

Effective June 7, 2009, Dr. Edmund Synakowski is the new Associate Director of the Office of Science for the Office of Fusion Energy Sciences (FES) in the U.S. Department of Energy (DOE).

Dr. Synakowski has served as the Fusion Energy Program (FEP) Leader at Lawrence Livermore National Laboratory (LLNL) since January 2006 and, more recently, as the Deputy Division Leader At-Large of the LLNL Physics Division. Within the FEP, he led a broad portfolio of experimental and theoretical research in magnetic fusion energy science, fusion-related high energy density physics, fusion technology, and beam research. His emphasis was on the science needed to predict, control, and optimize the burning plasma state of magnetically and inertially confined plasmas. His community service and leadership have been extensive, including his recent service on the U.S. Burning Plasma Organization Council and as a member of the Executive Committee of the Division of Plasma Physics of the American Physical Society. In addition, he has served on or led major programmatic reviews and advisory committees for the nation's leading fusion energy sciences programs, including planning and review activities for ITER, an international research project under construction in France that will become the world's leading platform for research in sustained, magnetically confined burning plasmas.

Dr. Synakowski was at the Princeton Plasma Physics Laboratory (PPPL) from 1988 through 2005, where he served as Head of Research of the National Spherical Torus Experiment and Deputy Program Director. His scientific group leadership began on the Tokamak Fusion Test Reactor at PPPL in the 1990s in cross-magnetic-field transport. He personally led some of the first detailed comparisons between experiment and turbulent transport theory of heat and particle fluxes in fusion reactor conditions, and he conducted the only measurements to date of the creation and transport of helium ash in a laboratory fusion plasma. For his work on the effects of sheared flows on plasma turbulence and tokamak plasma confinement, he shared the American Physical Society Award for Excellence in Plasma Physics in 2001 and Princeton University's Kaul Foundation Prize for Excellence in Plasma Physics Research and Technology Development in 2000. He is a Fellow of the American Physical Society and the Institute of Physics, and he has authored over 150 refereed publications. Dr. Synakowski's work approach is collaborative; he is known for forging connections between experiment and theory and also among institutions. His community leadership was exemplified by his service as the U.S. Transport Task Force Chairman from 2000 to 2002.

Dr. Synakowski received his Ph.D. in physics at the University of Texas in 1988, performing his research on the Texas Experimental Tokamak (TEXT). He received his Bachelor of Arts degree with Departmental Honors from the Johns Hopkins University. There, he received the Donald Kerr Memorial Medal for Excellence in Physics.

With an annual budget of more than \$400M, the Office of Fusion Energy Sciences is the nation's leading supporter of research in fusion-related plasma physics and in the general science of fusion energy. The FES mission is to expand the fundamental understanding of matter at very high temperatures and densities and the scientific foundations needed to develop a fusion energy source. Its major responsibilities include overseeing the U.S. participation in the ITER project. FES also oversees a domestic fusion energy sciences program preparing for the burning plasma era in magnetic fusion and high energy density physics. More broadly, FES stewards the development of plasma physics as a scientific discipline. As head of the Office of Fusion Energy Sciences, Dr. Synakowski will serve as one of the Associate Directors of the Office of Science. He will be responsible for strategic program planning, budget formulation and execution, program integration with other Office of Science activities and with the DOE technology offices, and interagency integration. The position is within the ranks of the U.S. government's Senior Executive Service.