

In Memoriam  
**An editorial in honour of Professor George Zaslavsky**

Professor George Zaslavsky (May 31, 1935-November 25, 2008) passed away on November 25, 2008. This news is of great sorrow to the community of nonlinear physics and our journal “Communications in Nonlinear Science and Numerical Simulations”, for which he was advisory editor for over 7 years. Therefore, on behalf of the editorial board of the journal “Communications in Nonlinear Science and Numerical Simulation”, I would like to take this opportunity to pay tribute to a valuable colleague, Dr. George Zaslavsky in physics of dynamical and quantum chaos.

Dr. Zaslavsky was born on May 31, 1935 in Odessa, Ukraine (former USSR). He graduated from Odessa State University, and earned his Ph.D. degree in 1964 and a Russian Doctoral degree in 1973. He worked in the Institute of Nuclear Physics at Novosibirsk from 1964 to 1970, and at the Institute of Physics in Krasnoyarsk from 1970 to 1984. From 1984 to 1991, Dr. Zaslavsky was Head of the Dynamical Systems Group of the Space Research Institute in Moscow. In 1991, Dr. Zaslavsky visited the University of California at Santa Barbara (USA). From 1992 to 2008, he worked at the Department of Physics and Courant Institute of Mathematical Sciences of the New York University as a professor of Physics and Mathematics. He has been a recipient of a Doctorate honoris causa from Aix-Marseilles University 1.

George Zaslavsky, together with Boris Chirikov and Joe Ford, was a founder of the theory of Hamiltonian chaos. He initialized many fundamental concepts and ideas in the field of nonlinear dynamics and chaos, which are vital and useful to influence further developments. George Zaslavsky suggested and studied the separatrix map to investigate the stochastic layer, and in the study of standard map he found out such fundamental phenomena (e.g., ballistic modes and islands-around-islands structure). Furthermore, he discovered the stochastic webs with crystal and quasicrystal symmetries. George Zaslavsky was the first scientist to study the probability distributions of Poincare recurrences for the theoretical developments of Hamiltonian chaos and he has obtained very fruitful results in this direction. For instance, he derived a fractional kinetic equation for the statistical description of dynamical chaos, and such an equation is a fractional generalization of the Fokker-Plank equation. In the field of quantum chaos, he successfully worked out the validity of semi-classical approximation (Ehrenfest time). In the field of dissipative systems, George Zaslavsky introduced a dissipative standard map which is called now the Zaslavsky map.

Professor Zaslavsky left us his fundamental, original contributions on physics of chaos and fractional dynamics. His direct and indirect influence on nonlinear dynamics and chaos was highly considerable. George Zaslavsky was serious, independent and creative in his research work. The scientific community suffers a loss with his passing.

Albert C.J. Luo  
Department of Mechanical and Industrial Engineering

Southern Illinois University Edwardsville  
Edwardsville, IL 62026, USA  
Tel.: +1-618-650-5389; fax: +1-618-650-2555  
E-mail address: [aluo@siue.edu](mailto:aluo@siue.edu)