RĂZVAN DIACONESCU
lista de publicații

September 7, 2025

PUBLICATION LIST

– STATISTICS

- 67% peer-reviewed journal publications, 87% of them in Web of Science indexed journals;
- publications in 30 different journals (23 Web of Science indexed journals) in informatics, mathematics, logic and philosophy;
- 65% of publications are single authored
- paramount scientists as co-authors: J. Goguen, R. Burstall, A. Tarlecki, T. Mossakowski, etc.
- 4000 citations (Google Scholar); h-index =31(GS), =22 (ScholarGPS), =20 (Scopus), =15(Web of Science), =13(MathSciNet), =12(zbMATH)

– THESES

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

[2-T] *Monadic Signatures for Abstract Model Theory*,
MSc thesis, Universitatea Bucureşti, 1988.

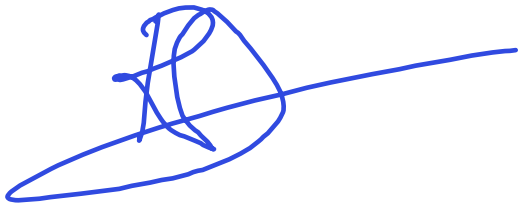
[3-T] *Algebraic Aspects of Logic Programming and Theorem Proving*,
BSc graduation thesis, Universitatea Bucureşti, 1987.

– MONOGRAPHS

[4-B] *Institution-independent Model Theory*, 2nd Edition,
volume of *Studies in Universal Logic* series. Birkhäuser Basel, 2024. (568 pages).

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

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



— JOURNAL ARTICLES (PEER-REVIEWED)

[7-J] Generating Symmetric and Alternating Groups (with S. Catoiu),
Journal of Algebra and its Applications, 23(8):2550052, World Scientific, 2024.

[8-J] Translation structures for fuzzy model theory,
Fuzzy Sets and Systems 480:108866, Elsevier, 2024.

[9-J] Partialising Institutions,
Applied Categorical Structures 31(6):46, Springer, 2023.

[10-J] Preservation in many-valued truth institutions,
Fuzzy Sets and Systems 456:38–71, Elsevier, 2023.

[11-J] Decompositions of stratified institutions,
Journal of Logic and Computation, 33(7):1625–1664, Oxford Univ. Press, 2023.

[12-J] Generalised graded interpolation,
International Journal of Approximate Reasoning 152:236–261, Elsevier, 2023.

[13-J] Introducing *H*, an institution-based formal specification and verification language,
Logica Universalis, 14(2)259–277, Springer Nature Switzerland, 2020.

[14-J] Towards Fuzzy Neural Conceptors (with T. Mossakowski and M. Glauer),
Journal of Applied Logics – IfCoLog Journal of Logics and their Applications, 6(4)725–744, College Publications, 2019.

[15-J] Implicit Kripke semantics and ultraproducts in stratified institutions,
Journal of Logic and Computation, 27(5):1577–1606, Oxford Univ. Press, 2017.

[16-J] Functorial semantics of first-order views,
Theoretical Computer Science 656:46–59, Elsevier, 2016.

[17-J] Encoding hybridized institutions into first order logic (with Alexandre Madeira),
Mathematical Structures in Computer Science 26(5):745–788, Cambridge Univ. Press, 2016.

[18-J] Quasi-varieties and initial semantics for hybridized institutions,
Journal of Logic and Computation 26(3):855–891, Oxford Univ. Press, 2016.

[19-J] Institution Theory,
Internet Encyclopedia of Philosophy, 2016.

[20-J] On the existence of translations of structured specifications,
Information Processing Letters 115:15–22, Elsevier, 2015.

[21-J] The institution-theoretic scope of logic theorems (with T. Mossakowski and A. Tarlecki),
Logica Universalis, 8(3-4):393–406, Springer Basel, 2014.

[22-J] Graded consequence: an institution theoretic study,
Soft Computing,18(7):1247–1267, Springer, 2014.

[23-J] Foundations for structuring behavioural specifications (with I. Ţuţu),
Journal of Logical and Algebraic Methods in Programming, 83(3-4):319–338, Elsevier, 2014.

[24-J] Institutional semantics for many-valued logics,
Fuzzy Sets and Systems, 218:32–52, Elsevier, 2013.

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

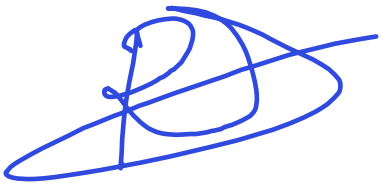
[26-J] An axiomatic approach to structuring specifications,
Theoretical Computer Science, 433:20–42, Elsevier, 2012.

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

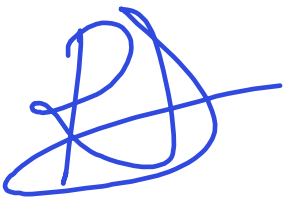
[51-J] Grothendieck institutions,
Applied Categorical Structures, 10(4):383–402, Kluwer, 2002.

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

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

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

[55-J] An overview of CafeOBJ (with K. Futatsugi, M. Ishisone, A. Nakagawa and T. Sawada),
Electronic Notes in Theoretical Computer Science, 15:285–298, Elsevier Science, 1998.



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

[57-J] Foundations of behavioural specification in rewriting logic,
Electronic Notes in Theoretical Computer Science, 4:226–245, Elsevier Science, 1996.

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

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

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

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

— INVITED PAPERS

[62-I] Universal logic and computation (editorial),
Journal of Logic and Computation, 27(6):1677–1678, Oxford Univ. Press, 2017.

[63-I] Structuring of Specification Modules (extended),
Computer Science Journal of Moldova, 23(2):135–152, 2015.

[64-I] Structuring of Specification Modules,
in Proceedings of the Workshop on *Foundations of Informatics – FOI 2015*, pages 4–13, Institute of Mathematics and Computer Science, Chişinău, Republic of Moldova, August 2015. ISBN 978-9975-4237-3-1

[65-I] From universal logic to computer science, and back,
in G. Ciobanu and D. Méry (Eds.): *Theoretical Aspects of Computing – ICTAC 2014*,
Lecture Notes in Computer Science 8687, pages 1–16, Springer Switzerland, 2014.

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

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

— BOOK CHAPTERS

[68-P] Implicit Partiality of Signature Morphisms in Institution Theory,
in Judit Madarász and Gergely Székely editors,
Hajnal Andréka and István Németi on Unity of Science: From Computing to Relativity Theory Through Algebraic Logic, pages 81–123, Springer, 2021.

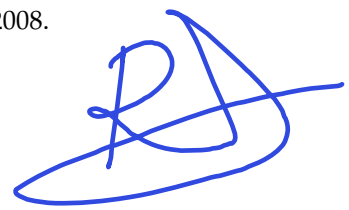
[69-P] The Algebra of Opposition (and universal logic interpretations),
in A. Koslow and A. Buchsbaum editors,
The Road to Universal Logic, pages 127–143, Springer Basel, 2015.

[70-P] Three decades of institution theory,
in Jean-Yves Beziau editor,
Universal Logic: an Anthology, pages 309–322, Springer Basel, 2012.

[71-P] 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.

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

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



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

[75-P] Component-based algebraic specification - behavioural specification for component-based software engineering - (with S. Iida and K. Futatsugi),
In *Behavioral specifications of businesses and systems*, The Springer International Series in Engineering and Computer Science Volume 523, pages 105–121, Kluwer, 1999.

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

– CONFERENCE PUBLICATIONS (PEER-REVIEWED)

[77-C] CafeOBJ traces,
in S. Iida, J. Meseguer, K. Ogata editors,
Specification, Software and Algebra, volume 8373 *Lecture Notes in Computer Science*, pages 53–65, Springer, Berlin Heidelberg, 2014.

[78-C] Hybridization of Institutions (with M. Martins, A. Madeira and L. Barbosa),
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.

[79-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), vol. 4060 of *Lecture Notes in Computer Science*, pag. 65–98, Springer, 2006.

[80-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, vol. 3188 of *Lecture Notes in Computer Science*, pag. 134–156, Springer, 2004.

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

[82-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, vol. 1130 of *Lecture Notes in Computer Science*, pag. 200–221, Springer, 1996.

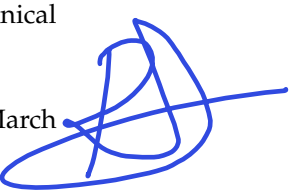
[83-C] Towards an algebraic semantics for the object paradigm (with J. Goguen),
In Harmut Ehrig and Fernando Orejas, editors,
Recent Trends in Data Type Specification, vol. 785 of *Lecture Notes in Computer Science*, pag. 1–34, Springer, 1994.

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

[85-C] Component-based algebraic specification: – behavioural specification for component based software engineering – (with S. Iida and K. Futatsugi),
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.

[86-C] Logical semantics for CafeOBJ (with K. Futatsugi),
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.

[87-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 (NOT PUBLISHED ELSEWHERE)

[88-R] In between myth and reality: AI for math – a case study in category theory.
arXiv:2504.13360 [cs.AI], 2025.

[89-R] Computational modelling for combinatorial game strategies.
arXiv:2408.03955 [cs.LO], 2024.

[90-R] Non-deterministic algebraic rewriting as adjunction.
arXiv:2204.12133 [math.LO], 2022.

[91-R] WADT 2014 Preliminary Proceedings (with M. Codescu, I. Ţuţu)
Technical Report 7-2014, Simion Stoilow Institute of Mathematics of the Romanian Academy, 2014.

[92-R] A module algebra for behavioural specifications.
In N. Marti-Oliet and M. Palomino editors, *WADT 2012 Preliminary Proceedings*, Technical report TR-08/12 pages 44–45, Universidad Complutense de Madrid Departamento de Sistemas Informaticos y Computacion, 2012.

[93-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.

[94-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.

[95-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.

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

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

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

— EDITED VOLUMES

[99-E] *Universal Logic and Computation*, (with M.Coniglio). Special issue to celebrate Jean-Yves Beziau's 50th birthday, *Journal of Logic and Computation* 27(6), Oxford University Press, 2017.

[100-E] *Recent Trends in Algebraic Development Techniques* – 22nd International Workshop, WADT 2014, revised selected papers (with M. Codescu and I. Ţuţu), volume 9463 of *Lecture Notes in Computer Science (Theoretical Computer Science and General Issues)*, Springer, 2015.

— EDITORIAL BOARD MEMBERSHIP

– *Studies in Universal Logic* book series at Springer Basel (formerly Birkhäuser), Switzerland (2007–).