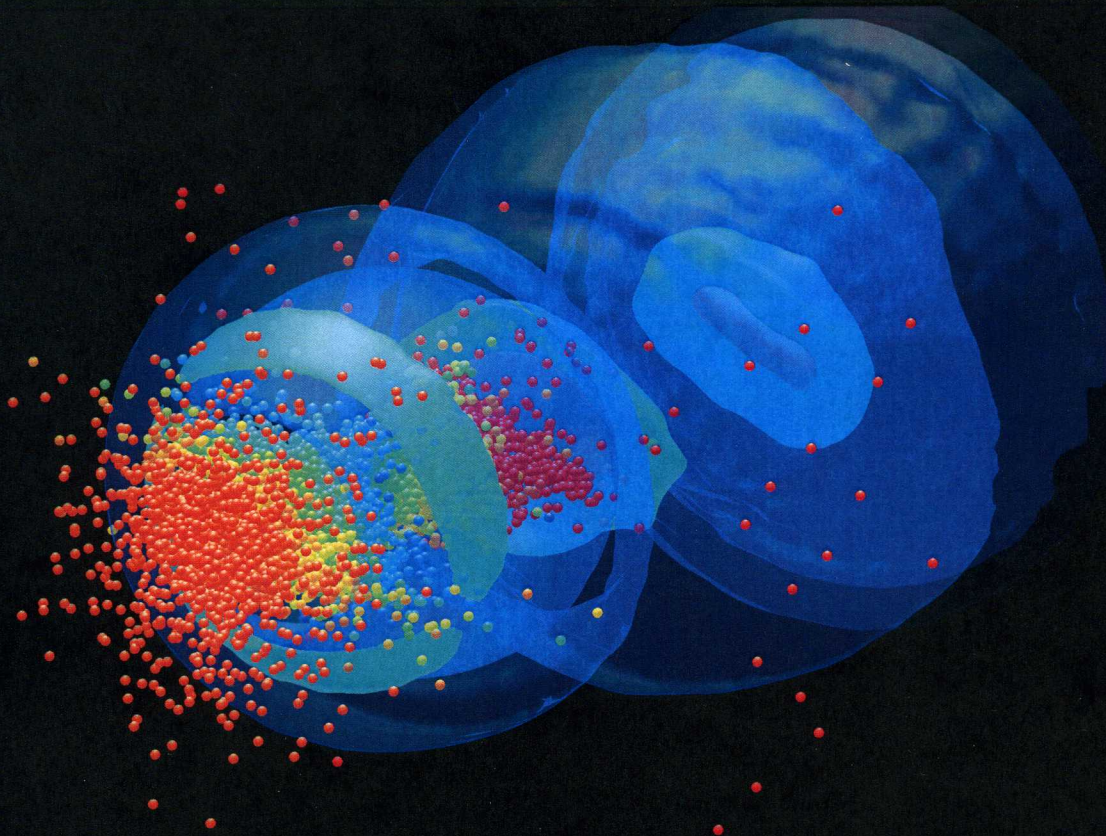


Surfing Plasma Waves: A New Paradigm for Particle Accelerators

Professor Chandrashekhar Joshi, UCLA
Thursday, November 1, 2007 • 7:30 P.M.
Room 101 • Friend Center
Olden and William Streets, Princeton, NJ



Accelerator-based experiments have produced key breakthroughs in our understanding of the physical world. New accelerators, to explore the frontiers of Terascale Physics, appear possible, based on concepts developed over the last three decades in multi-disciplinary endeavors. The Plasma-Based Particle Accelerator is one concept that has made spectacular advances in the last few years. In this scheme, electrons or positrons gain energy by surfing the electric field of a plasma wave that is produced by the passage of an intense laser pulse or an electron beam through the plasma. This talk reviews the principles of this new technique and prognosticates how it is likely to impact science and technology in the future.