

Curriculum Vitae

SOFONEA Victor Matei Constantin

Educational background:

- PhD in Physics (1996) - University of Bucharest, Romania
Title of the thesis: *Collective Interactions in Magnetic Fluids*
Advisor: Professor Ioan-Iovitz Popescu, Member of the Romanian Academy
- BSc (1978) - Department of Physics, West University of Timisoara, Romania

Professional experience (positions held) :

- *since 1997* : Senior Researcher (CS1)
Center for Fundamental and Advanced Technical Research, Romanian Academy, Bd. Mihai Viteazul 24, 300223 Timisoara, Romania
- *since 2011* : PhD Advisor
Doctoral School of Physics, West University of Timisoara, Bd. Vasile Parvan 4, Timisoara
- *1990 - 1997* : Researcher, Research Center for Hydrodynamics, Cavitation and Magnetic Fluids, “Politehnica” University of Timisoara
- *1986 - 1990* : Physicist, Department of Physics, West University of Timisoara
- *1981 - 1986* : Researcher, Institute for Welding and Materials Testing, Timisoara

Scholarships and invited research stages abroad (> 1 month) :

- Institute for Computer Applications, University of Stuttgart, Germany (1993);
- Laboratory of Acoustics and Condensed Matter Optics, Pierre and Marie Curie University, Paris, France (1994);
- International Centre for Theoretical Physics, Trieste, Italy (1994);
- Department of Theoretical Physics, University of Wuppertal, Germany (1996);
- Laboratory of Colloid Sensors, Jean Monnet University, Saint Etienne, France (1997),
- Department of Physics, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA (1998, 2001, 2004 and 2005);
- Department of Physics and Astronomy, The University of Edinburgh, UK (2000),
- Department of Physics, University of Bari, Italy (2004, 2005, 2006, 2009, 2011, 2013 and 2014);
- Department of Mechanical Engineering, Kobe University, Japan (2007 and 2008);
- Laboratory of Plasma and Energy Conversion, Paul Sabatier University, Toulouse, France (2009, 2010, 2013, 2014 and 2015).

Awards :

“Aurel Vlaicu” prize of the Romanian Academy (1999) , for the group of papers entitled *Lattice Boltzmann Morphological Models for Complex Fluids* (with Dr. Klaus Mecke, University of Wuppertal, Germany).

Involvement in national and international research projects:

- Since 1997 - various projects (supported by the Romanian Academy or the Romanian National Authority for Scientific Research) related to transport processes in rarefied gases as well as to structure formation in multicomponent and multiphase fluids.
- Research team member in NASA projects (1997 - 2005) on binary diffusion under stochastic microgravity.
- Two US Air Force European Office of Aerospace Research and Development (EOARD) projects: *Lattice Boltzmann models for multicomponent fluids* (1998 - 1999) and *High order numerical schemes for Lattice Boltzmann models: applications to flow with variable Knudsen number* (2005 - 2007), respectively.
- Exploratory research project: *Kinetic models for micro-scale transport phenomena and structure formation in complex fluids: implementation on GPU-based parallel computing systems* (2011 - 2016).
- Collaborative project France - Romania: *Lattice Boltzmann models for predicting the deposition of inertial particles transported by turbulent flows* (2013 - 2016).

Other activities :

- Scientific Secretary of the 8th International Conference on Magnetic Fluids held June 29 - July 3, 1998 în Timișoara, Romania
- Editor (2003 - 2014) for Computational Physics papers at the journal *Open Physics* (formerly *Central European Journal of Physics*, published by Springer and now by de Gruyter)
- Invited talks and lectures on Lattice Boltzmann models for transport phenomena, non-equilibrium flows and microfluidics, delivered at the *University of Bari, Italy* (2005 and 2007); *Paul Sabatier University, Toulouse, France* (2007 and 2009); *University of Kobe, Japan* (2007 and 2008); *Institute of Space Propulsion Lampoldshausen, Germany* (2015); *Institute of Mechanics, Sofia, Bulgaria* (2018).
- Member of the Managing Committee of the *COST Action MP1305 Flowing Matter* (2014 - 2018), chaired by Prof. Federico Toschi, Eindhoven Institute of Technology, Netherlands.
- 51 scientific papers included in the WoS database, 8 papers published in Romanian Academy journals, 1 chapter in a book published by Springer Online, 3 Romanian Patents

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