CURRICULUM VITAE

PERSONAL DETAILS

Name: Ionuţ Ţuţu
E-mail: ittutu@gmail.com
Born: 16th June 1987, Bucharest
Nationality: Romanian

RESEARCH INTERESTS

- Logic-independent logic programming
- Algebraic specification
- Formal software development
- Abstract model theory

EDUCATION

2012–2015 *PhD in Computer Science*
Royal Holloway University of London, United Kingdom

2011–2012 *Research student at the Department of Computer Science*
University of Leicester, United Kingdom

2009–2011 *MSc in Logic and Formal Specifications*
Department of Mathematics, Şcoala Normală Superioară Bucureşti, Romania

2008–2010 *MSc in Theoretical Computer Science*
Faculty of Mathematics and Computer Science, University of Bucharest, Romania

2005–2008 *BSc in Computer Science*
Faculty of Mathematics and Computer Science, University of Bucharest, Romania

AWARDS AND FUNDING

- Grigore C. Moisil Award of the Romanian Academy
  received in 2019 for work on logic programming published in 2017
- Reid Scholarship
  Royal Holloway University of London, United Kingdom
- EPSRC Doctoral Training Grant
  University of Leicester, United Kingdom
- Merit scholarships throughout the bachelor's and master's degree studies
  University of Bucharest and Şcoala Normală Superioară Bucureşti, Romania

RESEARCH AND TEACHING EXPERIENCE

2018– *Researcher (CS III)*
Department of Number Theory and Computational Methods
Simion Stoilow Institute of Mathematics of the Romanian Academy, Romania

2021– *Researcher*
Research group of the project PN-III-P4-ID-PCE-2020-0446
(Axiomatic Methods in Non-Classical Model Theory)
Institute of Mathematics of the Romanian Academy, Romania

2020–2022 *Researcher*
Research group of the project PN-III-P2-2.1-PED-2019-0955
(Component-Based Formal Verification)
Institute of Mathematics of the Romanian Academy, Romania

2019–2021 *Postdoctoral research associate*
School of Science and Engineering, University of Dundee, UK

2018–2019	*Research fellow* Department of Computer Science, Royal Holloway University of London, United Kingdom
2017–2018	*Teaching fellow* Department of Computer Science, Royal Holloway University of London, United Kingdom
2013–2017	*Teaching assistant* / *Workshop leader* (Software Verification, Mathematical Structures) Department of Computer Science, Royal Holloway University of London, United Kingdom
2015–2016	*Junior developer* Department of Computer Science, Royal Holloway University of London, United Kingdom
2012–2016	*Research assistant* Research group of the project ID-3-0439 (Universal Logic Methods in Computer Science) Institute of Mathematics of the Romanian Academy, Romania
2011–2012	*Graduate teaching assistant* (Software Reliability) Department of Computer Science, University of Leicester, United Kingdom
2008–2010	*Research assistant* Research Centre in Computing Models, Algorithms and Cryptography University of Bucharest, Romania

ACADEMIC VISITS

March 2019	Institute of Mathematics for Industry Kyushu University, Japan
Oct 2018	Computer Science Theory Group Swansea University, Wales, UK
Sept 2015	Institut de recherche en informatique et systèmes aléatoires INRIA Rennes, France
May 2014	Foundations of Computing Research Group University of Leicester, UK

SCIENTIFIC ACTIVITIES

Invited speaker	at *LAC 2018 – Workshop on Logic, Algebra and Category Theory*, Melbourne, 2018
Lecturer	at *LSGT 2018 – Leverhulme School on Graph Transformation Techniques*, Egham, 2018
Speaker	at *FMI Logic in Computer Science Seminar* and *LOS/IMAR/ILDS Logic Seminar*, Bucharest, 2013–2023
Co-editor	(with J. L. Fiadeiro) of the volume *Recent Trends in Algebraic Development Techniques – WADT 2018, Revised Selected Papers* Vol. 11563. Lecture Notes in Computer Science. Springer, 2019
	(with M. Codescu and R. Diaconescu) of the volume *Recent Trends in Algebraic Development Techniques – WADT 2014, Revised Selected Papers* Vol. 9463. Lecture Notes in Computer Science. Springer, 2015
Co-chair	(with J. L. Fiadeiro) of *WADT 2018 – the 24th International Workshop on Algebraic Development Techniques*
PC member	of *CALCO 2023 – the 10th Conference on Algebra and Coalgebra in Computer Science,* *ICFEM 2023 – the 24th International Conference on Formal Engineering Methods,* *WADT 2022 – the 26th International Workshop on Algebraic Development Techniques,* *ICFEM 2022 – the 23rd International Conference on Formal Engineering Methods,* *WADT 2020 – the 25th International Workshop on Algebraic Development Techniques,* *CALCO 2019 – the 8th Conference on Algebra and Coalgebra in Computer Science,* *WADT 2018 – the 24th International Workshop on Algebraic Development Techniques,* *CALCO 2017 EIW – the Early Ideas Workshop of the 7th Conference on Algebra and Coalgebra in Computer Science,*

WADT 2016 – the 23rd International Workshop on Algebraic Development Techniques, *WADT 2014 – the 22nd International Workshop on Algebraic Development Techniques*, and *ICCSW 2013 – 2013 Imperial College Computing Student Workshop*

Organizer of *IFIP WG1.3 2018 – the 28th IFIP WG1.3 (Foundations of System Specification) meeting*, *WADT 2018 – the 24th International Workshop on Algebraic Development Techniques*, *LSGT 2018 – Leverhulme School on Graph Transformation Techniques*, *WADT 2014 – the 22nd International Workshop on Algebraic Development Techniques*, and *CSPRC 2014 – the 14th Computer Science Postgraduate Research Colloquium*

Referee for *Journal of Logic and Computation* (Oxford University Press), *Journal of Computer and System Sciences* (Elsevier), *Formal Aspects of Computing* (Springer), *Mathematical Reviews* (American Mathematical Society), *Information Processing Letters* (Elsevier), *Logica Universalis* (Birkhäuser Verlag), *Workshop on Algebraic Development Techniques (WADT)*, *Conference on Algebra and Coalgebra in Computer Science (CALCO)*, *International Colloquium on Theoretical Aspects of Computing (ICTAC)*, *Conference on Software Engineering and Formal Methods (SEFM)*, *Workshop on Logic, Language, Information and Computation (WOLLIC)*, and *ACM/IEEE Symposium on Logic in Computer Science (LICS)*

SUPPORT FOR FORMAL SPECIFICATION AND VERIFICATION

SpeX a language-agnostic rewriting-based environment that facilitates the experimental development of formal-specification languages and tools (available at `https://gitlab.com/ittutu/spex`)

COMP (with R. Diaconescu) a structured specification language and analysis tool based on the behavioural-abstraction paradigm that supports the formal development of component-based systems (available at `https://gitlab.com/ittutu/comp`)

CITP (with D. Găină and A. Riesco) a constructor-based interactive theorem prover (available at `https://github.com/ittutu/citp`)

OVERVIEW OF PUBLICATIONS

- author of 16 peer-reviewed papers (listed below), either as a single author, or in collaboration with researchers from the UK, Romania, Portugal, USA, Japan, Spain, or Argentina
- 7 papers published in top-tier journals in the field: *Journal of Logic and Computation* (2017), *Logical Methods in Computer Science* (2015), *Journal of Logical and Algebraic Methods in Programming* (2014 & 2019), *Theoretical Computer Science* (2011 & 2014), and *Information Processing Letters* (2013)
- 9 papers presented at workshops and conferences: FM 2021 (Virtual Event), TABLEAUX 2019 (London, UK), APSEC 2018 (Nara, Japan), DaLí @ TABLEAUX 2017 (Brasília, Brazil), WADT 2014 (Sinaia, Romania), CALCO 2013 (Warsaw, Poland) and 2015 (Nijmegen, Netherlands), and ICCSW 2013 (London, UK)

PEER-REVIEWED PAPERS

1. (with C. E. Chiriţă and J. L. Fiadeiro) *Dynamic Reconfiguration via Typed Modalities*
   Formal Methods – 24th International Symposium, LNCS 13047:599–615, Springer, 2021
2. (with J. L. Fiadeiro, A. Lopes, and D. Pavlovic) *Logics for Actor Networks: A two-stage constrained-hybridisation approach*
   Journal of Logical and Algebraic Methods in Programming, Elsevier, 106:141–166, 2019
3. (with C. E. Chiriţă, A. Lopes, and J. L. Fiadeiro) *Logical Support for Bike-Sharing System Design*
   From Software Engineering to Formal Methods and Tools, and Back, LNCS 11865:152–171, Springer, 2019
4. (with D. Găină) *Birkhoff Completeness for Hybrid-Dynamic First-Order Logic*
   Automated Reasoning with Analytic Tableaux and Related Methods, LNCS 11714:277–293, Springer, 2019
5. (with D. Găină and A. Riesco) *Specification and Verification of Invariant Properties of Transition Systems*
   25th Asia-Pacific Software Engineering Conference, IEEE Computer Society, 99–108, 2018

6. (with J. L. Fiadeiro) *From Conventional to Institution-Independent Logic Programming*
   Journal of Logic and Computation, 27(6):1679–1716, Oxford University Press, 2017
7. (with J. L. Fiadeiro, A. Lopes, and D. Pavlovic) *Logics for Actor Networks: A Case Study in Constrained Hybridization*
   Dynamic Logic: New Trends and Applications, LNCS 10669:98–114, Springer, 2017
8. (with J. L. Fiadeiro) *Revisiting the Institutional Approach to Herbrand's Theorem*
   Algebra and Coalgebra in Computer Science, LIPICS 35:304–319, Schloss Dagstuhl, 2015
9. (with I. Vissani, C. G. Lopez Pombo, and J. L. Fiadeiro) *A Full Operational Semantics for Asynchronous Relational Networks*
   Recent Trends in Algebraic Development Techniques, LNCS 9463:131–150, Springer, 2015
10. (with J. L. Fiadeiro) *Service-Oriented Logic Programming*
    Logical Methods in Computer Science, 11(3), 2015
11. (with R. Diaconescu) *Foundations for Structuring Behavioural Specifications*
    Journal of Logical and Algebraic Methods in Programming, 83(3–4):319–338, Elsevier, 2014
12. *Parameterisation for Abstract Structured Specifications*
    Theoretical Computer Science, 517(0):102–142, Elsevier, 2014
13. *Comorphisms of Structured Institutions*
    Information Processing Letters, 113(22–24):894–900, Elsevier, 2013
14. *Logical Foundations of Services*
    Imperial College Computing Student Workshop, OASICS 35:111–118, Schloss Dagstuhl, 2013
15. (with J. L. Fiadeiro) *A Logic-Programming Semantics of Services*
    Algebra and Coalgebra in Computer Science, LNCS 8089:299–313, Springer, 2013
16. (with R. Diaconescu) *On the Algebra of Structured Specifications*
    Theoretical Computer Science, 412(28):3145–3174, Elsevier, 2011