nof (right) works in Purdue's PRISM laboratory with doctoral student, Pornthep Anussornnitisarn.

Posted: Monday, November 11, 2002 12:00 am

By Jon Gilman
Staff Writer

He didn't even notice the holes being burned in his shirt as he attentively watched a line of robots weld the body of a car.

Shimon Nof, a professor of industrial engineering and director of Purdue's PRISM laboratory, was too fascinated by the precise movement of the robots to notice the weld sparks that landed on his chest.

Nof founded the PRISM lab - which stands for Production, Robotics and Integration Software for Manufacturing Management - in 1991 with support from government and industry.

Nof first became interested in robotics after reading Isaac Asimov's novel, "I Robot," and has since devoted his life to the field.

"Asimov's perception of the good that can be accomplished with robots was

very inspirational," Nof said.

He decided to pursue his interest in robotics further by studying industrial engineering. Nof received his bachelor's and masters' degrees in industrial engineering from Technicon Haifa, a university in Israel.

Nof then went on to his doctoral studies in industrial engineering at the University of Michigan. He decided to get his degree in the United States because, at the time, it was the world leader in using computer applications in industry.

"The manufacturing industries already had the software and information, and it was only a matter of time before robotics emerged and became an integral part of manufacturing," Nof said.

After college, Nof worked for one year as a senior analyst at Manufacturing Data Systems Inc., in Ann Arbor, Mich. During his stay at Manufacturing Data Systems, the company visited Purdue to look at the advances in manufacturing research.

"I was amazed at the innovative ideas at Purdue, like flexible manufacturing systems and the combination of databases and computer simulation," Nof said.

He was offered a job as a professor and researcher at Purdue in 1977, and has been here ever since.

Through his years of research, Nof has pioneered computer-aided manufacturing and robotics not only for use in industry, but in education as well.

For his contributions to education, Nof received the Joseph F. Engelberger Award Oct. 9 at the International Symposium on Robotics in Stockholm, Sweden. The award is the highest honor in the field of robotics.

James W. Barany, associate head of the Schools of Engineering, said the award is a testament to the impact of Nof's work.

"It proves that his work is not only recognized here at Purdue, but all over the world, at universities and major corporations," Barany said.

Nof said the award is also representative of his students and colleagues.

"I've always worked in groups with students and faculty, so I think the award is for all of us," Nof said.

Barany said Nof has been a tremendous asset to the industrial engineering program.

"He's listed among the best professors at Purdue and he's also an outstanding researcher," Barany said.

Nof currently teaches IE 332, "Computing in Industrial Engineering," and spends the rest of his time researching and working in the PRISM lab.

He said his initial vision of robotics being used in every industry has already been achieved, but that there is still room in the future for further advancement.

"I believe the day will come when robots can deliver pizza or help with chores around the house," Nof said.

Although Nof has a multitude of accomplishments in research, he said his proudest accomplishments are his students.

"I have the opportunity to touch many different lives through teaching," Nof said.