Faculty Spotlight: Physics professor recognized as world leader in quantum optics

Regents Physics Professor Girish Agarwal came to OSU in 2004, looking for a place to do his research in quantum optics – the application of quantum mechanics to how light interacts with matter.

Eight years later, the scholar is the recipient of the Eminent Faculty Award that recognizes the highest level of scholarly achievement at OSU. The award was presented in November at the University Awards Convocation.

Agarwal, who received his doctoral degree from the University of Rochester in 1969, was born in 1946 in Bareilly, a town in the Indian state of Uttar Pradesh. The theoretician spent much of his career in India, where he was the director of the Physical Research Laboratory in Ahmedabad for 10 years and held the Einstein chair of the Indian National Science Academy.

His research has earned him global acclaim in his discipline. His monograph "quantum optics" has been cited more than 600 times, he says. He published his first book from OSU in November 2012. His latest book on quantum optics published by the Cambridge University Press is meant for graduate students and postdocs.

Agarwal's work has been recognized at the highest level, as witnessed by his election as a fellow of The Royal Society, where he joined the ranks of Sir Isaac Newton and Benjamin Franklin.

He has won accolades including Germany’s Humboldt Research Award, the Max Born prize of the Optical Society of America, the Third World Academy of Sciences Prize in Physics, and the Shanti Swarup Bhatnagar Prize from the Indian government.

He says that in the American university system he can continue with his research as long as I chose to do so.

"I've found a home at OSU where I may freely pursue my work and mentor graduate students," he says.

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