

Dr. Philip Snyder Selected as the 2004 Rosenbluth Award Recipient

Dr. Philip Snyder, a staff scientist at General Atomics is the recipient of the 2004 General Atomics Rosenbluth Award for Fusion Theory, established in 2003 to recognize and advance outstanding members of the Fusion Energy Sciences theoretical community in their early careers.

(See http://fusion.gat.com/awards/rosenbluth_award/rosenbluth.html)

Dr. Snyder's recent research focuses on the stability and nonlinear dynamics of the edge plasma, aimed at developing an understanding of edge localized modes (ELMs) and the H-mode pedestal. He has made pioneering contributions to the peeling-ballooning model of ELMs, and (with H.R. Wilson) developed the ELITE code, which has facilitated quantification and successful experimental tests of the model. He has also conducted (with X. Xu) studies of the nonlinear dynamics of edge instabilities, which have identified explosive growth and fast radial propagation of filaments during the early stages of the ELM crash. Previously, he derived fluid closures, which allow the incorporation of kinetic effects in both the MHD and electromagnetic microturbulence regimes (with G. Hammett). He also developed a novel and efficient electron physics model, and implemented it in realistic 3D nonlinear simulations of electromagnetic drift and Alfvén turbulence in the tokamak core, revealing significant finite beta effects on transport.

The award is open to fusion theorists worldwide who are in their early careers. The application deadline for the next award is February 1, 2005.