

Fellowship Supports Engineering/Nursing Teamwork



A new fellowship at the University of Massachusetts Amherst supports two graduate students in the College of Engineering and the School of Nursing so they can do collaborative research in the area of clinical healthcare. Dr. Michael Hluchyj ('76 B.S. Electrical Engineering) and Mrs. Theresa Hluchyj (B.S. School of Nursing) are supporting annual stipends of \$25,000 each for one graduate student in the College of Engineering and one graduate student in the School of Nursing. Dr. and Mrs. Hluchyj, who live in Wellesley, Massachusetts, funded the fellowships with key healthcare issues in mind. "We are excited to be funding these new fellowships to support cross-disciplinary research in clinical healthcare," said Theresa Hluchyj. "Quality healthcare ranks among the most important issues our society faces, and the collaborative research initiatives between nursing and engineering at UMass Amherst can make a real difference."

"Fellows will work on research projects from both disciplines," the fellowship stipulates, "seeking solutions to real problems in the clinical setting using engineering-based approaches."

The two Hluchyj Fellows are Yi You Mei, a first-semester doctoral student in industrial engineering, and Kavita Radhakrishnan, a first-year doctoral student in the School of Nursing. In keeping with the spirit of the Hluchyj fellowship, they had dovetailing research interests.

Mei's research interest is the digital dashboard, a device, common in the business community, providing a personalized desktop portal that includes such features as company metrics, charts, trends, data and visualizations, stock quotes, voice mail and e-mail messages, a calendar, a weather forecast, traffic information, access to news feeds, and customer and sales data. Mei is interested in the design and implementation of a specialized digital dashboard, geared specifically toward medical facilities, which would be useful for improving efficiency and quality of service.

"Dashboards are tools that are widely used in businesses to help executives make decisions on where to allocate resources," Mei says. "In recent years dashboards have become a popular tool in the healthcare field, and several large hospitals have even implemented dashboards to improve their organizational performance. However, in many areas of healthcare, such as nursing homes, dashboards remain a new concept and have yet to be implemented."

Radhakrishnan has a background as both a telecommunications engineer and a registered nurse. Her research interest is telehealth. Telehealth is the delivery of health-related services and information via telecommunications technologies. Telehealth delivery could be as simple as two health professionals discussing a case over the telephone, or as sophisticated as using

videoconferencing between providers at facilities in two countries, or even as complex as robotic technology.

“I am currently assisting Dr. Jenna Marquand [Mechanical and Industrial Engineering Department] testing a telehealth application for bariatric surgery patients at Baystate Medical Center,” says Radhakrisnan. “My doctoral dissertation will focus on researching healthcare solutions for remote monitoring of patients with chronic diseases.” (November 2008)