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NEWS RELEASE

For Immediate Release

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SPIE Awards \$2000 Scholarship to Joshua Ray Windmiller

Bellingham, WA—June 12, 2007—SPIE has awarded a \$2000 scholarship to Joshua Ray Windmiller, a Bachelor of Science student at the University of California, San Diego. His interests are in the areas of lightwave communications and nanoscale optics and is especially interested in nonlinear optics, nanophotonics, and optical fiber communications as they are burgeoning research endeavors.

Windmiller has several publications and a patent pending for a novel nanoscale photovoltaic cell. He has research experience as an Undergrad Research Scholar at CAL-(IT)² in the Photonic Systems Laboratory. He was the first and only undergrad student to conduct research in the laboratory, which is considered to be a pre-eminent university-based photonic systems lab. Windmiller has completely characterized the absorption and emission of specially drawn Erbium-doped silica fibers. Using these parameters, he developed modeling software to simulate the performance of these fibers in Erbium-Doped Fiber Amplifiers. Windmiller proceeded to simulate and design EDFA systems using a synergy of his software with a systems simulation software. He constructed the amplifier for system integration in the group's research projects. These EDFAs have gained acclaim due to their exceptionally low noise figure, high gain, wide bandwidth, low pass-band ripple, and suppression of nonlinear effects. Windmiller's amplifiers exceeded the performance of nearly all commercially available EDFAs. "This experience has given me acclamation to experimental techniques and has served to unearth my desire to pursue research in the field of optical telecom and novel optical signal processing schemes," says Windmiller.

SPIE is the world's largest international not-for-profit society in the fields of optics, photonics, and imaging with 17,500 individual members including 3,500 students. To date, SPIE has distributed over \$3 million U.S. dollars in scholarships and grants to those working and learning in 84 countries. SPIE strongly believes in the opportunities and personal enrichment that education provides and in the need for increased scientific and technical literacy. The Society is committed to the upcoming generations of scientists and engineers who will develop the potential of optics and photonics.

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