

## Viorel Arnăutu

(13.10.1955 – 04.01.2014)

Viorel Arnăutu was born on October 13-th, 1955, in Iași, the old capital of Moldavia, in a well-known family of physicians and professors. His whole life and career was dedicated to mathematics, that he studied in the schools and in the Department of Mathematics of the "Al. I. Cuza" University in Iași. He obtained his Ph.D. in Applied Mathematics in 1987 under the supervision of Academician Viorel Barbu. His scientific education also includes a postdoc grant in 1991 at the Laboratory of Numerical Analysis, CNRS and University Paris VI. After a short period at the Computer Center of the "Al. I. Cuza" University in Iași, his professional career included positions of assistant professor (1982 – 1992), associate professor (1992 – 2002) and full professor until his untimely death in the beginning of 2014. All the positions were in Numerical Analysis and Information Technology, at the Faculty of Mathematics, "Al. I. Cuza" University in Iași, Romania. He also held temporary positions for various time periods at the Institute for Applied Mathematics, Freiburg, Germany (1984) and at the Department of Mathematics, Università degli Studi di Bari, Italy (1985). With the University of Jyväskylä (Pekka Neittaanmäki) and the Weierstrass Institute Berlin (Juergen Sprekels, Dietmar Hoemberg) a very long cooperation was active for many years, concretized in several research projects and many co-authored scientific works. Other important collaborators of Viorel Arnutu were Vincenzo Capasso, Viorel Barbu, Dan Tiba, Sebastian Anița. The research interests of Viorel Arnăutu span a large range of subjects: numerical methods (theory, algorithms and computer programs) for optimal control problems governed by PDE's and by variational inequalities; numerical methods for Hamilton-Jacobi equations (the synthesis of optimal control); numerical methods for PDE's and integral equations; applied mathematics, applied optimal control problems; free boundary problems: epidemic models; optimization of plates; laser hardening of steel; 3D curved mechanical

structures; population dynamics. Viorel Arnăutu is the author or co-author of four books and more than 25 papers published in international journals and proceedings volumes:

- *Optimal Control from Theory to Computer Programs* (in cooperation with Pekka Neittaanmäki), Kluwer Academic Publishers, Dordrecht, Boston, London, 2003.
- *Numerical Methods for Variational Problems*, University of Jyväskylä, Department of Mathematical Information Technology, Lecture Notes 8/2001, Jyväskylä, Finland, 2001.
- *Metode numerice pentru probleme variaționale. Teorie și algoritmi*, Editura Universității "Alexandru Ioan Cuza", Iași, 2001.
- *An Introduction to Optimal Control Problems in Life Sciences and Economics. From Mathematical Models to Numerical Simulation with MatLab* (in cooperation with S. Anița, V. Capasso), Birkhäuser, Boston, 2010.

He had four Ph. D. students. He is survived by his wife Marcela and his two children. All his relatives, his friends and collaborators, his students will remember his very warm and pleasant personality, his positive and friendly attitude, his humour and his kindness.

Pekka Neittaanmäki