NINA GIERASIMCZUK

Contact

ILLC, UvA
Science Park 107
1098 XG Amsterdam
The Netherlands

Phone: +31 20 525 8254
Mobile: +31 06 52569567
E-mail: Nina.Gierasimczuk@gmail.com
Website: www.ninagierasimczuk.com

Research Interests

Primary: formal learning theory, computability, modal logic, epistemology
Secondary: cognitive science, philosophy of science, artificial intelligence

Employment History

Postdoc in the "Logical Structure of Correlated Information Change" Project, Institute for Logic, Language and Computation, University of Amsterdam **2012-present**

Postdoc in the "Reasoning about Quantum Information" Project, Institute of Artificial Intelligence, University of Groningen **2011**

Postdoc at Curious Minds Project, University of Amsterdam **2010**

Docent at Amsterdam University College **2009-2010**

Education

University of Amsterdam, The Netherlands **2006-2010**

Ph.D., Institute for Logic, Language and Computation

Title: Knowing One's Limits. Logical Analysis of Inductive Inference
Advisors: Johan van Benthem, Dick de Jongh
Committee: Pieter Adriaans, Robin Clark, Vincent Hendricks, Remko Scha, Sonja Smets, Rineke Verbrugge
Graduation date: December 17th, 2010

University of Warsaw, Poland **2000-2005**

MA in Philosophy (cum laude), Individual Studies in the Humanities

Title: On the Algorithmic Approach to the Problem of Language Learning
Supervisor: Marcin Mostowski

Publications

1. An analytic tableaux model for Deductive Mastermind empirically tested with a massively used online learning system (with Han van der Maas and Maartje Raijmakers), Journal of Logic, Language and Information, online first, DOI : 10.1007/s10849-013-9177-5.
2. Logic and Learning (with Vincent F. Hendricks and Dick de Jongh), to appear in Outstanding Contributions: Johan van Benthem. Trends in Logic Book Series, Springer 2013.
3. On the Complexity of Conclusive Update (with Dick de Jongh), The Computer Journal 56(3):365-377, 2013.
4. Logical and Psychological Analysis of Deductive Mastermind (with Han van der Maas and Maartje Raijmakers), in: Jakub Szymanik and Rineke Verbrugge (Eds.): Proceedings of the Logic & Cognition Workshop at European Summer School in Logic, Language and Information (ESSLLI) 2012, Opole, Poland, 13-17 August, 2012, CEUR Workshop Proceedings, vol. 883, pp. 1-13, CEUR-WS.org 2012.
5. Invariance Properties of Quantifiers and Multi-agent Information Exchange (with Jakub Szymanik), in: Makoto Kanazawa et.al (Eds.): Proceedings of 12th Meeting on Mathematics of Language, LNAI 6878, pp. 72-89, 2011.

6. Belief Revision as a Truth-Tracking Process (extended abstract, with Alexandru Baltag and Sonja Smets), in: Krzysztof R. Apt (Ed.): Proceedings of the 13th Conference on Theoretical Aspects of Rationality and Knowledge (TARK-2011), ACM 2011.

7. A Note on a Generalization of the Muddy Children Puzzle (with Jakub Szymanik), in: Krzysztof R. Apt (Ed.): Proceedings of the 13th Conference on Theoretical Aspects of Rationality and Knowledge (TARK-2011), ACM 2011.

8. Finite Identification from the Viewpoint of Epistemic Update (with Cédric Dégremont), Information and Computation 209(3): 383-396 (2011).

9. On the minimality of definite tell-tale sets in finite identification of languages (with Dick de Jongh). In D. Grossi, L. Kurzen, and F. R. Velázquez-Quesada, editors, 2009 Yearbook of Logic and Interactive Rationality (LIRA) Seminar. Institute for Logic, Language and Computation, Amsterdam, 2010.

10. Learning and Teaching as a Game: A Sabotage Approach (with Lena Kurzen and Fernando R. Velázquez-Quesada), X. He, J. Horty, and E. Pacuit (Eds.): Proceedings of the 2nd International Workshop on Logic, Rationality and Interaction (LORI) 2009, LNAI 5834, pp. 119-132, 2009.

11. Can Doxastic Agents Learn? On the Temporal Structure of Learning (with Cédric Dégremont), X. He, J. Horty, and E. Pacuit (Eds.): Proceedings of the 2nd International Workshop on Logic, Rationality and Interaction (LORI) 2009, LNAI 5834, pp. 90-104, 2009.

12. Bridging Learning Theory and Dynamic Epistemic Logic, Synthese 169 (2009), pp. 371-384.

13. Branching Quantification v. Two-way Quantification (with Jakub Szymanik), Journal of Semantics 26(4), pp. 367-392, 2009.

14. Learning by Erasing in Dynamic Epistemic Logic, A.H. Dediu, A.M. Ionescu, and C. Martin-Vide (Eds.): Proceedings of the 3rd International Conference on Language and Automata Theory and Applications (LATA) 2009, LNCS 5457, pp. 362-373, 2009.

15. Identification through Inductive Verification Application to Monotone Quantifiers, P. Bosch, D. Gabelaia, and J. Lang (Eds.): Proceedings of the 7th International Tbilisi Symposium on Logic, Language, and Computation (TbiLLC) 2007, LNCS 5422, pp. 193-205, 2009.

16. The Problem of Learning the Semantics of Quantifiers, in: B. ten Cate, H. Zeevat (eds.): Proceedings of the 6th International Tbilisi Symposium on Logic, Language, and Computation (TbiLLC) 2005, LNCS 4363, pp. 117-126, 2007.

17. Hintikka's Thesis Revisited (with Jakub Szymanik), The Bulletin of Symbolic Logic, vol. 13 (2007), p. 273.

18. On W.v.O. Quine's Model of Language Acquisition, J. Szymanik and M. Zajenkowski (Eds.): Cognitive Science, MISH 2004.

19. On the Algorithmic Approach to the Problem of Language Learning, Master Thesis, Institute of Philosophy, University of Warsaw 2005.

Current Writings in Preparation

20. Monograph on Formal Learning Theory and Logic (preliminarily accepted for publication in Synthese Library, Springer).

21. Epistemic Topology (with Alexandru Baltag and Sonja Smets).

22. On the Tractable Representations of Multi-Agent Information Exchange (with Jakub Szymanik).

Invited Talks

1. A logical model for Deductive Mastermind empirically tested with a massively used online learning system, Artificial Grammar Learning: Learnability, Complexity and Meaning Workshop, Tuebingen, Germany 2013.
2. Simplicity in Formal Learning Theory, Studia Logica International Conference, Trends in Logic XII, "The Logic of Simplicity", Carnegie Mellon University, USA 2013.
3. Convergence to knowledge. A logical perspective, Lecture at Modality and Modalities, Copenhagen, Denmark 2013.
4. Logic, Computation, and Cognition, Nordic Spring School in Logic, Sophus Lie Conference Center, Nordfjordeid, Norway 2013.
5. Using Logic to Explain Children Performance and Learning in Deductive Games, Guest Lecture at Games and Learning course, Amsterdam University College, 2013.
6. Conclusive Update, Learning, and Computability, 2nd Conference on Games, Interactive Rationality and Learning (GIRL), Lund, Sweden 2013.
7. Truth-tracking and Belief Revision, Centre for Logic and Philosophy of Science of Ghent University, Ghent 2013.
8. Truth-tracking and Belief Revision, Amsterdam Workshop on Truth, Amsterdam 2013.
9. Conclusive Update and Computability, GroLog Seminar, Groningen 2012.
10. On the Computational Properties of Finite Identifiability, XIII Logical Workshop "Truth - Complexity - Language", Łowicz 2012.
11. Using Proof Theory to Explain Children Performance in Deductive Games, Reasoning and Interaction (RAIN) at North American Summer School in Logic, Language and Information (NASSLLI), Austin 2012.
12. Inductive Inquiry via Belief Revision, Interrogative Model of Inquiry Seminar (IMI), IHPST, Paris 2012.
13. Iterated Belief Revision in the Limit, 1st Conference on Games, Interactive Rationality and Learning (GIRL), Lund, Sweden 2012.
14. On the Efficiency of Finite Identification, Seminar of The Department of Computation Theory, Faculty of Mathematics and Computer Science of A. Mickiewicz University, Poznań 2012.
15. Getting to Know. A Strategic Perspective, Lorentz Center Workshop on Modeling Strategic Reasoning, Leiden 2012.
16. A commentary on "Sincerity and Manipulation under Approval Voting" by Ulle Endriss, Lorentz Center Workshop on Modeling Strategic Reasoning, Leiden, The Netherlands 2012.
17. Learning-theoretical Analysis of Iterated Belief Revision, Special Session on Learning Theory, Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2012.
18. Quantifiers and Learnability, 3rd Workshop on Semantic Processing, Logic and Cognition, Tuebingen 2011.
19. Computational Learning Theory and Epistemic Logic, 2nd Entia et Nomina Workshop, Gdańsk 2011.
20. Logic and Cognition, Logic and Philosophy Today, Delhi 2011.
21. Believing in Formal Learning Theory, 19th Games, Logic, Language, and Computation (GLLC): Learning and Knowledge Change, Amsterdam 2011.

22. Truth Tracking and Belief Revision. Doxastic Logic Meets Learning Theory. Logic, Language, and Mind Seminar, Stockholm 2010.
23. What makes a good teacher? A Computational Study, Logic Tea, Institute for Logic, Language and Computation, Amsterdam 2009.

Conference Talks

1. Logical and Psychological Analysis of Deductive Mastermind, Logic & Cognition Workshop at European Summer School in Logic, Language and Information (ESSLLI) 2012, Opole 2012.
2. On the Complexity of Conclusive Update, 26th International Symposium on Computer and Information Sciences (ISCIS), London 2011.
3. Invariance Properties of Quantifiers and Multi-agent Information Exchange, 12th Meeting on Mathematics of Language (MoL), Nara 2011.
4. A Note on a Generalization of the Muddy Children Puzzle, 13th Conference on Theoretical Aspects of Rationality and Knowledge (TARK), Groningen 2011.
5. Belief Revision as a Truth-Tracking Process, 13th Conference on Theoretical Aspects of Rationality and Knowledge (TARK), Groningen 2011.
6. Inductive Inference and Epistemic Logic. An Overview, 18th Workshop on Logic, Language, Information and Computation (WOLLIC), Philadelphia 2011.
7. Muddy Children, Generalized Quantifiers and Internal Complexity, 4th Indian Conference on Logic and its Applications (ICLA), Delhi 2011.
8. Muddy Children Playground, Logic, Rationality and Intelligent Interaction Workshop, European Summer School in Logic, Language and Information (ESSLLI), Copenhagen 2010.
9. Can Doxastic Agents Learn? On the temporal structure of learning, 2nd International Workshop on Logic, Rationality and Interaction (LORI), Chongqing 2009.
10. Learning and Teaching as a Game, 2nd International Workshop on Logic, Rationality and Interaction (LORI), Chongqing 2009.
11. Variations on Sabotage: Obstruction and Cooperation, GAMES Workshop, Udine 2009.
12. Games for learning: a sabotage approach, Formal Approaches to Multi-Agent Systems (FAMAS), Torino 2009.
13. Learning as Interaction, Logical Methods for Social Concepts Workshop, European Summer School in Logic, Language and Information (ESSLLI), Bordeaux 2009.
14. Learning by Erasing in Dynamic Epistemic Logic, 3rd International Conference on Language and Automata Theory and Applications (LATA), Tarragona 2009.
15. On the Logic of Inductive Inference, Szklarska Poręba Workshop, Szklarska Poręba 2009.
16. Towards a game-theoretical and logical approach to learning, Szklarska Poręba Workshop, Szklarska Poręba 2009.
17. Identification through Inductive Verification Application to Monotone Quantifiers, 7th International Tbilisi Symposium on Logic, Language, and Computation (TbiLLC), Tbilisi 2007.
18. Hintikka's Thesis Revisited, Logic Colloqium, Nijmegen 2006.
19. The notion of computational complexity in psycholinguistics, 14th Annual Meeting of European Society for Philosophy and Psychology, Belfast 2006.
20. The Problem of Quantifiers Learning, 13th Annual Meeting of European Society for Philosophy and Psychology, Lund 2005.

Local Seminar Talks

1. Using Logic to Explain Children Performance in Deductive Games, Games and Learning Course, Amsterdam University College, Amsterdam 2013.
2. Invariance Properties of Quantifiers and Multi-agent Information Exchange, LeGO Seminar, Institute for Logic, Language and Computation, Amsterdam 2012.
3. Using Proof Theory to Explain Children Performance in Deductive Games, Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2012.
4. Inductive Inference and Epistemic Logic, Multi-agent Systems Group Meeting, Artificial Intelligence, University of Groningen, Groningen 2011.
5. Static Mastermind in Rekentuin. A computational, logical, and cognitive perspective, Code-P Seminar, Psychology Department, University of Amsterdam, Amsterdam 2010.
6. Games for Learning: A Sabotage Approach, Mini-Workshop, Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2009.
7. Can Doxastic Agents Learn? On the Temporal Structure of Learning, Mini-Workshop, Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2009.
8. What makes a good teacher? A Computational Study, Logic Tea, Institute for Logic, Language and Computation, Amsterdam 2009.
9. A Brief Introduction to Formal Learning Theory, Introductory Lecture at Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2009.
10. The New Eleusis, Working Session of Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2008.
11. On the Dynamics of Inductive Inference, Logic and Interactive Rationality Seminar, Institute for Logic, Language and Computation, Amsterdam 2008.
12. Experimenting with Some Non-Fregean Quantifier Combinations, Logic, Language, and Reasoning Seminar, Amsterdam 2008.
13. Model-Theoretic Learning, Cognitive Science Forum, Warsaw 2008.
14. Introduction to Learning Theory, Cognitive Science Forum, Warsaw 2007.

Teaching

1. Intensional Logic and Uncertainty, Bachelor in Artificial Intelligence Program, College of Science, University of Amsterdam (upcoming, 6 ECTS).
2. Belief Revision Meets Formal Learning Theory, course at European Summer School in Logic, Language and Information (ESSLLI) 2013, Düsseldorf, Germany (upcoming, 10h).
3. Logic, Computation, and Cognition, Nordic Spring School in Logic, Sophus Lie Conference Center, Nordfjordeid, Norway 2013 (upcoming, 6h).
4. Formal Learning Theory, Master of Logic Course, Institute for Logic, Language and Computation, University of Amsterdam (6 ECTS), Amsterdam 2013.
5. Formal Learning Theory and Epistemic Logic, course at European Summer School in Logic, Language and Information (ESSLLI) 2012, Opole, Poland (10h).
6. Belief Revision Meets Formal Learning Theory, course at North American Summer School in Logic, Language and Information 2012, Austin, Texas (10h).

7. Logic, Information Flow and Argumentation, Amsterdam University College, Amsterdam 2009-2010 (3 semesters x 6 ECTS).
8. Interacting Agents Processing Information, Institute for Logic, Language and Computation, Amsterdam 2009 (MoL Project, 6 ECTS).
9. Model-theoretic Learning, Cognitive Science Forum, Warsaw 2008 (6h).
10. Introduction to Formal Learning Theory, Logic and Cognitive Science Workshop, Szklarska Poręba 2007 (6h).
11. Logic, teaching assistance, Collegium Civitas, Warsaw 2006 (3 semesters x 3 ECTS).
12. Logic, teaching assistance, Warsaw University 2006 (2 semesters x 6 ECTS).
13. Philosophy, IB course, 20th Highschool of Jam Saheba Digvijay Sinhji, Warsaw 2006.
14. Introduction to Logic and Computation, Collegium Invisibile Summer School 2005 (30h).
15. Mathematical Linguistics, Collegium Invisibile Summer School 2003 (30h).

Supervision

1. Master Thesis supervision of Callum Sida-Murray, Institute for Logic, Language and Computation, University of Amsterdam)
2. Project supervision of Ciyang Qing (Institute for Logic, Language and Computation, University of Amsterdam)
3. PhD co-supervision of Zoe Christoff (Institute for Logic, Language and Computation, University of Amsterdam)
4. PhD co-supervision of Dariusz Kalociński (Institute of Philosophy, University of Warsaw)

Academic Activities

Participation in Summer Schools: European Summer School in Logic, Language and Information (2006-2013); Nordic Spring School in Logic 2013; North American Summer School in Logic, Language and Information 2012; Logical Workshop "Arithmetic, Computation, and Model Theory" (2001-08, 2012); The Continuum in Mathematics and Philosophy (2004); Vilem Mathesius Lecture Series 18 (2003); Lvov-Warsaw Seminars in the Philosophy of Science (2001-02).

Organizational Activities: LIRa Seminar, Institute for Logic, Language and Computation, Amsterdam; LogiCIC Seminar, Institute for Logic, Language and Computation, Amsterdam; Belief Change in Social Context (the kick-off Workshop of the LogiCIC Project), Amsterdam 2012; Poznań Logic and Cognition Conference 2012; Strategies for Learning, Belief Revision and Preference Change (Workshop at ESSLLI 2012); Mathematical Logic in The Netherlands 2011; Co-editor of webportal Filozofia.pl; Szklarska Poręba Workshop 'Learning' 2009; Szklarska Poręba Workshop 'Complexity and Language' 2008; Mathematical Models for Language Workshop, Szklarska Poręba 2007; PALMYR 5 'Dynamic Perspectives on Meaning', Paris 2007; Logic and Games Workshop, Kazimierz Dolny 2006; graphic design activities for Amsterdam Dynamics Group (websites, book covers); establishing websites for many of the above-listed events

Reviewing: Journal of Logic, Language and Information; Synthese; Information and Trust Dynamics in Artificial Societies Workshop at IJCAI 2013; International Workshop on Logic, Rationality and Interaction (LORI) 2012, 2013; Conference on Games, Interactive Rationality and Learning (GIRL) 2012, 2013; Conference on Theoretical Aspects of Rationality and Knowledge (TARK) 2011; Computability in Europe (CiE) 2011, 2013; Strategies for Learning, Belief Revision and Preference Change Workshop at ESSLLI 2012; Poznań Logic and Cognition Conference 2012.

PC Membership PC member of International Workshop on Logic, Rationality and Interaction (LORI) 2013; PC member of Information and Trust Dynamics in Artificial Societies Workshop at IJCAI 2013; PC member of Poznań Logic and Cognition Conference 2012.

PC Chairing PC co-chair of Strategies for Learning, Belief Revision and Preference Change (Workshop at ESSLLI 2012); PC chair of 10th Szklarska Poręva Workshop 2009.

Committee Work serving as an opponent at the PhD Defense of Lauri Keskinen (Institute for Logic, Language and Computation, UvA); serving as a committee member at the MoL Defence of Cecilia Chavez and Robert Carrington (Institute for Logic, Language and Computation, UvA); serving as the Logic and Computation area expert at European Summer School of Logic Language and Information 2013 Student Session.

Other Relevant Activities: Collaboration with Nemo Museum, Amsterdam: Lecture 'Wat is logisch?' within the Wakker Worden lecture series; Collaboration with the Curious Minds project (TalentenKracht): co-organisation of Publieksdag TalentenKracht 2010 and 2011 in Naturalis Museum, Leiden.

Awards & Grants

The Netherlands Organization for Scientific Research VENI 2013 Grant 'Learning from each other. Formal analysis of multi-agent learning' (individual grant, EUR 250.000).

The Best Paper Prize for 'Logical and Psychological Analysis of Deductive Mastermind' at the Logic & Cognition Workshop at European Summer School in Logic, Language and Information (ESSLLI) 2012, Opole, Poland, 13-17 August, 2012.

Foundation for Polish Science Award for Young Researchers, 2009, 2010

Polish Ministry of Education Scholarship for Academic Excellence, 2001-05

Languages

Polish (native); English (fluent); Dutch (intermediate); German (basics)

Hobby

Painting and drawing, visual arts, graphic design, climbing

Amsterdam, April 2013