



*OSA & Applied Physics
Optics Seminar*



Fun with Photons: Light for the Information Age

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The infrastructure of the Information Age relies upon an efficient, fast, and inexpensive manner to distribute digital data. The emergence of photonics for data communication has enabled the interconnection of our planet. Central to the continued photonic revolution is the development of miniature laser diode sources. Recent progress in device physics and nanotechnology is leading to a new generation of high performance lasers. This presentation will discuss vertical cavity surface emitting lasers, which are among the world's smallest laser diodes. We will report novel new devices, such as photonic crystal and composite resonator vertical cavity lasers, which will lead to improved performance. Applications of this laser (i.e. how to make money) will also be discussed.

Brief Biography:

Kent D. Choquette received B.S. degrees in Engineering Physics and Applied Mathematics from the University of Colorado-Boulder in 1984 and M.S. and Ph.D. degrees in Materials Science from the University of Wisconsin-Madison in 1985 and 1990, respectively. In 1990 he held a postdoctoral appointment at AT&T Bell Laboratories at Murray Hill, NJ. In 1992 he joined Sandia National Laboratories in Albuquerque, NM. He became a Professor in the Electrical and Computer Engineering Dept. at the University of Illinois at Urbana-Champaign in 2000, and the Director of the Micro and Nanotechnology Laboratory in July 2005. His Photonic Device Research Group is centered around the design, fabrication, characterization, and applications of VCSELs, novel microcavity light sources, nano-fabrication technologies, and hybrid integration techniques. He has served as an Associate Editor of the IEEE Journal of Quantum Electronics, IEEE Photonic Technology Letters, and guest Editor of IEEE J. Sel. Topics in Quantum Electronics. He is a Fellow of IEEE/Lasers and Electro-Optics Society (LEOS) and a Fellow of the Optical Society of America (OSA). <http://vcSEL.micro.uiuc.edu/>

Wednesday, April 19, 2006.

4:00pm-5:00pm.

Watson 104

Refreshments will be available in the Watson Lobby at 3:45pm.