

# Curriculum Vitae

*Name:* **Libor Behounek**

*Date:* **2012, May 1**

## **A. Contact Data**

*Academic Address:*

Institute of Computer Science  
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*Citizenship:*

Czech Republic, European Union

*URL:*

<http://www.cs.cas.cz/behounek>

## **B. Research Experience**

### **Employment:**

2003—

Academy of Sciences of the Czech Republic, Institute of Computer Science  
Full-time researcher 2010—  
Full-time graduate student researcher 2005–9  
Part-time graduate student researcher 2003–4

2011–2012

Vienna University of Technology  
Postdoctoral project assistant  
Project MA07-016 *Fuzzy logic: from mathematics to medical applications* of Vienna Science and Technology Fund (WWTF), principal investigator A. Ciabattoni, Faculty of Mathematics and Geoinformatics, Institute of Discrete Mathematics and Geometry (Aug 2011 – Feb 2012)

Project I143-G15 LogICCC *Contextualism, supervaluation, and fuzzy logic* of Austrian Science Fund (FWF), principal investigator Ch. Fermueller, Faculty of Informatics, Institute of Computer Languages (Mar–Apr 2012)

2000–2001

Academy of Sciences of the Czech Republic, Institute of Mathematics  
Contractual student research assistant (supervisor: A. Sochor)

## C. Awards

2010 Antonin Svoboda Prize of the Czech Society for Cybernetics and Informatics (CSKI) for the best PhD thesis in computer science defended in Czechia in 2009

2007 Distinguished Student Paper Award at the 5th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT)

2005 Best Paper Award at the XI International Fuzzy Systems Association (IFSA) World Congress

2004–2008: 1st (2008) and 2nd (2004, 2007) Best Presentation Award at the graduate-student workshop Doktorandske dny of the Institute of Computer Science AS CR

2002 Summa cum laude Mgr. (master's degree) at Charles University in Prague

### Citations (as of January 2012, excluding self-citations)

	<i>Number of citations</i>	<i>Hirsch index</i>
Scopus	66	5
All known	ca 110	5

## D. Grants

### Fellowships and single-researcher projects

2010—

*Logic-based fuzzy mathematics*

Postdoctoral single-researcher project 2010–2012

Czech Science Foundation (GACR), No. P103/10/P234

Academy of Sciences of the Czech Republic, Institute of Computer Science

2006 (Feb–May)

*Uncertain reasoning*

Marie Curie Early Stage Training short-term fellowship

Program *Mathlogaps* (Mathematical Logic and Its Applications)

University of Manchester, School of Mathematics, supervisor Jeff B. Paris

## Grant-team membership

(Participation in bilateral projects with foreign institutions not listed; for research stays financed by such projects see *Stays abroad* below.)

2012–(expected: 2014)

*A multivalued approach to optima and equilibria in economics*

Research grant, principal investigators T. Kroupa, P. Cintula

Czech Science Foundation (GACR), No. P402/12/1309

Academy of Sciences of the Czech Republic, Institute of Computer Science

2011–2012

*Fuzzy logic: from mathematics to medical applications*

Research project 2008–2012, principal investigator A. Ciabattini

Vienna Science and Technology Fund (WWTF), No. MA07–016

Vienna University of Technology, Faculty of Mathematics and Geoinformation,  
Institute of Discrete Mathematics and Geometry

2010—

*Mathematical fuzzy logic in computer science*

Research grant 2010–2013, principal investigator P. Hajek

Czech Science Foundation (GACR), No. P202/10/1826

Academy of Sciences of the Czech Republic, Institute of Computer Science

2008–2012

*Logical models of reasoning with vague information*

Research project 2008–2011, principal investigators: C. Fermueller, L. Godo, P. Hajek  
European Science Foundation (ESF), Scheme EUROCORES (European Collaborative  
Research), Program LogICCC (*Modelling Intelligent Interaction—Logic in the  
Humanities, Social and Computational Sciences*), Project FP006 LoMoReVI,  
consisting of 3 grants for participating teams in Vienna, Barcelona, and Prague

Team member of 2 constituent projects:

2008–2011: Czech Science Foundation (GACR) grant ICC/08/E018 *Fuzzy logic as a  
basis for a common framework of vague reasoning*, Academy of Sciences of  
the Czech Republic, Institute of Computer Science

2012: Austrian Science Fund (FWF) grant No. I143–G15 *LogICCC—Contextualism,  
supervaluation, and fuzzy logic*, Vienna University of Technology, Faculty of  
Informatics, Institute of Computer Languages

2007–2010

*Dynamic formal systems*

Research grant 2007–2010, principal investigators O. Majer, P. Cintula, E. Jerabek

Grant Agency of the Academy of Sciences of the Czech Republic, No. IAA900090703

Academy of Sciences of the Czech Republic, Institute of Computer Science

2005–2009

*Methods for intelligent systems and their applications in data-mining and natural language processing*

Research grant 2005–9, principal investigators J. Sima, M. Platek  
Information Society Programme, No. 1ET100300517

Academy of Sciences of the Czech Republic, Institute of Computer Science

Final report assessment: successful with excellent results

2005–2009

*Mathematical foundation of inference and decision under uncertainty*

Research grant 2005–9, principal investigator P. Hajek

Grant Agency of the Academy of Sciences of the Czech Republic, No. A100300503

Academy of Sciences of the Czech Republic, Institute of Computer Science

2005–2007

*Formal theory of mathematical structures with vagueness*

Junior research grant 2005–7, principal investigators P. Cintula, T. Kroupa

Grant Agency of the Academy of Sciences of the Czech Republic, No. B100300502

Academy of Sciences of the Czech Republic, Institute of Computer Science

Final report assessment: Successful with excellent results

2003–2006

*Logical foundations of semantics and knowledge representation*

Graduate student training grant 2003–7, principal supervisors: P. Jirku, V. Kolman,  
J. Peregrin, M. Duzi

Czech Science Foundation, No. 401/03/H047

Charles University in Prague, Faculty of Arts

2003–2004

*Mathematical foundations of inference under vagueness and uncertainty*

Research grant 2002–2004, principal investigator P. Hajek

Grant Agency of the Academy of Sciences of the Czech Republic, No. A1030004

Academy of Sciences of the Czech Republic, Institute of Computer Science

## **E. Education**

2002–2009: PhD, Charles University in Prague, Faculty of Arts, Department of Logic

*Subject:* Logic

*Advisors:* Petr Jirku, Petr Hajek

*Thesis:* Logical foundations of fuzzy mathematics

1996–2002: Master's degree (Mgr.), Charles University in Prague, Faculty of Arts

*Subject:* Logic (major), Computational linguistics (minor)

*Thesis:* Set theory over Goedel logic

## F. Publications

For a more detailed list, including minor items and papers in other languages, see <http://www.volny.cz/behounek/logic#papers>

### Journal papers

- Behounek L.: Graded properties of unary and binary fuzzy connectives. *Fuzzy Sets and Systems*, in print, doi: 10.1016/j.fss.2011.12.020 (2012).
- Behounek L., Dankova M.: Relational compositions in Fuzzy Class Theory. *Fuzzy Sets and Systems* 160 (8) 1005–1036 (2009).
- Behounek L., Bodenhofer U., Cintula P.: Relations in Fuzzy Class Theory: Initial steps. *Fuzzy Sets and Systems* 159 (14): 1729–1772 (2008).
- Behounek L.: On the difference between traditional and deductive fuzzy logic. *Fuzzy Sets and Systems* 159 (10): 1153–1164 (2008).
- Behounek L., Cintula P.: From fuzzy logic to fuzzy mathematics: a methodological manifesto. *Fuzzy Sets and Systems* 157 (5): 642–646 (2006).
- Behounek L., Cintula P.: Fuzzy logic as the logic of chains. *Fuzzy Sets and Systems* 157 (5): 604–610 (2006).
- Behounek L., Cintula P.: Fuzzy class theory. *Fuzzy Sets and Systems* 154 (1): 34–55 (2005).
- Behounek L.: Fuzzification of Groenendijk–Stokhof propositional erotetic logic. *Logique et Analyse* 47 (185–188): 167–188 (2004).

### Papers in edited volumes and conference proceedings

- Behounek L., Cintula P., Hajek P.: Introduction to mathematical fuzzy logic. In P. Cintula, P. Hájek, C. Noguera (eds.): *Handbook of Mathematical Fuzzy Logic*, pp. 1–101, College Publications, 2011.
- Behounek L., Majer O.: A semantics for counterfactuals based on fuzzy logic. In M. Pelis, V. Puncochar (eds.): *The Logica Yearbook 2010*, pp. 25–41. College Publications 2011.
- Behounek L., Cintula P., Bodenhofer U., Saminger-Platz S., Sarkoci P.: On a graded notion of t-norm and dominance. In *Proceedings of the 40th IEEE International Symposium on Multiple-Valued Logics*, pp. 73–76, Barcelona 2010.
- Behounek L.: Number-free mathematics in t-norm fuzzy logics. In J. Carvalho, D. Dubois, U. Kaymak, J. Sousa (eds.): *Proceedings of IFSA–EUSFLAT 2009*, pp. 449–454, Lisbon 2009.
- Behounek L.: Fuzzy logics interpreted as logics of resources. In M. Pelis (ed.): *The Logica Yearbook 2008*, pp. 9–21, College Publications 2009.

- Behounek L., Bodenhofer U., Cintula P.: Valverde-style representation results in a graded framework. In M. Stepnicka, V. Novak, U. Bodenhofer (eds.): *New Dimensions in Fuzzy Logic and Related Technologies: Proceedings of the 5th Eusflat Conference*, vol. I, pp. 153–160, University of Ostrava 2007.
- Behounek L., Kroupa T.: Interior-based topology in Fuzzy Class Theory. In M. Stepnicka, V. Novak, U. Bodenhofer (eds.): *New Dimensions in Fuzzy Logic and Related Technologies: Proceedings of the 5th Eusflat Conference*, vol. I, pp. 145–151, University of Ostrava 2007.
- Behounek L., Cintula P.: Features of mathematical theories in formal fuzzy logic. In P. Melin, O. Castillo, L.T. Aguilar, J. Kacprzyk, W. Pedrycz (eds.): *Foundations of Fuzzy Logic and Soft Computing*, pp. 523–532. Lecture Notes in Artificial Intelligence 4529 (IFSA 2007), Springer 2007.
- Behounek L., Kroupa T.: Topology in Fuzzy Class Theory: Basic notions. In P. Melin, O. Castillo, L.T. Aguilar, J. Kacprzyk, W. Pedrycz (eds.): *Foundations of Fuzzy Logic and Soft Computing*, pp. 513–522. Lecture Notes in Artificial Intelligence 4529 (IFSA 2007), Springer 2007.
- Behounek L.: Extensionality in graded properties of fuzzy relations. In *Proceedings of the Eleventh International Conference IPMU 2006*, pp. 1604–1611. Edition EDK, Paris 2006.
- Behounek L.: Towards a formal theory of fuzzy Dedekind reals. In E. Montseny, P. Sobrevilla (eds.): *Proceedings of the Joint 4th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT) and the 11th Rencontres Francophones sur la Logique Floue et ses Applications (LFA), Barcelona, Spain, September 7–9, 2005*, pp. 949–954. Barcelona 2005.
- Behounek L., Cintula P.: Fuzzy class theory as foundations for fuzzy mathematics. In Y. Liu, G. Chen, M. Ying (eds.): *Fuzzy Logic, Soft Computing and Computational Intelligence: Eleventh International Fuzzy Systems Association World Congress*, vol. 2, pp. 1233–1238. Tsinghua University Press & Springer, Beijing 2005.
- Behounek L., Cintula P.: General Logical Formalism for Fuzzy Mathematics: Methodology and Apparatus. In Y. Liu, G. Chen, M. Ying (eds.): *Fuzzy Logic, Soft Computing and Computational Intelligence: Eleventh International Fuzzy Systems Association World Congress*, vol. 2, pp. 1227–1232. Tsinghua University Press & Springer, Beijing 2005.
- Behounek L.: Axiomatic Fuzzy Set Theories. In P. Jirku and K. Bendova (eds.): *Miscellanea Logica V* (pp. 31–43). Karolinum Press, Prague 2003.

## **G. Papers Presented at Conferences**

### **Plenary and invited lectures, tutorials**

*Fuzzy logics among substructural logics* (tutorial, with P. Hajek)  
2nd World Congress and School on Universal Logic, Xian 2007

*The apparatus of fuzzy class theory* (plenary lecture, with P. Cintula)  
VIII International Conference on Fuzzy Set Theory and Applications (FSTA),  
Liptovsky Jan 2006

*Kurt Goedel – život, výsledky a jejich význam* (Czech, “Kurt Goedel—biography, results and their significance”, invited lecture)  
Kognice a umely život VI (Czech, “Cognition and Artificial Life VI”), Trest 2006

### **Contributed papers (selection)**

*Plurivaluationistic models of vagueness in logic-based fuzzy mathematics*  
Eleventh International Conference on Fuzzy Sets Theory and Its Applications (FSTA),  
Liptovsky Jan 2010

*Naive set theories over the logic IMTL*  
Asian Logic Conference, Wellington 2011

*Fuzzy set theories with naive comprehension*  
Non-Classical Modal and Predicate Logics, Guangzhou 2011

*Fuzzy logics as the logics of linearly decomposable resources*  
14th Congress of Logic, Methodology and Philosophy of Science, Nancy 2011

*A fuzzy semantics of the feasible knowledge*  
Dialogues, Inference, and Proof—Logical and Empirical Perspectives, Vienna 2010

*Formal fuzzy semantics for (crisp or fuzzy) counterfactuals* (with O. Majer)  
Logic, Reasoning and Rationality, Ghent 2010

*A degree-theoretical solution to the logical omniscience paradox*  
Epistemic Aspects of Many-Valued Logics, Prague 2010

*Semantics of counterfactuals in higher-order fuzzy logic* (with O. Majer)  
Logic, Algebra and Truth Degrees, Prague 2010

*A semantics for counterfactuals based on formal fuzzy logic* (with O. Majer)  
Logica XXIV, Hejnice 2010

*On a graded notion of  $t$ -norm and dominance* (with U. Bodenhofer, P. Cintula, S. Saminger-Platz, and Peter Sarkoci)  
40th International Symposium on Multiple-Valued Logics (ISMVL), Barcelona 2010

- Features of axiomatic theories in contraction-free logics* (with P. Cintula)  
3rd World Congress on Universal Logic, Lisbon 2010
- Extending Cantor–Lukasiewicz set theory with classes*  
31st Linz Seminar on Fuzzy Set Theory, Linz 2010
- Graded properties of t-norms* (with U. Bodenhofer, P. Cintula, S. Saminger-Platz and P. Sarkoci)  
X International Conference on Fuzzy Sets Theory and Its Applications (FSTA), Liptovsky Jan 2010
- Number-free mathematics based on t-norm fuzzy logic*  
IFSA World Congress and EUSFLAT Conference, Lisbon 2009
- Infinitesimal calculus based on a fuzzy notion of infinitesimal*  
Non-Classical Mathematics, Hejnice 2009
- Axiomatization of mathematical and physical theories in t-norm logics*  
Trends in Logic VI: Space, Time and Quanta, Brussels 2008
- Set theory over Goedel logic revisited*  
Logic, Algebra and Truth Degrees, Siena 2008
- Modeling the costs of programs by fuzzy dynamic logic* (with M. Bilkova and P. Cintula)  
6th European Congress of Analytic Philosophy, Krakow 2008
- Fuzzy logics interpreted as logics of resources*  
Logica XXII, Hejnice 2008
- Graded dominance* (with U. Bodenhofer, P. Cintula, and S. Saminger-Platz)  
29th Linz Seminar on Fuzzy Set Theory, Linz 2008
- Continuous relations over topological spaces in Fuzzy Class Theory* (with T. Kroupa)  
29th Linz Seminar on Fuzzy Set Theory, Linz 2008
- Interior-based topology in Fuzzy Class Theory* (with T. Kroupa)  
5th Conference of European Society for Fuzzy Logic and Technology (EUSFLAT), Ostrava 2007
- Traditional vs. deductive fuzzy logic*  
13th International Congress of Logic, Methodology and Philosophy of Science (LMPS), Beijing 2007
- Multiplicative quantifiers in fuzzy and substructural logics* (with P. Cintula and R. Horcik)  
Logic Colloquium, Wroclaw 2007
- Exponentials and multiplicative quantifiers in fuzzy logic* (with P. Cintula and R. Horcik)  
Trends in Logic V: Many-Valued Logic and Cognition, Guangzhou 2007

- Topology in Fuzzy Class Theory: Basic notions* (with T. Kroupa)  
XII International Fuzzy Systems Association (IFSA) World Congress, Cancun 2007
- Dubois and Prade's fuzzy elements: a challenge for formal fuzzy logic*  
The Logic of Soft Computing V and 5th Workshop of ERCIM Working Group on Soft Computing, Malaga 2006
- A model of higher-order vagueness in higher-order fuzzy logic*  
Uncertainty: Reasoning about Probability and Vagueness, Prague 2006
- Fuzzy logics interpreted as expressing the cost of knowledge*  
Trends in Logic IV: Towards Mathematical Philosophy, Torun 2006
- An alternative justification of the axioms of fuzzy logics*  
Logic Colloquium, Nijmegen 2006
- Extensionality in graded properties of fuzzy relations*  
11th International Conference IPMU, Paris 2006
- Two notions of fuzzy lattice completion*  
The Logic of Soft Computing IV and 4th Workshop of ERCIM Working Group on Soft Computing, Ostrava 2005
- Towards a formal theory of fuzzy Dedekind reals*  
4th EUSFLAT and 11th LFA Joint Conference, Barcelona 2005
- Betting on fuzzy logic* (with O. Majer)  
Dutch Book Arguments, Prague 2005
- Fuzzy class theory as foundations for fuzzy mathematics* (with P. Cintula)  
XI International Fuzzy Systems Association (IFSA) World Congress, Beijing 2005
- A delimitation of fuzzy logics in the logical landscape* (with P. Cintula)  
XIX Logica, Hejnice 2005
- Fuzzy logics among weakly implicative logics* (with P. Cintula)  
1st World Congress on Universal Logic, Montreux 2005
- Relations in higher-order fuzzy logic* (with P. Cintula and U. Bodenhofer)  
XXVI Linz Seminar on Fuzzy Set Theory, Linz 2005
- Extensional set equalities over Goedel logic*  
Logic Colloquium, Turin 2004
- What is fuzzy logic?* (with P. Cintula)  
ERCIM Workshop on Soft Computing, Vienna 2004
- From fuzzy logic to fuzzy mathematics: A methodological manifesto* (with P. Cintula)  
The Challenge of Semantics, Vienna 2004

*Intensional semantics of fuzzy logics*

Residuated Lattices and Many-Valued Logic, Patras 2004

*Class theory over LPi logic (with P. Cintula)*

VII International Conference on Fuzzy Sets Theory and Its Applications (FSTA),  
Liptovsky Jan 2004

*Fuzzification of Groenendijk–Stokhof erotetic logic*

VIII Flemish-Polish Workshop on Adaptive and Erotetic Logics and Their Application  
to the Philosophy of Science (VlaPoLo), Zielona Gora 2003

*On fuzzy set theory over Goedel logic*

The Logic of Soft Computing III, Siena 2003

## H. Teaching

### Courses

2011/12 WT

*Advanced mathematical logic*

Vienna University of Technology, Faculty of Informatics

2009/10 WT, 2007/8 WT, 2005/6 WT

*Category theory (from the perspective of logic)*

Charles University in Prague, Faculty of Philosophy and Arts

2009/10 ST, 2007/8 ST

*Logic from the perspective of category theory*

Charles University in Prague, Faculty of Philosophy and Arts

2009/10 ST, 2006/7 WT

*Mathematical fuzzy logic (with P. Cintula and R. Horcik); Formal fuzzy logic (2006/7)*

Charles University in Prague, Faculty of Philosophy and Arts

### Thesis supervision

2009 Ondrej Luhan: *Categories of fuzzy sets*

Bc thesis, Charles University in Prague, Faculty of Philosophy and Arts

2006 Nelly Vostra: *Fuzzification of simple systems of deontic logic*

Master thesis, Charles University in Prague, Faculty of Philosophy and Arts

## I. Other Professional Activity

### Edited volumes

Behounek L., Bilkova M. (eds.): *Logica Yearbook 2004*. Filosofia, Prague 2005.

Behounek L. (ed.): *Logica Yearbook 2003*. Filosofia, Prague 2004.

### **Special issues**

*Studia Logica* 90 (3): 287–453 (2008), “Vagueness” (with R. Keefe)

*Fuzzy Sets and Systems* 159 (14): 1727–1835 (2008), 160 (8): 1003–1004 (2009) “Formal methods for fuzzy mathematics, approximation and reasoning—Part I, II” (with P. Cintula, V. Novak, and I. Perfilieva).

### **Program committees**

*Non-Classical Modal and Predicate Logics*, Guangzhou, 2011 December 5–9

*Non-Classical Mathematics*, Hejnice, 2009 June 18–22

### **Organizing committees**

*Uncertainty: Reasoning about Probability and Vagueness (Prague International Colloquium)*  
Prague, 2006 September 5–8 (ca 40 participants)

### **Special sessions**

2010 *Non-classical mathematics* (with P. Cintula, 5 papers)  
3rd World Congress on Universal Logic, Lisbon

2010 *Mathematical fuzzy logic* (with P. Cintula and C. Noguera, 5 papers)  
X International Conference on Fuzzy Set Theory and Applications (FSTA), Liptovsky  
Jan

2007 *Formal fuzzy mathematics* (with P. Cintula, 6 papers)  
5th Conference of European Society for Fuzzy Logic and Technology (EUSFLAT),  
Ostrava

2006 *Logical foundations of fuzzy mathematics* (with P. Cintula, 5 papers)  
VIII International Conference on Fuzzy Set Theory and Applications (FSTA),  
Liptovsky Jan

### **Journal peer reviews**

*At least 3 manuscripts:*  
Fuzzy Sets and Systems  
Studia Logica

*Less than 3 manuscripts:*  
Annals of Pure and Applied Logic  
IEEE Transactions on Fuzzy Systems  
Information Sciences  
International Journal of Approximate Reasoning

International Journal of General Systems  
International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems  
Iranian Journal of Science and Technology  
Journal of Applied Logic  
Journal of Computational Optimization in Economics and Finance  
Logic Journal of the IGPL  
Logique et Analyse  
Neural Network World  
Review of Symbolic Logic  
Soft Computing

### Research stays

- 2012 Vienna, 2 months  
Faculty of Informatics, Vienna University of Technology  
Austrian Science Fund (FWF) project FWF I143–G15 “LogICCC—Contextualism, supervaluation, and fuzzy logic”
- 2011–2012 Vienna, 6 months  
Faculty of Mathematics and Geoinformatics, Vienna University of Technology  
Vienna Science and Technology Fund (WWTF) project MA07–016 “Fuzzy logic: from mathematics to medical applications”
- 2010 Barcelona, 1 week  
Institut d’Investigacio en Intel·ligencia Artificial, Spanish Scientific Research Council  
Joint project of the Academy of Sciences of the Czech Republic and the Spanish Scientific Research Council (CSIC) “Fuzzy logic and modalities”
- 2009–2010 Kyoto, total 3 weeks  
Kyoto University  
Program Kontakt ASCR–JSPS, Project ME09110 of the Ministry of Education of the Czech Republic “Fuzzy set theory as a foundation of fuzzy mathematics”
- 2007–2008 Linz, total 7 weeks  
Institute of Bioinformatics, Johannes Kepler University Linz  
Program Kontakt / WTZ Project 6–07–17 / 2–2007 “Formal foundations of fuzzy preference modelling”
- 2007 Barcelona, 1 week  
Institut d’Investigacio en Intel·ligencia Artificial, Spanish Scientific Research Council  
Joint project of the Academy of Sciences of the Czech Republic and the Spanish Scientific Research Council (CSIC) “Fuzzy logic in the framework of abstract algebraic logic”
- 2006 Manchester, 3 months  
Department of Logic, School of Mathematics, University of Manchester  
Mathlogaps (Mathematical Logic and Its Applications) Marie Curie Early Stage Training Short-Term Fellowship, supervisor Jeff B. Paris

- 2005–2006 Vienna, total 3 weeks  
Institute of Computer Languages, Vienna University of Technology  
Program Kontakt / WTZ, Project Austria No. 2005–15 “Automated model building for fuzzy logic”
- 2005–2006 Linz, total 3 weeks  
Institute for Knowledge-based Mathematical Systems, Johannes Kepler University  
Information Society Programme, Project No. 1ET100300517
- 2005–2006 Barcelona, total 2 weeks  
Institut d’Investigacio en Intel·ligencia Artificial, Spanish Scientific Research Council  
Joint project of the Academy of Sciences of the Czech Republic and the Spanish Scientific Research Council (CSIC) “Theoretical investigations of fuzzy logic systems in the framework of substructural logics”
- 2005 Linz, 2 months  
Institute for Knowledge-based Mathematical Systems, Johannes Kepler University  
CEEPUS (Central European Exchange Program for University Studies) scholarship
- 2003–2004 Barcelona, total 1 month  
Institut d’Investigacio en Intel·ligencia Artificial, Spanish Scientific Research Council  
Joint project of the Academy of Sciences of the Czech Republic and the Spanish Scientific Research Council (CSIC)

### **Academic functions**

Academy Assembly of the Academy of Sciences of the Czech Republic  
Elected representative of the Institute of Computer Science AS CR for 2010–2014

### **Membership in professional organizations**

JCMF (Union of Czech Mathematicians and Physicists), 1990—  
CMS (Czech Mathematical Society), a branch of JCMF, 2005—

CSKI (Czech Society for Cybernetics and Informatics), 2005—

EUSFLAT (European Society for Fuzzy Logic and Technology), 2005, 2007–2009  
MathFuzzLog (Mathematical Fuzzy Logic), a working group of EUSFLAT, 2007—

Veda zije! (citizens’ association Science Is Alive!), 2009–2010

**J. Language Competence**

Language	Understanding	Speaking/Writing	Examinations
<i>Czech</i>	Native	Native	
<i>Slovak</i>	Native	Fluent	
<i>English</i>	Fluent	Fluent	University exam 2001
<i>Russian</i>	Fluent	Good	University exam 2000, 2004
<i>Polish</i>	Good	Basic	
<i>Latin</i>	Basic	Basic	

**K. Research Area***Specialization:*

Axiomatic fuzzy set theory and logic-based fuzzy mathematics  
 Mathematical fuzzy logic  
 Non-classical foundations of mathematics

*Competence:*

Fuzzy logic and fuzzy sets  
 Non-classical logics  
 Foundations of mathematics  
 Philosophy of vagueness

*General curriculum:*

Mathematical logic  
 Computational linguistics  
 Logic-related areas of mathematics, philosophy, linguistics, and computer science  
 (set theory, analytic philosophy, philosophy of language, recursion theory,  
 computational complexity, generative and unification grammars, universal  
 algebra, etc.)