

Department of Physics & Astronomy

PHYSICS NEWS FLASH

Physics Department Announces Four New APS Fellows

January 27, 2004

Four scientists with ties to the UT Physics Department have been elected fellows of the American Physical Society. David Dean, Anthony Mezzacappa, Serge Ovchinnikov, and Lal Pinnaduwege will join the ranks of APS members recognized for making significant contributions to the world of physics through research, applications, or teaching. Every year, their peers elect less than one-half of one percent of the current APS membership as fellows.

Dr. David Dean is an adjunct associate professor in the department. He is a senior scientist in the physics division at Oak Ridge National Laboratory where he is also the nuclear theory group leader. Dr. Dean was cited for “his important contributions to understanding of quantum many-body systems and for applications of computational quantum mechanics to the structure of atomic nuclei.” He is currently teaching a graduate course in physics devoted to computational methods and previously helped coordinate a [nuclear physics “summer school”](#) for graduate students.

Dr. Anthony Mezzacappa is adjunct professor of physics and an astrophysics theorist at Oak Ridge National Laboratory. He was cited “for his pioneering work toward identifying the explosion mechanism of core collapse supernovae and his leadership in the development of U.S. computational science.” ([Dr. Mezzacappa’s work on understanding supernovae](#) was featured in the Fall 2000 issue of *Cross Sections*, the physics department newsletter).

Dr. Serge Ovchinnikov is a research professor in the physics department and was cited “for the development of the hidden crossing and two-center Sturmian theory of ion-atom collisions, and the hyperspherical hidden crossing theory of electron and positron interactions with atoms.” In November 2004, Dr. Ovchinnikov and two of his colleagues won the prestigious [Konstantinov Prize](#) from the Russian Academy of Sciences.

Dr. Lal Pinnaduwege is a research professor in the department and a senior scientist at Oak Ridge National Laboratory. He was cited for “his pioneering work in developing micromechanical cantilever-based sensors for detection of explosive vapors and elucidation of fundamental physical principles underlying the thermally-induced nanodeflagations for chemical selectivity.” Dr. Pinnaduwege is one of the developers of [SniffEx](#), a compact, low-cost vapor sensor designed to detect and locate a variety of explosives, which won an R&D 100 Award last summer.