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- Citizenship: romanian
- Date of birth: December 27th, 1982
- Place of birth: Bucharest, Romania

EDUCATION

2002-present *POLITEHNICA University of Bucharest, Faculty of Power Engineering, Hydraulics Department, REOROM Group*

- PhD student in Fluid Mechanics and Rheology (with scholarship)
- Supervisor: Prof. Dr. Eng. Corneliu Balan

2007-2009 *POLITEHNICA University of Bucharest, Bioengineering and Biotechnology Department*

- MSc in Medical and Clinical Engineering

2002-2007 *POLITEHNICA University of Bucharest, Faculty of Engineering and Management of Technological Systems*

- BEng in Mechatronics.
- Graduated as faculty head of graduates, with an average grade of 9,57
- Diploma examination grade: 10,00.

EXPERIENCE

2005–Present *Member of the REOROM research group (POLITEHNICA University of Bucharest, Faculty of Power Engineering) under the supervision of Prof. Dr. Eng. Corneliu Balan. As a member of the group I worked as a researcher/specialist on the following research grants:*

Grant **CNMP** (Centrul National de Management Programe) no. 3617 “Diffusion Tensor Imaging integrated within a 3D anatomic model – instrument for diagnostics and treatment (3DDTI)” (Imagini ale traiectelor nervoase (Diffusion Tensor Imaging) integrate unui model anatomic 3D – instrument de diagnostic si tratament (3DDTI)), Grand issued by Partnership in Priority Domains Program (Programul Parteneriate in Domeniile Prioritare);

Grant **CNMP** (Centrul National de Management Programe) no. 4240 “LASER confocal endomicroscopy and magnification endoscopy value in the narrow band (NBI) for the diagnostic of the ENDONERD” (Valoarea endomicroscopiei confocale LASER si endoscopiei cu magnificatie, in banda ingusta (NBI), in diagnosticul bolii de reflux gastroesofagian nonerozive (ENDONERD)). Grant issued by Partnership in Priority Domains Program (Programul Parteneriate in Domeniile Prioritare);

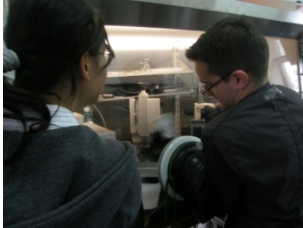
Grant **CNCSIS A 102 / 2007** : “The study of boundary conditions applied at the flow of complex fluids in micro and nanochannels (Studierea condițiilor la limită aplicate curgerii fluidelor complexe prin micro și nano-canale), 2007-2009;

Grant **CNCSIS 54 / 2006** Interdisciplinary Platform for research, development – *BIOINGTEH*” (Platforma interdisciplinara pentru cercetare, dezvoltare si formare

profesionala);

Grant **CEEX** 2005 (INFOSOC no. 620/13.10.2005) “Research concerning the development of a computerized system for the modeling of the lubricants durability” (Cercetari privind realizarea unui instrument informatic integrat pentru modelarea si simularea comportarii la uzura si a durabilitatii lubrifiantilor), 2005-2008;

Grant **RESPLATEPE CEEX** 2006 (AMTRANS Program) “Scientific network and ecological technological platform for electronic packaging” (Rețea științifică și platformă tehnologică ecologică pentru packagingul electronic), 2006-2008;



Grant **NANOINT CEEX** 2006 (AMCSIT Program) “The control of human cellular and bacterian interaction with nanostructured surfaces: strategies for the development of „intelligent” biosurfaces” (Controlul interactiei celulelor umane si bacteriene cu suprafetele nanostructurate: strategii pentru realizarea de biosuprafete “inteligente”), 2006-2008;

Grant **CARDIOCOMP CEEX** 2006 (VIASAN no: 81/2006) “Computerized optimisation of the diagnostical process, therapeutic intervention and prognosis of cardiovascular disease” (Optimizarea computerizată a procesului de diagnostic, intervenție terapeutică și prognostic a bolilor cardiovasculare), 2006-2008;

Grant **DIAPROGENDO CEEX** 2006 (VIASAN no: 89/2006) “Diagnostical and prognostical implication of the endomicroscopic aspect of the microvascularisation of pre-malign and malign lesions of the superior digestive tube” (Implicații diagnostice și prognostice ale aspectului endomicroscopic al microvascularizației leziunilor premaligne și maligne ale tubului digestiv superior), 2006-2008.

AWARDS AND SCHOLARSHIPS

2009 (October)- 2010 (March) DAAD Doctoral Scholarship for six months at Universität Karlsruhe (TH), Institut für Thermische Verfahrenstechnik, under the supervision of Prof. Dr. Eng. Matthias Kind;

2009 *Ist prize* for “The influence of a magnetic field in Taylor-Couette Bioseparators”; Section: Bioengineering and Biotechnology (Master);

2008 Society of Rheology student scholarship for the International Congress on Rheology, Monterey, California 2008;

2008 *IInd prize* for “Couette-Taylor flow applications in Biofluid mechanics”; Section: Bioengineering and Biotechnology (Master);

2007-2010 CNCSIS (The National Council for Scientific Research) Bd Scholarship award holder

2007 *IInd prize* for “Study on the flow of a fluid in microchannels”; Section: Bioengineering and Biotechnology;

2009 *Ist prize* for “Experimental research on laminar turbulent transition between coaxial cylinders”; Section: Fluid mechanics, Hydraulics and Hydroenergetics.

FOREIGN LANGUAGES

English (advanced); French (beginners); German (beginners).

OTHER

- *Member of the SOCIETY OF RHEOLOGY starting from July 2008;*
- *SOR Travel Grant for The International Congress on Rheology, Monterey 2008;*
- *Member in the organizing committee of the 1st PolyCerNet Annual School, Romania, September 2007;*

- *Visits at universities and research institutes:*

- Universität Karlsruhe (TH): Institute for Chemical Technology and Polymer Chemistry (Prof. dr. Manfred Wilhelm), Germany;
- Universität Karlsruhe (TH): Institut für Thermische Verfahrenstechnik (Prof. Dr. Eng. Matthias Kind) Germany 2007 and 2008;
- Stanford University: Chemical Engineering Department (Prof. Dr. G. Fuller), USA 2008;
- T.U. Eindhoven: Mathematics for Industry; Physics Department (Prof. Dr. Eng. G.J.F. van Heijst), the Netherlands 2007;
- T.U. Darmstadt: Fachbereich Material- und Geowissenschaften, Thermische Verfahrenstechnik (Prof. Dr. Eng. Manfred Hampe), Germany 2007;
- Deutsches Kunststoff-Institut, Darmstadt, Germany 2007;
- Universität Karlsruhe (TH): Institut für Mechanische Verfahrenstechnik und Mechanik (Prof. Dr. Norbert Willenbacher), Germany 2007.

QUALIFICATIONS

2006 Course on “Numerical Methods in Fluid Dynamics and FLUENT Applications” organized by the Academic consortium for research and development on fluid Dynamics (ACCORD-Fluid) at Politehnica university of Timisoara, National Centre for Complex Fluids Systems Engineering as part of CNCSIS A Consortium Code 33, “Vortex Hydrodynamics and Applications” Research Grant;

2004 Language proficiency certificate for English (Politehnica University of Bucharest, Foreign Languages Department).

LECTURES AND PRESENTATIONS



2008(Sep.) VIASAN-CEEX National Simposium (Module 1), Sinaia, Romania – poster presentation

- Poster title: Experimental and numerical modeling of blood flow in capillaries

2008 (Aug.) International Congress on Rheology, Monterey CA, United States of America – poster presentation

- Poster title: Time dependant flow patterns in Couette-Taylor motion of pure viscous and weakly elastic polymer solution

2007 (Nov.) Uni. Karlsruhe (TH): Institut für Thermische Verfahrenstechnik (Prof. Dr. Eng. Matthias Kind)

- Presentation title: The effects of elasticity on laminar-turbulent transition in Couette-Taylor flow

2007 (Sept.) PolyCerNet Rheology School (20-22th of Sept. Bucharest - Iassy, Romania)

- Lecture: Applied Rheology: material functions (C Balan, **R. Kadar**)
- Lecture: Numerical Simulations of the flow field (Al. Morega, C. Marculescu, **R. Kadar**)

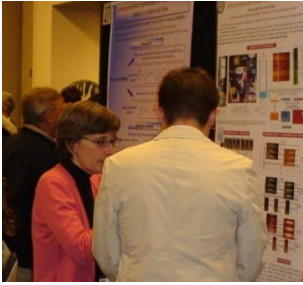
2007 (Feb.) Uni. Karlsruhe: Institut für Mechanische Verfahrenstechnik und Mechanik (Prof. Dr. Norbert Willenbacher), Germany;

- Presentation title: Laminar – turbulent transition in Couette – Taylor flow: comparison between Newtonian and non – Newtonian fluids

LIST OF PUBLICATIONS

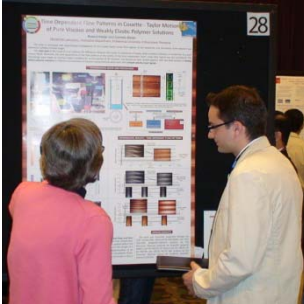
Kadar R., Balan C., Broboana D., Balan C.M., *Experimental and numerical modeling of blood flow in capillaries*, (in romanian), Proceeding of the National Simposium VIASAN-CEEX (Module 1), Edited by the National Authority for Scientific

Research and the Academy of Medical Sciences, 2008;



Kadar R., Barbat T., *Experimental investigations and numerical simulations of Couette-Taylor flow with applications in mixing processes*, Scientific Bulletin of the Politehnica University of Timisoara, Transactions of Mechanics, Proceedings of the 4th Workshop on Vortex Dominated Flows, Bucharest, Romania, Ed. by A.M. Georgescu et al, pp. 101-106, 2008;

Balan C.M., Broboana D., Balan C., **Kadar R.**, *Experimental and numerical study on blood flow in carotid affected by stenosis*, (in romanian), Proceeding of the National Symposium VIASAN-CEEX (Module 1), Edited by the National Authority for Scientific Research and the Academy of Medical Sciences, 2008;



Broboana D., Calin A., Ou Yang T., Balan C.M., **Kadar R.**, Marculescu C., Balan C., *Visualizations and numerical techniques in the complex flows analysis*, U.P.B. Sci. Bull., Series D, Vol. 70, No. 4, 2008;

Kadar R., Balan C., *Time Dependent Flow Patterns in Couette - Taylor Motion of Pure Viscous and Weakly Elastic Polymer Solution*, Proceedings of The XVth International Congress on Rheology, Monterey 2008, American Institute of Physics, pp. 294-296, ISBN 978-0-7354-0549-3;

Kadar R., Balan C., *Onset of the Rheological Fluid Behavior in High Concentrated Suspensions*, Proceedings of The XVth International Congress on Rheology, Monterey 2008, American institute of Physics, pp. 815-817, ISBN: 978-0-7354-0549-3;

Broboana D., **Kadar R.**, Balan C., *Rheology of solder pastes: procedure to determine the yield shear stress*, CEEX Program Seminar « Ecological Electronick Packaging », Sinaia, Romania, July 25-27, 2008, pp. 112-119.

Broboana D., **Kadar R.**, Balan C., *Rheology of solder pastes: investigations of the squeezing flow*, CEEX Program Seminar « Ecological Electronick Packaging », Sinaia, Romania, July 25-27, 2008, pp. 127-133

Balan C., Broboana D., **Kadar R.**, *Vortex and Vorticity* in Chapter 9 - *Biomedical Vortex Flows of Vortex Dominated Flows*, Edited by Romeo F. Susan-Resiga, Sandor I. Bernad and Sebastian Muntean, Eurostampa 2007, pp. 430-443, ISBN 978-973-687-659-2;

Balan C., Broboana D., Balan C., **Kadar R.**, *On the Stick – slip Boundary Conditions at the Wall of Microchannels*, Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transactions on Mechanics, Proceedings of the 2nd Workshop on Vortex Dominated Flows – Achievements and Open Problems, 2007;

Broboana D., Marculescu C., **Kadar R.**, Balan C.M., *Experimental and Numerical Simulations of 3D Branching Flows with Application to the modeling of Blood Flow in Arteries*, 69-74, Timisoara Medical Journal, Volume 56, Supplement 4, pp. 23-29, 2006 (ISSN 1583-5251).

Marculescu C., **Kadar R.**, *Flow Visualizations and Numerical Modeling of Viscous Fluids in Rotational Motions*, The 32nd National Conference “Caius Iacob” of Fluid Mechanics, Mathematical Modeling, Nonlinear Dynamical Systems and Technical Applications”, Transilvania University Press, Brasov, Romania, 2006;