BIRCK Nanotechnology Center

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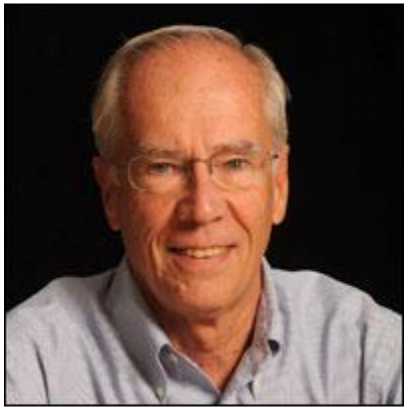
"Femtosecond Optics: More Than Just Really Fast"



ECE Distinguished Seminar
November 13, 2012
Burton D. Morgan Center, ROOM 121
3:30 PM

Erich P. Ippen

Elihu Thomson Professor of Electrical Engineering and Professor of Physics, Emeritus"
Massachusetts Institute of Technology
Research Laboratory of Electronics

Brief Bio: Erich Ippen received his S.B. degree from MIT in 1962 and his M.S. and Ph.D. from the University of California in 1965 and 1968 respectively. He worked at Bell Laboratories in Holmdel, NJ for 12 years before joining the faculty of MIT where he is now Elihu Thomson Professor of Electrical Engineering and Professor of Physics, Emeritus. Prof. Ippen has received major awards for his work from IEEE, the OSA, the APS and the SPIE; and he is a member of the National Academy of Sciences and the National Academy of Engineering. He has been recognized for his early work on nonlinear optics in fibers and for pioneering femtosecond technology and its applications. His current research interests include femtosecond optical clock technologies, nanophotonics, ultrashort-pulse fiber devices and precision sampling as well as ultrafast studies of materials and devices.

Brief Abstract: Advances in ultrafast optics have created dramatic new capabilities for a variety of applications, such as optical clocks, medical imaging, micro-machining, precision sampling, and signal processing, as well as for a wide range of scientific investigations. Many of these applications do not themselves rely on ultrafast time resolution, but benefit from the ultrawide bandwidths, low temporal coherence, low noise or high peak powers of ultrashort light pulses. This talk will describe briefly the femtosecond laser state-of-the-art that makes these things possible, and will illustrate how it enables such a wide range of uses.

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Hosted by Professors Andrew Weiner and Peter Bermel

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