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Optoelectronics expert joins McCormick faculty

Manijeh Razeghi, one of the leading researchers in the field of optoelectronics, has been named to direct Northwestern's new Center of Exploratory Quantum Photonic and Electronic Engineering.

Razeghi was recruited from her position as head of the Exploratory Materials Laboratory of Thompson CSF in Orsay, France, by Jerome B. Cohen, dean of the Robert R. McCormick School of Engineering and Applied Science.

"This is one of the most important additions to our faculty in the past 20 years," Cohen said, noting that the school will outfit her labs and support her research, including the hiring of assistant professors, research scientists and lab technicians.

She has joined the McCormick faculty as the Walter P. Murphy Professor of Electrical Engineering and Computer Science.

Razeghi said she was attracted to Northwestern by the number of leading researchers in physics, chemistry and materials science as well as electrical engineering.

The addition of Razeghi to a staff already strong in the fields of optics and optoelectronics should make Northwestern a leading research center in that area, according to department chair Abraham Haddad.

Razeghi said she will be installing her reactor, which was developed at Thompson. It carries out Metallorganic Chemical Vapor Deposition, a process that permits a high degree of control over the deposition of specialized materials for high speed photonic and electronic devices. She also will install her RDS Characterization Systems at McCormick.

The center will develop new quantum photonic and electronic devices such as lasers, photodetectors, modulators and transistors and assemble them into novel optoelectronic integrated circuits, she said. Razeghi has developed a number of semiconductor structures used in advanced photonic and electronic devices, which are in turn used in fiber optics communication.

She holds more than 30 patents and in 1987 was awarded the prestigious IBM Europe Science and Technology Prize. She is the author of "The MOCVD Challenge," and the co-author of several other books. In the introduction to "The MOCVD Challenge" Pierre Aigrain, then France's minister of education, said she has accomplished "astonishingly brilliant results." She is the author and co-author of more than 350 papers.

She studied nuclear physics at the University of Teheran and received her

(continued on page 2)

Razeghi (continued from page 1)

doctoral degree in physics from the University of Paris. She taught as a visiting professor at the University of Michigan and the Ecole Polytechnique in Lausanne.

She chaired the 1990 international conference on Physical Concepts of Materials for Optoelectronic Device Applications held in Aachen. She is co-editor of the Journal of Applied Physics A and a member of the editorial board of Semiconductor Science and Technology and the Journal of Optoelectronics.

Manijeh Razeghi (right) addresses the participants of the International Workshop on Science and Technology of Thin Films for the 21st Century held this summer at Northwestern. (Photo by Yael Routtenberg)

