



Monday Evening Student Tutorials

5:00 PM, August 1, 2016

AAC 2016 is pleased to offer two outstanding student tutorials Monday evening. All attendees of the workshop are welcome to attend the tutorials.



Particle Acceleration and Coherent Radiation Generation

Prof. Phillip Sprangle

University of Maryland and Naval Research Laboratory
5:00-6:00 PM, Woodrow Wilson B, Gaylord Hotel

Abstract: Particle acceleration and coherent radiation generated are closely related inverse processes. Various acceleration and radiation generation mechanisms will be described. For example, the limits on laser vacuum acceleration will be discussed. The acceleration mechanisms include: i) cyclotron auto-resonance, ii) laser beat wave, iii) Cherenkov and iv) inverse free electron laser.



Laser-Plasma Accelerators

Dr. Carl B. Schroeder

Lawrence Berkeley National Laboratory

5:00-6:00 PM, Woodrow Wilson CD, Gaylord Hotel

Abstract: The physics of laser-driven plasma-based electron accelerators will be discussed. This tutorial will present the basic physics of plasma wave excitation (linear and nonlinear) by intense short-pulse lasers, laser pulse propagation and guiding in underdense plasma, charged particle dynamics in plasma wakes, and methods for trapping of plasma electrons into plasma waves. Applications of laser-plasma accelerated beams will also be discussed.