

CURRICULUM VITAE

Name: Ruxandra-Marina STAVRE

Position: Senior researcher at the Institute of Mathematics "Simion Stoilow", Romanian Academy, Continuum Mechanics Workgroup

Nationality: Romanian

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Education:

- 1990–Ph. D. in Mathematics, Institute of Mathematics, Romanian Academy

Thesis title: "Free boundary problems in fluid mechanics"

Scientific advisor: Professor dr. Horia ENE

- 1982–Master degree of the Faculty of Mathematics, University of Bucharest

(5 years), with Magna cum laude

Postdoctoral stages:

- Project Tempra. Cooperation with University Jean Monnet, Saint-Etienne, France, January-June 1995.

Employment:

- 2002– senior researcher I at the Institute of Mathematics "Simion Stoilow", Romanian Academy, Bucharest

- 1997–2001 senior researcher II at the Institute of Mathematics "Simion Stoilow", Romanian Academy, Bucharest

- 1990–1997 senior researcher III at the Institute of Mathematics "Simion Stoilow", Romanian Academy, Bucharest

- 1983–1990 researcher at the Department of Mathematics of National Institute for Scientific and Technical Creation (INCREST), Bucharest

Teaching experience:

- Since 1982 part time teaching of seminars and courses at the Department of Mechanics of the Faculty of Mathematics of the University of Bucharest: rational mechanics, mechanics of continua, viscous flows, transport in porous media.

Scientific fields of interest:

- free boundary problems,
- variational methods in the mechanics of continuous media with special interest in the study of partial differential equations in fluid mechanics and porous media flows,

- numerical analysis employing finite difference and finite element methods

for obtaining quantitative behaviour of solutions of P. D. E. in the mechanics of continua,

- optimal control methods associated with problems of the mechanics of continua,

- asymptotic methods.

The main results are:

1. Free boundary problems modelling the fluid flow through a non-homogeneous dam. Publications in 1984-1989, 1999. Main result in 1985.

2. The study of a jet incident on a porous wall. Publications in 1991-1994. Main result in 1991.

3. Optimal control problems for Navier-Stokes flows. Publications in 1995-2002. Main results in 1996, 2002.

4. The study of an inverse problem in heat propagation. Publication in 2000.

5. Numerical simulation of a jet of ink. Publication in 2001.

6. Control problems for micropolar fluids. Publications in 2000-2006. Main results in 2002, 2003.

7. Asimptotic analysis for micropolar fluids. Publications in 2002-2008. Main result in 2008.

8. Asymptotic methods for fluid-structure interaction problems. Publications in 2006–2018. Main results in 2006, 2008, 2010, 2012, 2014, 2016, 2018.

9. Mathematical modeling of the fluid flow through PEM fuel cells. Publications in 2008, 2009. Main result in 2011.

10. Optimization for coupled problems. Main results in 2015, 2016.

International cooperation:

- EURROMMAT (European Integration of the Romanian Research Activity); director of project of the cooperation with University Jean Monnet, Saint-Etienne, France, 2001-2004.
- Academy Exchanges with University Jean Monnet, Saint-Etienne, France, 2004-2005.
- Visiting Professor at Jean Monnet University, Saint-Etienne, France, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2018.

During my visits at Jean Monnet University I published 18 joint works (with G. Panasenko, D. Dupuy, C. Carasso, Y. Sirakov, R. Fares, I. Malakhova-Ziablova).

I was twice member of the examination committee for the Ph. D theses, defended at Jean Monnet University in 2010 (Abdessalam Nachit) and in 2015 (Irina Malakhova-Ziablova).

Awards:

- Prize "Spiru Haret" of the Romanian Academy, December 2010 (for 2008).
- UEFISCDI prizes for ISI publications: 3 in 2008, 1 in 2009, 1 in 2010, 1 in 2011, 1 in 2014, 2 in 2015, 1 in 2016.