Curriculum vitae of Ondřej Kreml

- February 26, 1983: born in Šumperk
- 1997 - 2001: Mikuláš Koperník gymnasium in Bílovec, class with extended education of mathematics
- 2001 - 2006: undergraduate studies at the Faculty of Mathematics and Physics, Charles University in Prague, mathematical modeling, diploma thesis "Axially symmetric flow of a viscous newtonian fluid", supervisor Milan Pokorný
- 2005 - 2011: teaching at the Faculty of Mathematics and Physics, Charles University in Prague - exercises of mathematical analysis
- May 2006: winner of the czech-slovak competition SVOČ in the category "mathematical analysis"
- 2007 - 2010: Ph.D. student at the Faculty of Mathematics and Physics, Charles University in Prague, mathematical modeling, PhD thesis "Mathematical analysis of models for viscoelastic fluids", supervisor Milan Pokorný
- 2010 - present: postdoc position at Institute of Mathematics, Academy of Sciences of the Czech Republic
- 2012 - 2013: 12 months postdoc position at University of Zurich, working on project SCIEX 11.152

Longer academic stay:

- October 2012 - January 2013, May 2013 - December 2013: University of Zurich, Switzerland, working on project SCIEX 11.152

Shorter academic stays:

- November 2008: University of Warsaw, Poland
- June 2009, November 2010: Technical University, Darmstadt, Germany
- February 2010: Institute of Mathematics and Its Applications, University of Minnesota, Minneapolis, USA
- March 2013: Princeton University, USA
- July 2013: Max Planck Institute, Leipzig, Germany
- November 2014: Shanghai Jiao Tong University, China
- January 2015: Tokyo Institute of Technology, Japan

Grants:

- 2006 - 2009, Basic research center, funded by Ministry of Education, Youth and Sports, no. LC06052 *Nečas Center for Mathematical modeling*, graduate student and Ph.D. student
- 2007 - 2009, Grant Agency of the Charles University, project 2509/2007 *Mathematical models of viscoelastic fluids - theoretical and computational analysis*, principal investigator
- 2011 - 2013, Czech Science Foundation, project GAP201/11/1304 *Flow of fluids in domains with variable geometry*, team member
- 2012 - 2013, SCIEX, project 11.152 *TraFlu: Transport phenomena in continuum fluid dynamics*, fellow

- 2013 - 2016, Czech Science Foundation, project GA13-00522S *Qualitative analysis and numerical solution of problems of flows in generally time-dependent domains with various boundary conditions*, team member

LIST OF PUBLICATIONS

[1] Kreml, O.; Pokorný, M.: *A regularity criterion for the angular velocity component in axisymmetric Navier-Stokes equations.* Electron. J. Differential Equations 2007, No. 08, 10 pp. (electronic).

[2] Kreml, O.; Pokorný, M.: *On the local strong solutions for a system describing the flow of a viscoelastic fluid.* Nonlocal and abstract parabolic equations and their applications, 195–206, Banach Center Publ., **86**, Polish Acad. Sci. Inst. Math., Warsaw, 2009.

[3] Kreml, O.; Pokorný, M.: *On the local strong solutions for the FENE dumbbell model.* Discrete Contin. Dyn. Syst. Ser. S **3** (2010), no. 2, 311–324.

[4] Konieczny, P.; Kreml, O.: *On the 3D steady flow of a second grade fluid past an obstacle.* J. Math. Fluid Mech. **14** (2012), no. 2, 295–309.

[5] Feireisl, E., Karper, T., Kreml, O., Stebel, J.: *Stability with respect to domain of the low Mach number limit of compressible viscous fluids.* Mathematical Models and Methods in Applied Sciences **23** (2013), no. 13, 2465–2493.

[6] Kreml, O.; Nečasová, Š.; Pokorný, M.: *On the steady equations for compressible radiative gas.* Z. Angew. Math. Phys. **64** (2013), no. 3, 539–571.

[7] Feireisl, E.; Kreml, O.; Nečasová, Š.; Neustupa, J.; Stebel, J.: *Weak solutions to the barotropic Navier-Stokes system with slip boundary conditions in time dependent domains.* J. Differential Equations **254** (2013), no. 1, 125–140.

[8] Feireisl, E.; Kreml, O.; Nečasová, Š.; Neustupa, J.; Stebel, J.: *Incompressible limits of fluids excited by moving boundaries.* SIAM J. Math. Anal. **46** (2014), no. 2, 1456–1471.

[9] Chiodaroli, E.; Kreml, O.: *On the Energy Dissipation Rate of Solutions to the Compressible Isentropic Euler System.* Arch. Rational Mech. Anal. **214** (2014), 1019–1049.

[10] Chiodaroli, E.; Feireisl, E.; Kreml, O.: *On the weak solutions to the equations of a compressible heat conducting gas.* Ann. Inst. H. Poincaré Anal. Non Linéaire **32** (2015), no. 1, 225–243.

[11] Chiodaroli, E.; De Lellis, C.; Kreml, O.: *Global ill-posedness of the isentropic system of gas dynamics.* To appear in Comm. Pure Appl. Math., published online, DOI: 10.1002/cpa.21537.

[12] Feireisl, E.; Kreml, O.: *Uniqueness of rarefaction waves in multidimensional compressible Euler system*, Preprint (2014), accepted to J. Hyperbolic Differ. Equ.

[13] Feireisl, E.; Kreml, O.; Mácha, V.; Nečasová, Š: *On the low Mach number limit of compressible flows in exterior moving domains*, Preprint (2014).

[14] Kreml, O.; Pokorný, M.; Šalom, P.: *On the global existence for a regularized model of viscoelastic non-newtonian fluid*, Preprint (2014), accepted to Colloq. Math.

[15] Feireisl, E.; Kreml, O.; Vasseur, A.: *Stability of the isentropic Riemann solutions of the full multidimensional Euler system*, Preprint (2014).