RĂZVAN DIACONESCU

curriculum vitæ

ADDRESSES:

1. Str. Democraţiei 32, Ploieşti 100559
2. Str. M. Eminescu 115A, Sinaia 106100
ROMANIA

phone Ploieşti: (+4)0244-513-664, **Sinaia**: (+4)0244-315-463
Fax IMAR: (+4)021-319-6505
GSM: (+4)0744-153-703
E-mail: Razvan.Diaconescu@imar.ro
Web page: http://www.imar.ro/∼diacon

PERSONAL DATA:

Born on 19 March 1964 in Ploieşti, România.
Romanian nationality.
Fluent in Romanian and English languages.

EDUCATION:

D.Phil. Mathematical Sciences, University of Oxford (England), 1994.
M.Sc. Mathematics and Computation, Universitatea Bucureşti (România), 1988.
B.Sc. Mathematics and Computation, Universitatea Bucureşti (România), 1987.
Bacalaureat, Liceul teoretic "Mihai Viteazul" Ploieşti (România), 1982.

PROFESSIONAL POSITIONS:

Director, Informatics Dept. of SNSB[§], since 2002.
Scientific Researcher I (= Professor) at IMAR[†], since 2001.
Scientific Researcher II (= Associate Professor) at IMAR[†], 1997–2001
Panasonic-Fujitsu-USAC Endowed Chair & Associate at JAIST[*], 1996–1999.
Scientific Researcher III (= Assistant Professor) at IMAR[†], 1995–1997.
Visiting Researcher at the Naval Postgraduate School, Monterey, CA, Sept 1994.
Researcher at IMAR[†], 1990–1995.

PROFESSIONAL AWARDS AND DISTINCTIONS:

- Birkhäuser Award for the winner of the contest "How to translate a logic into another one?" of the *2nd World Congress of Universal Logic* (joint work with T. Mossakowski and A. Tarlecki) (2007).
- *Grigore Moisil Award* (for 2002) of the Romanian Academy (2004).
- J. William Fulbright Award under *Mutual Educational Exchange Program* (1996).[‡]
- US National Research Council *Resident Research Associateship Award* (1995).[‡]
- Winner of the *Romanian National Mathematical Olympiad* (1979).

EDITORIAL BOARD:

- member of editorial board of *Studies in Universal Logic* book series at Birkhäuser, Switzerland

PUBLICATION LIST

MONOGRAPHS AND TEXTBOOKS

[1-B] *Institution-independent Model Theory*.
volume of *Studies in Universal Logic* series. Birkhäuser Basel, 2008. (386 pages).

[2-B] (with K. Futatsugi) *CafeOBJ Report: the language, proof techniques, and methodologies for object-oriented algebraic specification*,
volume 6 of *AMAST Series in Computing*. World Scientific Singapore, 1998. (174 pages)

[3-B] *Category-based Semantics for Equational and Constraint Logic Programming*.
D.Phil thesis, University of Oxford, 1994. (published as OUCL Monograph PRG-116, 120 pages)

JOURNAL ARTICLES

[4-J] Borrowing interpolation.
Journal of Logic and Computation, 22(3):561–586, Oxford Univ. Press, 2012.

[§]Academic school of postgraduate studies "Şcoala Normală Superioară Bucureşti". `snsb.online.fr`
[†]Simion Stoilow Institute of Mathematics of the Romanian Academy. `www.imar.ro`
[*]Japan Advanced Institute for Science and Technology, Hokuriku. `www.jaist.ac.jp`
[‡]But fellowship declined due to concurrency with other professional commitments.

[5-J] An axiomatic approach to structuring specifications.
Theoretical Computer Science, 433:20–42, Elsevier, 2012.

[6-J] Interpolation for predefined types.
Mathematical Structures in Computer Science, 22(1):1–24, Cambridge Univ. Press, 2012.

[7-J] Grothendieck inclusion systems.
Applied Categorical Structures, 19(5):783–802, Springer, 2011.

[8-J] Structural Induction in Institutions.
Information and Computation, 209(9):1197–1222, Elsevier, 2011.

[9-J] (with I. Ţuţu) On the Algebra of Structured Specifications.
Theoretical Computer Science, 412(28):3145–3174, Elsevier, 2011.

[10-J] On quasi-varieties of multiple valued logic models.
Mathematical Logic Quarterly, 57(2):194–203, Wiley, 2011.

[11-J] Coinduction for preordered algebras.
Information and Computation, 209(2):108–117, Elsevier, 2011.

[12-J] (with M. Petria) Saturated models in institutions.
Archive for Mathematical Logic, 49(6):693–723, Springer, 2010.

[13-J] Quasi-Boolean encodings and conditionals in algebraic specification.
Journal of Logic and Algebraic Programming, 79(2):174–188, Elsevier, 2010.

[14-J] An encoding of partial algebras as total algebras.
Information Processing Letters, 109(23-24):1245–1251, Elsevier, 2009.

[15-J] (with T. Mossakowski and A. Tarlecki) What is a Logic Translation?
Logica Universalis, 3(1):59–94, Birkhäuser, 2009.

[16-J] A categorical study on the finiteness of specifications.
Information Processing Letters, 108(2):75–80, Elsevier, 2008.

[17-J] (with P. Stefaneas) Ultraproducts and possible worlds semantics in institutions.
Theoretical Computer Science, 379(1):210–230, Elsevier, 2007.

[18-J] (with M. Aiguier) Stratified institutions and elementary homomorphisms.
Information Processing Letters, 103(1):5–13, Elsevier, 2007.

[19-J] (with M. Petria) Abstract Beth definability in institutions.
Journal of Symbolic Logic, 71(3):1002–1028, 2006.

[20-J] Proof systems for institutional logic.
Journal of Logic and Computation, 16(3):339–357, Oxford Univ. Press, 2006.

[21-J] Behavioural specification for hierarchical object composition.
Theoretical Computer Science, 343(3):305–331, Elsevier, 2005.

[22-J] Elementary diagrams in institutions.
Journal of Logic and Computation, 14(5):651–674, Oxford Univ. Press, 2004.

[23-J] Herbrand theorems in arbitrary institutions.
Information Processing Letters, 90:29–37, Elsevier, 2004.

[24-J] An institution-independent proof of Craig interpolation theorem.
Studia Logica, 77(1):59–79, Springer, 2004.

[25-J] Interpolation in Grothendieck institutions.
Theoretical Computer Science, 311:439–461, Elsevier, 2004.

[26-J] (with P. Stefaneas) Modality in open institutions with concrete syntax.
Bulletin of the Greek Mathematical Society, 49:91–101, 2004.

[27-J] (with K. Futatsugi and K. Ogata) CafeOBJ: logical foundations and methodologies.
Computing and Informatics, 22:257–283, 2003.

[28-J] Institution-independent ultraproducts.
Fundamenta Informaticæ, 55(3-4):321–348, IOS Press, 2003.

[29-J] (with K. Futatsugi) Logical foundations of CafeOBJ.
Theoretical Computer Science, 285:289–318, Elsevier, 2002.

[30-J] Grothendieck institutions.
Applied Categorical Structures, 10(4):383–402, Kluwer, 2002.

[31-J] (with K. Futatsugi) Behavioural coherence in object-oriented algebraic specification.
Universal Computer Science, 6(1):74–96, Springer, 2000.

[32-J] Category-based constraint logics.
Mathematical Structures in Computer Science, 10(3):373–407, Cambridge Univ. Press, 2000.

[33-J] Extra theory morphisms for institutions: logical semantics for multi-paradigm languages.
Applied Categorical Structures, 6(4):427–453, Kluwer, 1998.

[34-J] Category-based modularization for equational logic programming.
Acta Informatica, 33(5):477–510, Springer, 1996.

[35-J] Completeness of category-based equational deduction.
Mathematical Structures in Computer Science, 5(1):9–41, Cambridge Univ. Press, 1995.

[36-J] (with J. Goguen) An Oxford survey of order sorted algebra.
Mathematical Structures in Computer Science, 4(4):363–392, Cambridge Univ. Press, 1994.

[37-J] Contraction algebras and unification of infinite terms.
Journal of Computer and System Sciences, 44(1):23–43, Academic Press, 1992.

[38-J] (with J. Goguen) A short Oxford survey of order sorted algebra.
Bulletin of EATCS, 48:121–133, European Association of Theoretical Computer Science, 1992.

BOOK CHAPTERS

[39-BC] Three decades of institution theory.
In Jean-Yves Beziau editor, *Universal Logic: an Anthology*, pages 309–322, Springer Basel, 2012.

[40-BC] A methodological guide to CafeOBJ logic.
In Dines Björner and Martin Henson editors, *Logics of Specification Languages*, pages 153–240, Springer-Verlag Berlin Heiderberg, 2008.

[41-BC] Institutions, Madhyamaka, and universal model theory.
In Jean-Yves Béziau and Alexandre Costa-Leite editors, *Perspectives in Universal Logic*, pages 41–65, Polimetrica, 2007.

[42-BC] (with T. Mossakowski, J. Goguen and A. Tarlecki) What is a Logic?
In Jean-Yves Beziau editor, *Logica Universalis*, pages 113–133, Birkhauser, 2005.

[43-BC] (with K. Futatsugi and S. Iida) CafeOBJ jewels.
In Kokichi Futatsugi, Ataru Nakagawa, and Tetsuo Tamai editors, *Cafe: An Industrial-Strength Algebraic Formal Method*, Elsevier, 2000.

[44-BC] (with S. Iida and K. Futatsugi) Component-based algebraic specification - behavioural specification for component-based software engineering -
In *Behavioral specifications of businesses and systems*, pages 103–119, Kluwer, 1999.

[45-BC] (with R. Burstall) Hiding and behaviour: an institutional approach.
In A. William Roscoe, editor, *A Classical Mind: Essays in Honour of C.A.R. Hoare*, pages 75–92. Prentice-Hall, 1994.

[46-BC] (with J. Goguen) A short Oxford survey of order sorted algebra.
Current Trends in Theoretical Computer Science: Essays and Tutorials, World Scientific, 1993, pages 209–221.

REFEREED CONFERENCE PUBLICATIONS

[47-C] (with M. Martins, A. Madeira and L. Barbosa) Hybridization of Institutions.
In Andrea Corradini, Bartek Klin and Corina cîrstea editors, *Algebra and Coalgebra in Computer Science*, volume 6859 *Lecture Notes in Computer Science*, pages 283–297, Springer, Berlin Heidelberg, 2011.

[48-C] Jewels of institution-independent model theory.
In Kokichi Futatsugi, Jean-Pierre Jouannaud, and Jose Meseguer editors, *Algebra, Meaning, and Computation* (a Festschrift in honour of Professor Joseph Goguen), volume 4060 of *Lecture Notes in Computer Science*, pages 65–98, Springer, Berlin Heidelberg, ISBN 3-540-35462-X, 2006.

[49-C] Behavioural specification of hierarchical object composition.
In Frank S. de Boer, Marcello M. Bonsangue, Susanne Graf and Willem-Paul de Roever editors, *Formal Methods for Components and Objects*, volume 3188 of *Lecture Notes in Computer Science*, pages 134–156, Springer, ISBN 3-540-22942-6, 2004.

[50-C] (with K. Futatsugi and S. Iida) Component-based algebraic specification and verification in CafeOBJ.
In Jeanette M. Wing, Jim Woodcock and Jim Davies editors, *FM'99 – Formal Methods*, volume 1709 of *Lecture Notes in Computer Science*, pages 1644–1663, Springer, 1999.

[51-C] (with K. Futatsugi, M. Ishisone, A. Nakagawa and T. Sawada) An overview of CafeOBJ.
In *Proceedings, 2nd International Workshop on Rewriting Logic and its Applications.*, volume 15 of *Electronic Notes in Theoretical Computer Science*, Elsevier Science, 1998.

[52-C] Foundations of behavioural specification in rewriting logic.
In *Proceedings, First International Workshop on Rewriting Logic and its Applications.*, volume 4 of *Electronic Notes in Theoretical Computer Science*, Elsevier Science, 1996.

[53-C] A category-based equational logic semantics to constraint programming.
In Magne Haveraaen, Olaf Owe, and Ole-Johan Dahl, editors, *Recent Trends in Data Type Specification*, volume 1130 of *Lecture Notes in Computer Science*, pages 200–221, Springer, 1996.

[54-C] (with J. Goguen) An introduction to category-based equational logic.
In V.S. Alagar and Maurice Nivat, editors, *Algebraic Methodology and Software Technology*, volume 936 of *Lecture Notes in Computer Science*, pages 91–126, Springer, 1995.

[55-C] (with J. Goguen) Towards an algebraic semantics for the object paradigm.
In Harmut Ehrig and Fernando Orejas, editors, *Recent Trends in Data Type Specification*, volume 785 of *Lecture Notes in Computer Science*, pages 1–34, Springer, 1994.

[56-C] (with J. Goguen and P. Stefaneas) Logical support for modularization.
In Gerard Huet and Gordon Plotkin, editors, *Logical Environments*, pages 83–130, Cambridge Univ. Press, 1993.

[57-C] (with S. Iida and K. Futatsugi) Component-based algebraic specification: – behavioural specification for component based software engineering –.
In *7th OOPSLA Workshop on Behavioral Semantics of OO Business and System Specification*, 1998. Also in the technical report of Technical University of Munich TUM-I9820.

[58-C] (with K. Futatsugi) Logical semantics for CafeOBJ.
In *Precise Semantics for Software Modeling Techniques*, 1998. Technical Report TUM-I9803, Technical University Munchen, pages 31–54. Proceedings of an ICSE'98 workshop held in Kyoto, Japan.

[59-C] Free monads in the hypercategory of all the monads.
In *East European Category Seminar 1990*. Proceedings of a Workshop held in Predela, Bulgaria, March 1990.

TECHNICAL REPORTS

[60-R] Interpolation in Grothendieck institutions.
IMAR Preprint 8-2003, Institute of Mathematics of the Romanian Academy, 2003. ISSN 250 3638.

[61-R] (with P. Stefaneas) Possible worlds semantics in arbitrary Institutions.
IMAR Preprint 7-2003, Institute of Mathematics of the Romanian Academy, 2003. ISSN 250 3638.

[62-R] An institution-independent proof of Craig interpolation property.
IMAR Preprint 8-2002, Institute of Mathematics of the Romanian Academy, 2002. ISSN 250 3638.

[63-R] Elementary diagrams in institutions.
IMAR Preprint 7-2002, Institute of Mathematics of the Romanian Academy, 2002. ISSN 250 3638.

[64-R] Institution-independent ultraproducts.
IMAR Preprint 5-2002, Institute of Mathematics of the Romanian Academy, 2002. ISSN 250 3638.

[65-R] Grothendieck institutions.
IMAR Preprint 2-2000, Institute of Mathematics of the Romanian Academy, February 2000. ISSN 250 3638.

[66-R] (with K. Futatsugi and S. Iida) Component-based algebraic specification and verification in CafeOBJ.
Technical Report IS-RR-99-0020S, Japan Advanced Institute for Science and Technology, 1999.

[67-R] Behavioural coherence in object-oriented algebraic Specification.
Technical Report IS-RR-98-0017F, Japan Advanced Institute for Science and Technology, 1998.

[68-R] (with P. Stefaneas) Categorical foundations of modularization for multi-paradigm languages.
Technical Report IS-RR-98-0014F, Japan Advanced Institute for Science and Technology, 1998.

[69-R] (with S. Iida, M. Matsumoto, K. Futatsugi and D. Lucanu) Concurrent object composition in CafeOBJ.
Technical Report IS-RR-98-0009S, Japan Advanced Institute for Science and Technology, 1998.

[70-R] (with P. Stefaneas) Modality in open institutions with concrete syntax.
Technical Report IS-RR-97-0046F, Japan Advanced Institute for Science and Technology, 1997.

[71-R] Extra theory morphisms for institutions: logical semantics for multi-paradigm languages.
Technical Report IS-RR-97-0032F, Japan Advanced Institute for Science and Technology, 1997.

[72-R] (with K. Futatsugi) Logical semantics for CafeOBJ.
Technical Report IS-RR-96-0024S, Japan Advanced Institute for Science and Technology, 1996.

[73-R] Completeness of semantic paramodulation: a category-based approach.
Technical Report IS-RR-96-0006S, Japan Advanced Institute for Science and Technology, 1996.

[74-R] (with R. Burstall) Hiding and behaviour: an institutional approach.
Technical Report ECS-LFCS-8892-253, Laboratory for Foundations of Computer Science, University of Edinburgh, 1992.

[75-R] The formal completeness of equational logics.
Technical Report PRG-TR-12-92, Programming Research Group, University of Oxford, 1991.

[76-R] The logic of Horn clauses is equational.
Technical Report PRG-TR-3-93, Programming Research Group, University of Oxford, 1990.

[77-R] Monadic equational logic.
Technical Report 9-90, INCREST Bucureşti, 1990.

PRESENTATIONS

INVITED LECTURES/CONFERENCES

- "Stainless Formal Verification", *JAIST Advanced School on Formal Specification and Systems Verification 2010*, Kanazawa, Japan, March 2010.
- "Institution theory and Buddhist thinking", *2nd World Congress on Universal Logic*, Xi'an, China, August 2007.
- "CafeOBJ: logical foundations and methodologies", lecture course in the European Summer School on *Logics for Specification Languages*, Stara Lesna, Slovakia, June 2004.
- "Behavioural Specification of Hierarchical Object Composition", *2nd Formal Methods for Components and Objects Symposium*, Leiden, Netherlands, November 2003.

TUTORIALS

- "Institution theory for computer science", *Mondrian Workshop*, Aveiro, Portugal, July 2010.

OTHER PRESENTATIONS

- "Towards Automated Structural Induction: an institution-independent methodology", *Third Romanian-Japanese Algebraic Specification Workshop*, Sinaia, Romania, April 2012.
- "Guidelines for Formal Specification and Verification", *Second Romanian-Japanese Algebraic Specification Workshop*, Sinaia, Romania, March 2011.
- "Coinduction for preordered algebras", *Mondrian Workshop*, Aveiro, Portugal, July 2010.
- "Stainless Formal Verification", *3rd MAP-i Doctoral Symposium*, Aveiro, Portugal, July 2010.
- "Introduction to institution theory", Senshu University, Tokyo, Japan, March 2010.
- "What is a formal proof?", *Conference on Logic, Algebra, and Fundamentals of Computer Science*, IMAR, Bucharest, Romania, May 2008.
- "What is a logic translation?", *2nd World Congress on Universal Logic*, Xi'an, China, August 2007. (winner of the UNILOG'07 contest 'What is a logic translation?')

- "Inclusion Systems", Faculty of Mathematics and Informatics, University "Ovidius" Constanţa, April 2007.
- "Behavioural specification of hierarchical object composition", *DFKI*, University of Bremen, November 2006.
- "Ultraproducts in institution-independent model theory", *KatMAT* (category theory) seminar, University of Bremen, November 2006.
- "Jewels of institution-independent model theory", Symposium *Algebra, Meaning and Computation*, La Jolla, California, June 2006.
- "Institution-independent Model Theory", IFIP 1.3 WG meeting, La Roche, Belgium, June 2006.
- "Behavioural specification of hierarchical object composition", *Institute d'Informatique*, Universite Notre-Dame de la Paix, Namur, Belgium, May 2006.
- "Behavioural specification of hierarchical object composition", *Language Design Laboratory seminary*, Japan Advanced Institute for Science and Technology, Ishikawa-ken, Japan, March 2006.
- "Institution-independent Model Theory", *Symposium for the 100th anniversary of Grigore Moisil*, Bucharest, Romania, January 2006.
- "Institutions: methodological implications", *Logic Colloquim 2005* (Association of Symbolic Logic European Summer Meeting), Athens, Greece, July-August 2005.
- "What is a Logic?", *First World Congress on Universal Logic*, Montreux, Switzerland, March-April 2005.
- "Abstract Modalities and Institutions", Workshop on *Combination of Logics: theory and applications*, Lisbon, Portugal, July 2004.
- "Formal Specification and Verification with CafeOBJ: logical foundations and methodologies", VERIMAG, Grenoble, France, March 2004.
- "Abstract Modal Logic", *4th Panhellenic Logic Symposium*, Thessaloniki, Greece, July 2003.
- "From Birkhoff axiomatizability to Interpolation: a categorical model theoretic approach", Logic Seminar, University of Athens, Greece, March 2003.
- "Institutions in algebraic specification", a V-a conferinţă *Modelarea structural-fenomenologică*, Academia Română, June 2001.
- "Specificaţii Algebrice: drumul de la logica ecuaţională la teoria abstractă a modelelor categorială", Seminarul *Mari teme matematice in secolul XX*, Bucharest, Romania, May 2000.
- "Grothendieck Institutions", Instituto Tecnico Superior, Lisbon, Portugal, November 1999.
- "Component-based Algebraic Specification and Verification in CafeOBJ", *World Congress on Formal Methods FM'99*, Toulouse, France, September 1999.
- "Object-oriented Algebraic Specification and Verification in CafeOBJ", project presentation at *2nd Panhellenic Logic Symposium*, Delfi, Greece, July 1999.
- "Behavioural Methodologies for Algebraic Specification and Verification", IFIP2.2 WG Meeting, Udine, Italy, June 1999.
- "Rezultate Recente in Teoria Specificaţiilor Algebrice", *50th Anniversary of the IMAR Conference*, Bucharest, Romania, June 1999.
- "Object-oriented Methodologies in CafeOBJ", CafeOBJ Workshop, Miurakaigan, Japan, April 1999.
- "A Survey of Institutions", National Technical University of Athens, Greece, November 1998.
- "CafeOBJ: language definition, proof techniques and methodologies", *CafeOBJ Symposium*, Numazu, Japan, April 1998.
- "Logical Semantics for CafeOBJ", *Precise Semantics for Software Modeling Techniques*, Kyoto, Japan, April 1998.
- "Overview of the CafeOBJ Definition", University of Kyushu, Fukuoka, Japan, February 1998.
- "Modern Algebraic Specification and Verification in CafeOBJ", Philips Research Laboratories, Eindhoven, The Netherlands, January 1998.
- "Overview of the CafeOBJ Definition", the 3rd CafeOBJ International Workshop, Kanazawa, Japan, October 1997.
- "The CafeOBJ Definition", the First Romanian-Japanese Algebraic Specification Meeting, Sinaia, Romania, August 1997.
- "Teorii Categoriale ale Modelelor în Informatica Teoretică", Institute of Mathematics of the Romanian Academy, May 1997.

- "Modern algebraic specification and programming in CafeOBJ", National Technical University of Athens, Greece, April 1997.
- "An overview of the current stage of CafeOBJ", 2nd CafeOBJ International Workshop, Saitama, Japan, March 1997.
- "The CafeOBJ Definition", CafeOBJ project meeting, Tōkyō, Japan, January 1997.
- "Foundations of behavioural specification in rewriting logic", 1st International Workshop on Rewriting Logic and its Applications, Asilomar, California, September 1996.
- "Logical Semantics for CafeOBJ", 1st CafeOBJ International Workshop, Shonnan International Village, Kanagawa, Japan, August 1996.
- "Institutions: abstract model theory for Computing", Algebra and Logic Seminar, Japan Advanced Institute for Sci. & Tech., May 1996.
- "Common Framework Initiative", CafeOBJ project meeting, Tōkyō, Japan, February 1996.
- "Extensible Modular Constraint Programming: a category-based equational logic perspective", the University of Amsterdam, Netherlands, November 1995.
- "Category-based Equational Logic Semantics to Constraint Programming", presented at the joint 11th ADT conference and COMPASS workshop, Oslo, Norway, September 1995.
- "Category-based Equational Logic Programming", presented at BRICS, University of Aarhus, Denmark, August 1995.
- "Completeness of Model Theoretic Paramodulation: a Category-based Approach" joint 10th ADT conference and COMPASS workshop, St Margherita Ligure, Italy, May/June 1994.
- "Equational logic programming in Eqlog", Abo Academy, Turku, Finland, November 1993.
- "A model-theoretic approach to rewriting", University of Turku, Finland, November 1993.
- "Hiding and Behaviour: an Institutional Approach", ISCORE group meeting, Oxford, England, March 1993.
- "The Equational Logic Programming project in Oxford", Edinburgh LFCS, Scotland, February 1992.
- "The Formal Completeness of Equational Logics", London Mathematical Society conference on Applications of Categories to Computer Science, Durham, England, July 1991.
- "Logical Support for Modularisation", Amsterdam University, Netherlands, January 1992.
- "Logical Support for Modularisation", joint COMPASS and WADT workshop, Dourdan, France, August 1991.
- (with Joseph Goguen) "Logical Support for Modularisation", Workshop of ESPRIT project in Logical Frameworks, Edinburgh, Scotland, May 1991.
- "Equational Logic Programming", PRG Oxford University Computing Laboratory meeting on Future Research Directions, England, April 1991.
- "Free Monads in the Hypercategory of All the Monads", East European Category Seminar 1990, Predela, Bulgaria, March 1990.

RESEARCH GRANTS:

- Project Director of the National Council for Scientific Research (CNCSIS) grants PN-II-ID-PCE-2011-3-0439, and 202GR/2006, 54GR/2007, 23GR/2008.
- Project Director of Romanian Academy Grants (contracts 171/29.4.2004, 170/21.7.2003, and 3787/1995) for basic research in information science and technology.
- Project Director from the Romanian side of research contract 1938/12.11.1998 of scientific collaboration between Romania and Japan.
- Project Director from the Romanian side for the collaboration project 65/640 between the National Technical University Athens and IMAR.
- Cooperation partner in the *Latin* projects funded by DFG, Germany (2009-2012).
- Consultant of the *Mondrian project*, Portugal (2009-2011).

TEACHING:

- Director of Master (by research) programme in *Logic and Formal Specification*, SNSB, 2004-2011.
- "Structuring specifications and programs", SNSB 2008.
- "Model theory for specification and programming", SNSB 2005-2006.

- "Mathematical foundations of Algebraic Specification", SNSB, 2002-2006, 2008, 2010.
- "Formal Specification and Verification Methodologies", SNSB 2005, 2007, 2009-2010, Master in Informatics at Universities of Bucharest, 2003-2004 and Ploieşti, 2011-2012.
- "Heterogenous Multi-Logic Specification", SNSB, 2004.
- "Logic Programming", SNSB, 2003.
- "Introduction to Algebraic Specification", Inter-University Program in Graduate Studies in *Logic and Theory of Algorithms and Computation*, University of Athens, Greece, March 2003.
- "Theory of Institutions", MSc in Computing, Faculty of Mathematics, University of Bucharest, 2000.
- "Formal Languages and Automata", undergraduate, Faculty of Mathematics and Informatics, University of Ploieşti, 1995.
- "Equational Logic Programming", MSc in Computing, Faculty of Mathematics, University of Bucharest, 1995.

SCIENTIFIC EVENTS:

- Co-chair and organizer of *Sinaia School on Formal Verification of Software Systems*, 3-10 March 2008. (co-chairs: R. Diaconescu and K. Futatsugi)
- Co-chair and organizer of *Third Romanian-Japanese Algebraic Specification Workshop*, Sinaia, Romania, 2-3 April 2012. (co-chairs: R. Diaconescu and K. Futatsugi)
- Co-chair and organizer of *Second Romanian-Japanese Algebraic Specification Workshop*, Sinaia, Romania, 1-4 March 2011. (co-chairs: R. Diaconescu and K. Futatsugi)
- Co-chair and organizer of *First Romanian-Japanese Algebraic Specification Workshop*, Sinaia, Romania, August 1997. (co-chairs: R. Diaconescu and K. Futatsugi)
- Program Committee member at *AMAST 2008*, Urbana, Illinois, USA. (co-chairs: J. Meseguer and G. Roşu)
- Program Committee member at *International Workshop on Rewriting Logic and its Applications* (WRLA2000), Kanazawa, Japan, 2000. (chair: K. Futatsugi)
- Program Committee member at OBJ/CafeOBJ/Maude satellite workshop at *World Congress of Formal Methods '99*, Toulouse, France, 1999. (co-chairs: K. Futatsugi, J. Goguen and J. Meseguer)
- Program Committee member at Distributed Systems satellite workshop at *FCT'99 conference*, Iaşi, Romania, 1999. (chair: G. Ştefanescu)

STUDENTS:

- supervisor of Madeira, Alexandre PhD thesis *Behavioural Certification of Evolving Sofware Requirements*, MAP-i (joint doctoral programme in informatics of the universities Minho, Aveiro şi Porto), Portugal.
- member of the commitee for Barbier, Fabrice PhD thesis *Géneralisation et préservation au travers de la combinaison des logique des résultats de théorie des modèles standards liés à la structuration des spécifications algébriques*, University Evry, France, 2005.
- member of the commitee for Găină, Daniel PhD thesis *Theorem proving and institutions*, Japan Advanced Institute for Science and Technology, 2009.
- supervisor of Ţuţu, Ionuţ MSc thesis, *On the Instantiation of Multiple Parameterized Specifications*, SNSB, 2012.
- supervisor of Petria, Marius MSc thesis *Abstract Beth definability institutionally*, SNSB, 2005.
- supervisor of Codescu, Mihai MSc thesis *Model theory for higher order logic with Henkin semantics*, SNSB, 2007.

– supervisor of Găină, Daniel MSc thesis *Layered Completeness*, SNSB, 2006.
– supervisor of Diaconescu, Denisa MSc thesis *Model theory for multiple valued logic*, SNSB, 2009.

MEMBERSHIP:

– International Tibet Support Network
– Scientific Council of "Şcoala Normală Superioară" Bucharest
– Mathematical Reviews, Zentralblatt fur Mathematik

SYSTEMS:

(1) Designer of CafeOBJ,* an industrial strength multi-logic heterogenous algebraic language, succesor of the OBJ, and directly incorporating some modern developments in algebraic specification such as behavioural specification and rewriting logic.

(2) Built the first prototype of EQLOG, an equational and constraint logic programming system with subtypes and generic modules, extending the OBJ3 system.

*Developed at the Japan Advanced Institute for Science & Technology; supported on a large scale by the Japanese Government through its Information-technology Promotion Agency.