

## Professional CV

**Ing. Jiří M I K Y Š K A, Ph.D.**

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### Education:

- 2001-2005 Czech Technical University, (Faculty of Nuclear Sciences and Physical Engineering),  
PhD in *Mathematical Engineering*,  
Dissertation thesis *Numerical Model for Simulation of Behaviour of Non-Aqueous Phase Liquids in Heterogeneous Porous Media Containing Sharp Texture Transitions*
- 1996-2001 Czech Technical University, (Faculty of Nuclear Sciences and Physical Engineering)  
MSc degree in *Mathematical Engineering*  
Degree thesis *Numerical Analysis of the Non-Stationary 2-D Porous Media Flow and Heat Transport in the Vicinity of Sources of the Geothermal Energy*

### Professional:

- Since 2005 **Assistant professor** at the Department of Mathematics, Czech Technical University, (Faculty of Nuclear Sciences and Physical Engineering)
- Duties:*  
teaching in undergraduate and graduate courses; mathematical modelling of multiphase flow processes in the subsurface, promotion of the faculty;
- 2003-2005 **Research assistant** at the Department of Mathematics, Czech Technical University, (Faculty of Nuclear Sciences and Physical Engineering)
- Duties:*  
mathematical modelling of two-phase flow in porous media; teaching in undergraduate and graduate courses; postgraduate study, promotion of the faculty
- 1996-2001 **Graduate study** at the Department of Mathematics, Czech Technical University, (Faculty of Nuclear Sciences and Physical Engineering)
- Duties:*  
mathematical modelling of two-phase flow in porous media, teaching in undergraduate courses, promotion of the faculty.

### Stays abroad

- 2008-2009: Reservoir Engineering Research Institute, Palo Alto, California, USA (8 months)

### Shorter stays abroad

- 2011: Computational Transport Phenomena Laboratory, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia (1 week)
- 2009: Yale University, Department of Chemical Engineering, New Haven, Connecticut, USA (1 week)
- since 2009: regularly visiting Reservoir Engineering Research Institute, Palo Alto, California, USA
- 2006: Laboratoire de Mathématiques, Université Paris-Sud, Orsay, France (3 weeks)
- 2004: Interdisciplinary Center for Scientific Computations, Simulation in Technology Center, University of Heidelberg, Germany (2 weeks)
- 2002-2009: regularly visiting Colorado School of Mines, Golden, Colorado, USA.
- 2002: CINECA, High Performance Computing Centre, Consortium of Italian Universities (1 month), Cassalechio di Reno, Bologna, Italy
- Since 2000: visiting Slovak University of Technology in Bratislava, Slovakia

**Scientometric data:** (as of Sep 23, 2014)

- ISI Web of Knowledge: 53 citations including self-citations
- ISI Web of Knowledge: 30 citations without self-citations
- H-index (Web of Knowledge): 5

**Grants** (principal investigator)

*"Computational Methods in Thermodynamics of Hydrocarbon Mixtures"*, KONTAKT LH 12064 of the Ministry of Education of the Czech Republic, principal investigator: Ing. Jiří Mikyška, Ph.D., 2012-2015.

*"Development of Computer Models of CO<sub>2</sub> Sequestration in the Subsurface"*, Czech Science Foundation, grant no. 105/11/1507, principal investigator: Ing. Jiří Mikyška, Ph.D., 2011-2013.

*"Mathematical Modelling of Multiphase Porous Media Flow"*, Czech Science Foundation, grant no. 201/08/P567, principal investigator: Ing. Jiří Mikyška, Ph.D., 2008-2010.

*"Mathematical Modelling of Groundwater Flow Contaminated by Organic Compounds"*, Internal Grant of the Czech Technical University, grant no. CTU 0309914, principal investigator: Ing. Jiří Mikyška, 2003

*"Mathematical Modelling of Multiphase Flow in Porous Media"*, Internal Grant of the Czech Technical University, grant no. CTU 0410714, principal investigator: Ing. Jiří Mikyška, 2004

**Grants** (participation)

*"Mathematical Modelling and Numerical Simulation of Free Boundary Problems with Application in Metallurgy"*, project No. 210/01/0676 of the Czech Science Foundation, principal investigator Dr. Ing. M. Beneš, 2001-2003

*"Mathematical Analysis of Evolution Problems within the Context of Free Boundary Problems and of Biology"*, principal investigator of the project No. 2001-036-1 of the French Czech Exchange Programme "Barrande", Dr. Ing. M. Beneš, 2001

*"Application of Mathematics in Technical Sciences"*, Research Direction Project of the Ministry of Education of the Czech Republic No. J04/98/210000010, principal investigator Prof. RNDr. Karel Kozel, DrSc., 1999-2004

*"Modern Methods of Mathematical Modelling and Numerical Simulation of Technological and Natural Processes"*, Czech-Slovak Joint Science Program, project No. 159, 2002-2003

*"Czech-Japanese Seminar in Applied Mathematics"*, Internal Grant of the Czech Technical University, grant no. CTU0415314, principal investigator Doc. Dr. Ing. Michal Beneš, 2004

*"Advanced Methods in Control and Optimization of Energy Production"*, project of the Ministry of Industry of the Czech Republic, project no. 1H-PK/22, principal investigator P. Šebek, Faculty of Electrical Engineering of the Czech Technical University in Prague, 2004-2008

*"Applied Mathematics in Technical and Physical Sciences"*, Research Direction Project of the Ministry of Education of the Czech Republic No. MSM6840770010, principal investigator Prof. RNDr. Karel Kozel, DrSc., 2005-2012

*"Workshop on Applied Mathematics"*, Internal Grant of the Czech Technical University in Prague, grant. No. CTU0511714, principal investigator: Doc. Dr. Ing. Michal Beneš, 2005

*"Czech-Japanese Seminar in Applied Mathematics"*, Internal Grant of the Czech Technical University, grant no. CTU0617014, principal investigator Doc. Dr. Ing. Michal Beneš, 2006

*"Modern Methods of Mathematical Modelling and Numerical Simulation of Technological and Natural Processes II"*, Czech-Slovak Joint Science Program, project No. 83, 2006-2007

*"Numerical and Experimental Validation of Stochastic Upscaling for Subsurface Contamination Problems Involving Multi-Phase Volatile Organic Chlorinated Solvents"*, National Science Foundation Award 0222286, principal investigator Tissa H. Illangasekare, Colorado School of Mines, Golden, Colorado, 2002-2007

*"Development and Validation of Porous Media Flow and Transport Models for Subsurface Environmental Application"*, Ministry of Education of the Czech Republic, KONTAKT ME878, principal investigator Doc. Dr. Ing. Michal Beneš, 2006-2009.

*"Numerical Methods for Multiphase Flow and Transport in Subsurface Environmental Applications"*, Ministry of Education, Youth and Sports of the Czech Republic, KONTAKT ME10009, 2010-2012, principal investigator M. Beneš, support for cooperation with the Colorado School of Mines, Golden.

*"Jindřich Nečas Center for Mathematical Modelling"*, Research Center of the Ministry of Education of the Czech Republic LC06052, principal investigator Doc. RNDr. Josef Málek, CSc., Charles University, 2006-2012.



***Supervising students***

Currently supervising 1 graduate, and 2 PhD students at FNSPE CTU in Prague. Previously 7 master students and 1 PhD student graduated. Former supervisor of 3 students of the Grammar School of George of Poděbrady within the framework of the faculty promotion activity TCN, organized by FNSPE CTU in Prague.

***Foreign languages******language******level of knowledge***

English

postgraduate exam

French

advanced

German

postgraduate exam

***Personal******Miscellaneous***

The diploma thesis awarded by the Werner von Siemens Excellence Award in 2001.

The dissertation thesis awarded by the Professor Babuška Price in 2006.

Elsevier's Outstanding Paper Award, International Conference on Computational Science, June 1-3, 2011, Singapore.

***Publication list*** separately.

Ing. Jiří Mikyška, Ph.D.  
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