

George Zaslavsky

(1935-2008)

It is our very sad duty to write the obituary dedicated to the former member of the organizing committee of the conference, Prof. George Zaslavsky.

Prof. George Zaslavsky was a key person for studies of Hamiltonian chaos as well as made important contributions to a variety of other subjects. Without pretending at the completeness, we would like to mention the following basic results by George Zaslavsky.

1. The introduction of the *separatrix map* in 1968 (in the co-authorship with N. Filonenko). The separatrix map has become one of the major tools in theoretical studies of separatrix chaos. Nowadays, it is often called as *Zaslavsky separatrix map*.
2. Studies of nonlinear dynamics, especially chaos, in *plasma physics*, in collaboration with R. Sagdeev, B. Chirikov, X. Leoncini and others.
3. A development of the first rigorous theory of quantum resonance in 1977 (in the co-authorship with G. Berman) and further studies of the subject.
4. A discovery (in the end of the 80th, in the co-authorship with A. Chernikov, R. Sagdeev, D. Usikov and others) of *stochastic webs* in nearly degenerate Hamiltonian systems and a further development of the subject. In particular, the map describing one of the types of such webs was later named after him: *Zaslavsky web map*.
5. Studies of dissipative systems and, in particular, an introduction of the map named later after him: *Zaslavsky map*.
6. A study of nonlinear dynamics of *optical rays* (in collaboration with S. Abdullaev).
7. A development of fundamental issues of the statistical physics, in particular concerning the concept of *Maxwell demon*.
8. A study of an *anomalous* chaotic transport and, in particular, *Levi flights* (in collaboration with M. Shlesinger, J. Klafter and others), and a development of the theoretical tools of a *fractional* dynamics.

It is worth to note that, despite a very intensive collaboration with colleagues, Prof. Zaslavsky kept an intensive scientific research on his own, publishing until the recent time a lot of scientific papers and books without co-authors.

Apart from extraordinary scientific achievements, George Zaslavsky was incredible in an organization and stimulation of a scientific research. He wrote seven books (some of which were republished a few times) and several key reviews in major scientific journals. He was an editor of more than a dozen of topical collections of papers and of special issues in various journals.

We would like to emphasize also an extreme clarity of his scientific works, that provides for their great pedagogical value, especially for physicists.

It is worth to mention also a scientific courage of Prof. Zaslavsky, who was open to new ideas and didn't fear to develop non-conventional approaches.

Finally, we would like to mention extraordinary personal merits of George Zaslavsky, especially emphasizing his generosity, both personal and scientific: despite his fame and extreme business, he was very careful to works and ideas by others, as well as to their fates, that was particularly important for young scientists. We personally feel ourselves very much indebted to George Zaslavsky both as to a scientist and a person. If any of the conference participants or external visitors of the conference web-site wish to share their own reminiscences about George Zaslavsky, they may do this on-line (see the link in the conference's web site) specially arranged by us for this aim.

In conclusion, the death of Prof. George Zaslavsky is a great loss both for people who knew him personally and for many scientific areas, especially Hamiltonian chaos. To compensate this loss at least partly, researchers in these areas should increase their scientific and organizational activity, which would be a tribute to the memory of George Zaslavsky.

Prof. Edson Denis Leonel, Chairman
Dr. Stanislav Soskin, Plenary Speaker