

Yuliya Lierler

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RESEARCH INTERESTS

Artificial intelligence, especially in the area of computational methods for knowledge representation, reasoning, declarative problem solving, and natural language processing. She is a founder of the Knowledge Representation and Natural Language Processing Lab at the University of Nebraska Omaha: <http://cist.unomaha.edu/nlpkr/>

EDUCATION

- | | |
|-----------|---|
| 2006-2010 | Ph.D. in Computer Sciences
<i>University of Texas at Austin</i>
Dissertation: “SAT-based Answer Set Programming”
Advisor: Dr. Vladimir Lifschitz |
| 2000-2003 | M.S. in Computer Sciences
<i>University of Texas at Austin</i> |
| 1999-2000 | B.S. in Computer Sciences
<i>University of Texas at Austin</i>
Honors Thesis: “Experiments with Answer Set Solvers”
Advisor: Dr. Vladimir Lifschitz |
| 1996-1999 | Computer Science Program
<i>Belarusian State University of Informatics and Radioelectronics</i> |

RESEARCH EXPERIENCE

- | | |
|----------------|--|
| 9/2018-present | Associate Professor
<i>University of Nebraska Omaha, Department of Computer Science</i> |
| 9/2020-8/2023 | Cheryl Prewett Diamond Professor
<i>University of Nebraska Omaha</i> |
| 8/2012-8/2018 | Assistant Professor
<i>University of Nebraska Omaha, Department of Computer Science</i> |
| 8/2010-7/2012 | Computing Innovation Fellow Postdoc
<i>University of Kentucky, Department of Computer Science</i>
Mentor: Dr. Mirosław Truszczyński |
| 5/2006-2/2010 | Research Assistant
<i>University of Texas at Austin, Department of Computer Science</i>
Supervisor: Dr. Vladimir Lifschitz |
| 9/2003-4/2006 | Visiting Researcher
<i>Erlangen-Nuremberg University, Germany, Department of Computer Science</i>
Supervisor: Dr. Günter Görz |

5/2003-7/2003	Visiting Researcher <i>University of Genoa, Italy, Department of Computer Science</i> Supervisor: Dr. Enrico Giunchiglia
5/2002-9/2002	Visiting Researcher <i>Freiburg University, Germany, Department of Computer Science</i> Supervisor: Dr. Bernhard Nebel
9/2000-5/2003	Research Assistant <i>University of Texas at Austin, Department of Computer Science</i> Supervisor: Dr. Vladimir Lifschitz

TEACHING EXPERIENCE

2012-present	Course Instructor <i>University of Nebraska Omaha, Department of Computer Science</i> • Introduction to Artificial Intelligence • Introduction to Artificial Intelligence (online version, compliant with the Digital Learning standard) • Natural Language Processing • Advanced Topics in Natural Language Understanding • Advanced Topics in Artificial Intelligence • Theoretical Foundations of Computer Science
2005	Course Instructor <i>Erlangen Nuremberg University, Germany, Department of Computer Science</i> • Computational Syntax and Semantics
2006-2010	Teaching Assistant <i>University of Texas at Austin, Department of Computer Science</i> Courses: <i>Data Management, Abstract Data Types, Introduction to Mathematical Logic</i>
2014-present	Advising <i>Thesis</i> Nicholas Wilson, Master's Project on <i>Maturing and Extending The EZSMT System</i>, 2022 Adrian Dorsey, Master's Project on <i>Extending Text2ALM with New Relations and Explanations by XClingo</i>, 2021 Nicholas Hippen, Master's Thesis on <i>Grounding Size Prediction for Answer Set Programs</i>, 2019 Craig Olson, Master's Thesis on <i>Processing Narratives by Means of Action Languages</i>, 2019 Gang Ling, <i>From Narrative Text to Formal Action Language System Descriptions</i>, 2018 Benjamin Susman, Master's Thesis on <i>The EZSMT Solver: Constraint Answer Set Solving meets SMT</i>, 2016 <i>Graduate research</i> Keeran Dhakal: <i>EZSMT 3.0 Revamped</i>, 2023-present Zachary Hansen: <i>Correctness in Constraint Answer Set Programming</i>, 2020-present Justin Robbins: <i>Lazy Grounding via MultiShot Solving</i>, 2019-2020 Joseph Meyer: <i>Interpreter for Action Language H</i>, 2019 Brian Hodges: <i>Lazy Grounding in Answer Set Programming</i>, 2018-2019 Dan Bailey: <i>Prepositional Phrase Attachment and How Knowledge can Help</i>, 2014

Undergraduate research

Josh Gryzen: *What do LLMs mean for bAbI*, 2023-present
Daniel Bresnahan: *ASP Rewriting Tool LPOPT Enhanced by Predictor*, 2020
Da Shen: *SMT-based Constraint Answer Set Solvers for Nontight Programs*, 2016-2017
Nick Richman: *Constraint Answer Set Solving via Minizinc*, 2016
Maeghan Fry: *Knowledge-Based Linguistic Reasoning*, 2016
Joshua Irvin: *Rewriting Techniques to Improve Performance in Answer Set Programming*, 2015-2016
Matt Buddenhagen: *Performance Tuning in Answer Set Programming*, 2015

Dissertation Committee Member or Opponent or Evaluator

Francesco Pacenza: *Reasoning in Highly Dynamic Environments*, Calabria University, Italy, 2021
Jori Bomanson: *Normalization and Rewriting for Answer Set Programming and Optimization*, Aalto University, Finland, 2020
Sriram Srinivasan: *Scalable Algorithms for Updating Large-Scale Dynamic Networks*, University of Nebraska Omaha, 2020
Jose M. Santos: *Physiologically-Aware Architecture for Fidelity-Preserving Transmission of Biomedical Signals in Body Area Sensor Networks and IoT*, University of Nebraska Lincoln, 2020
Ayan Dutta: *Configuration Formation Planning and Adaptive Locomotion Learning in Modular Self-reconfigurable Robots*, University of Nebraska Omaha, 2017

2015

Mentorship

Robert Woodward, Preparing Future Faculty Program

INDUSTRIAL EXPERIENCE

5/2007-8/2007	Software Engineer <i>IBM, WBI System Performance</i>
5/2001-8/2001	Software Engineer <i>Verizon, Information Technology</i>

JOURNAL PUBLICATIONS

- 1 Yu. Lierler, G. Ling, C. Olson, **Information Extraction Tool TEXT2ALM: From Narratives to Action Language System Descriptions and Query Answering**, *AI communications*, 2024
- 2 Yu. Lierler, **An Abstract View on Optimizations in Propositional Frameworks**, *Annals of Mathematics and Artificial Intelligence*, 2023
- 3 Yu. Lierler, **Unifying Framework for Optimizations in Non-boolean Formalisms**, *Theory and Practice of Logic Programming*, vol. 23 (6), 2023, 1248–80, doi:10.1017/S1471068422000400
- 4 J. Fandinno, Z. Hansen, Yu. Lierler, V. Lifschitz, N. Temple, **External Behavior of a Logic Program and Verification of Refactoring**, *Theory and Practice of Logic Programming*, 2023, 1-15, doi:10.1017/S1471068423000200
- 5 D. Bresnahan, N. Hippen, Yu. Lierler, **System Predictor: Grounding Size Estimator for Logic Programs under Answer Set Semantics**, *Theory and Practice of Logic Programming*, vol. 24 (1), 2023, 132–56 doi:10.1017/S1471068423000078

- 6 Yu. Lierler, **Constraint Answer Set Programming: Integration and SMT-based Approaches**, *Theory and Practice of Logic Programming*, volume 23, number 1, 2023, 195-225
- 7 Yu. Lierler, **Strong Equivalence and Program Structure in Arguing Essential Equivalence between Logic Programs**, *Theory and Practice of Logic Programming*, volume 22, number 3, 2022, 335-366
- 8 P. Cabalar, J. Fandinno, and Yu. Lierler, **Modular Answer Set Programming as a Formal Specification Language**, *Theory and Practice of Logic Programming*, volume 20, number 5, 2020, 767-782
- 9 Yu. Lierler, **What is Answer Set Programming to Propositional Satisfiability**, *Constraints*, volume 22, July 2017, 307-337
- 10 Yu. Lierler and B. Susman, **On Relation between Constraint Answer Set Programming and Satisfiability Modulo Theories**, *Theory and Practice of Logic Programming*, volume 17, July 2017, 559-590
- 11 M. Balduccini and Yu. Lierler, **Constraint Answer Set Solver EZCSP and Why Integration Schemas Matter**, *Theory and Practice of Logic Programming*, volume 17, July 2017, 462-515
- 12 A. Harrison and Yu. Lierler, **First-Order Modular Logic Programs and their Conservative Extensions** (Best Student Paper Award) *Theory and Practice of Logic Programming*, volume 16, number 5-6, August 2016, 755-760
- 13 Yu. Lierler, M. Maratea, and F. Ricca, **Systems, Engineering Environments, and Competitions** *AI Magazine*, volume 37, number 3, Fall 2016, 45-52
- 14 Yu. Lierler and M. Truszczynski, **On Abstract Modular Inference Systems and Solvers**, *Artificial Intelligence* volume 236, July 2016, 65-89
- 15 R. Brochenin, Yu. Lierler, and M. Maratea, **Disjunctive Answer Set Solvers via Templates** *Theory and Practice of Logic Programming*, volume FirstView, December 2015, 1-33
- 16 Yu. Lierler, **Relating Constraint Answer Set Programming Languages and Algorithms**, *Artificial Intelligence*, volume 207, February 2014, 1-22
- 17 P. Ferraris, J. Lee, Yu. Lierler, V. Lifschitz, and F. Yang, **Representing First-Order Causal Theories by Logic Programs**, *Theory and Practice of Logic Programming*, volume 12, 2012, 383-412
- 18 Yu. Lierler and M. Truszczynski, **Transition Systems for Model Generators — A Unifying Approach**, *Theory and Practice of Logic Programming*, 27th Int'l. Conference on Logic Programming (ICLP'11) Special Issue, volume 11 (4-5), 2011, 629-646
- 19 Yu. Lierler, **Abstract Answer Set Solvers with Backjumping and Learning**, *Theory and Practice of Logic Programming*, Special Issue, volume 11 (2-3), 2011, 135-169
- 20 M. Gebser, J. Lee, Yu. Lierler, **On Elementary Loops of Logic Programs**, *Theory and Practice of Logic Programming*, volume 11 (6), 2011, 953-988
- 21 E. Giunchiglia, Yu. Lierler, and M. Maratea, **Answer Set Programming based on Propositional Satisfiability**, *Automated Reasoning*, volume 36, April 2006, 345-377

CONFERENCE PUBLICATIONS

- 1 J. Fandinno and Yu. Lierler, **Splitting Answer Set Programs with respect to Intensionality Statements**, *37th AAAI Conference on Artificial Intelligence (AAAI)*, 2023
- 2 J. Fandinno, Z. Hansen, and Yu. Lierler, **Axiomatization of Aggregates in Answer Set Programming**, *36th AAAI Conference on Artificial Intelligence (AAAI)*, 2022
- 3 L. Liu, M. Truszczynski, and Yu. Lierler, **A Machine Learning System to Improve the Performance of ASP Solving Based on Encoding Selection**, *16th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2022
- 4 Z. Hansen and Yu. Lierler, **Semantics for Conditional Literals via the SM Operator**, *16th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2022
- 5 J. Fandinno, Z. Hansen, and Yu. Lierler, **Arguing Correctness of ASP Programs with Aggregates**, *16th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2022
- 6 Yu. Lierler, **An Abstract View on Optimizations in SAT and ASP**, *17th edition of the European Conference on Logics in Artificial Intelligence (JELIA)*, 2021
- 7 J. Robbins, Yu. Lierler, **DualGrounder: Lazy instantiation via Clingo multi-shot framework**, *17th edition of the European Conference on Logics in Artificial Intelligence (JELIA)*, 2021
- 8 N. Hippen, Yu. Lierler, **Estimating Grounding Sizes of Logic Programs under Answer Set Semantics and System Predictor**, *17th edition of the European Conference on Logics in Artificial Intelligence (JELIA)*, 2021
- 9 Yu. Lierler and C. Olson, **An Architecture of Semantic Information Extraction Tool Text2ALM**, *10th International Scientific and Technical Conference "Open Semantic Technologies for Intelligent Systems"*, 2020
- 10 C. Olson and Yu. Lierler, **Information Extraction Tool Text2Alm: From Narratives to Action Language System Descriptions**, *35th International Conference on Logic Programming (ICLP) Technical Communications*, 2019
- 11 N. Hippen and Yu. Lierler, **Automatic Program Rewriting in Non-Ground Answer Set Programs**, *Practical Aspects of Declarative Languages (PADL)*, 2019
- 12 Yu. Lierler, **Strong Equivalence and Program's Structure in Arguing Essential Equivalence Between First-Order Logic Programs**, *Practical Aspects of Declarative Languages (PADL)*, 2019
- 13 D. Shen and Yu. Lierler, **SMT-Based Answer Set Solver CMODELS(DIFF) (System Description)**, *International Conference on Logic Programming (ICLP), Technical Communications*, 2018
- 14 D. Shen and Yu. Lierler, **SMT-Based Constraint Answer Set Solver EZSMT+ for Non-Tight Programs**, *International Conference on Principles of Knowledge Representation and Reasoning (KR)*, 2018
- 15 A Harrison and Yu. Lierler, **First-Order Modular Logic Programs and their Conservative Extensions (Extended Abstract)**, *27th International Joint Conference on Artificial Intelligence (IJCAI)*, 2017
- 16 Yu. Lierler, D. Inclezan and M. Gelfond, **Action Languages and Question Answering** *12th International Conference on Computational Semantics (IWCS)*, 2017

- 17 B. De Cat and Yu. Lierler, **Constraint CNF: a SAT and CSP Language Under One Roof** , *32nd International Conference on Logic Programming (ICLP)*, 2016
- 18 B. Susman and Yu. Lierler, **SMT-based Constraint Answer Set Solver EZSMT (System Description)**, *32nd International Conference on Logic Programming (ICLP)*, 2016
- 19 Yu. Lierler and B. Susman, **Constraint Answer Set Programming versus Satisfiability Modulo Theories**, *25th International Joint Conference on Artificial Intelligence (IJCAI)*, 2016
- 20 M. Buddenhagen and Yu. Lierler, **Performance Tuning in Answer Set Programming**, *13th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR)*, 2015
- 21 D. Bailey, Yu. Lierler, and B. Susman, **Propositional Phrase Attachment Problem Revisited: How VERBNET Can Help**, *11th International Conference on Computational Semantics (IWCS)*, 2015
- 22 Yu. Lierler and M. Truszczynski, **An Abstract View on Modularity in Knowledge Representation**, *29th AAAI Conference on Artificial Intelligence (AAAI-15)*, 2015
- 23 R. Brochenin, Yu. Lierler, and M. Maratea, **Abstract Disjunctive Answer Set Solvers**, *21st European Conference on Artificial Intelligence (ECAI)*, 2014
- 24 Yu. Lierler and M. Truszczynski, **Abstract Modular Inference Systems and Solvers**, *Practical Aspects of Declarative Languages (PADL)*, 2014, 49-64
- 25 M. Balduccini and Yu. Lierler, **Integration Schemas for Constraint Answer Set Programming: a Case Study (technical communication)**, *Theory and Practice of Logic Programming, On-line Supplement*, *29th International Conference on Logic Programming (ICLP)* 2013
- 26 Yu. Lierler and V. Lifschitz, **Logic Programs vs. First-Order Formulas in Textual Inference**, *10th International Conference on Computational Semantics (IWCS)*, 2013, 340-346
- 27 Yu. Lierler and P. Schueller, **Towards a Tight Integration of Syntactic Parsing with Semantic Disambiguation by means of Declarative Programming**, *10th International Conference on Computational Semantics (IWCS)*, 2013, 383-389
- 28 Yu. Lierler and M. Truszczynski, **Modular Answer Set Solving**, *27th AAAI Conference on Artificial Intelligence (AAAI-13)*, 2013, 244-249
- 29 M. Balduccini, Yu. Lierler, and P. Schueller, **Prolog and ASP Inference Under One Roof**, *12th International Conference on Logic Programming and Nonmonotonic Reasoning*, 2013, 148-160
- 30 M. Denecker, Yu. Lierler, M. Truszczynski, and J. Vennekens, **A Tarskian Informal Semantics for Answer Set Programming**, *28th International Conference on Logic Programming (ICLP)*, 2012, 277-289
- 31 B. Silverthorn, Yu. Lierler, and M. Schneider, **Surviving Solver Sensitivity: An ASP Practitioner's Guide**, *28th International Conference on Logic Programming (ICLP)*, 2012, 164-175
- 32 Yu. Lierler, **On the Relation of Constraint Answer Set Programming Languages and Algorithms**, *26th AAAI Conference (AAAI)*, 2012
- 33 Yu. Lierler, S. Smith, M. Truszczynski, and A. Westlund, **Weighted Sequence Problem: ASP vs CASP and Declarative vs Problem Oriented Solving**, *Practical Aspects of Declarative Languages (PADL)*, 2012, 63-77
- 34 M. Balduccini and Yu. Lierler, **Practical and Methodological Aspects of the Use of Cutting-Edge ASP Tools**, *Practical Aspects of Declarative Languages (PADL)*, 2012, 78-92

- 35 Yu. Lierler and V. Lifschitz, **Termination of Grounding is not Preserved by Strongly Equivalent Transformations**, *11th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2011, 205-210
- 36 Yu. Lierler and V. Lifschitz, **One More Decidable Class of Finitely Ground Programs**, *25th International Conference on Logic Programming (ICLP)*, 2009, 489-493
- 37 Yu. Lierler, **Abstract Answer Set Solvers**, *24th International Conference on Logic Programming (ICLP)*, 2008, 377-391
- 38 M. Gebser, Yu. Lierler, and J. Lee, **Head-Elementary-Set-Free Logic Programs**, *9th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2007, 149-161
- 39 M. Gebser, Yu. Lierler, and J. Lee, **Elementary Sets for Logic Programs**, *21st National Conference on Artificial Intelligence (AAAI)*, 2006, 244-249
- 40 Yu. Lierler and G. Görz, **Model Generation for Generalized Quantifiers via Answer Set Programming**, *8th Conference on Natural Language Processing KONVENS*, 2006, 101-106
- 41 Yu. Lierler, **Cmodels – SAT-Based Disjunctive Answer Set Solver**, *8th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2005, 447-451
- 42 A. Armando, L. Compagna, and Yu. Lierler, **Automatic Compilation of Protocol Insecurity Problems into Logic Programming**, *9th European Conference on Logics in Artificial Intelligence (JELIA)*, 2004, 617-627
- 43 B. Nebel and Yu. Lierler, **When Are Behavior Networks Well-Behaved?**, *16th European Conference on Artificial Intelligence (ECAI)*, 2004, 672-676
- 44 E. Giunchiglia, Yu. Lierler, and M. Maratea, **SAT-Based Answer Set Programming**, *19th National Conference on Artificial Intelligence (AAAI)*, 2004, 61-66
- 45 Yu. Lierler and M. Maratea, **Cmodels-2: SAT-based Answer Set Solver Enhanced to Non-tight Programs**, *7th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR)*, 2004, 346-350

BOOK CHAPTERS AND INVITED CONTRIBUTIONS

- 1 Yu. Lierler and P. Schueller **AspCgTk: Towards Syntactic Parsing with Semantic Disambiguation**, *ALP newsletter featured article*, 2014
- 2 Yu. Lierler, **Role of KR in Natural Language Understanding and Synergic KR**, *NSF Workshop: Research Challenges and Opportunities in Knowledge Representation*, 2013
- 3 Yu. Lierler and P. Schueller, **Parsing Combinatory Categorical Grammar via Planning in Answer Set Programming**, *Correct Reasoning: Essays on Logic-Based AI in Honour of Vladimir Lifschitz (Lecture Notes in Computer Science / Theoretical Computer Science and General Issues)*, Springer, 2012, 436-453
- 4 Yu. Lierler, **Constraint Answer Set Programming**, *ALP newsletter featured article*, 2012
- 5 M. Balduccini, C. Baral, and Yu. Lierler, **Knowledge Representation and Question Answering**, *The Handbook of Knowledge Representation*, Foundations of Artificial Intelligence, 2008, 779-820
- 6 Yu. Lierler and M. Maratea, **Cmodels: SAT-based Answer Set Programming System**, *ALP newsletter featured article*, 2007

WORKSHOP PUBLICATIONS

- 1 Yu. Lierler, **Optimizations in SAT and ASP via an Abstract Lens**, 27th RCRA International Workshop on *Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion* (RCRA), 2020
- 2 N. Hippen and Yu. Lierler, **Estimating Grounding Sizes of Logic Programs under Answer Set Semantics**, 27th RCRA International Workshop on *Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion* (RCRA), 2020
- 3 Yu. Lierler and B. Susman, **Constraint Answer Set Programming versus Satisfiability Modulo Theories Or Constraints versus Theories**, *Workshop on Grounding, Transforming, and Modularizing Theories with Variables*, 2015
- 4 D. Bailey, A. Harrison, Yu. Lierler, V. Lifschitz, and J. Michael, **The Winograd Schema Challenge and Reasoning about Correlation**, *AAAI Symposium on Logical Formalizations of Commonsense Reasoning*, 2015
- 5 Yu. Lierler and M. Truszczynski, **Abstract Modular Systems and Solvers**, *Workshop on Answer Set Programming and Other Computing paradigms (ASPOCP'13)*, 2013
- 6 M. Balduccini and Yu. Lierler, **Hybrid Automated Reasoning Tools: from Black-box to Clear-box Integration**, *Workshop on Answer Set programming and Other Computing Paradigms (ASPOCP'13)*, 2013
- 7 M. Denecker, Yu. Lierler, M. Truszczynski, and J. Vennekens, **A Tarskian Informal Semantics for Answer Set Programming**, *14th International Workshop on Non-Monotonic Reasoning*, 2012
- 8 Yu. Lierler and P. Schueller, **Parsing Combinatory Categorical Grammar with Answer Set Programming: Preliminary Report**, *25th Workshop on Logic Programming (WLP)*, 2011
- 9 Yu. Lierler and Yu. Zhang, **A Transition System for AC Language Algorithms**, *4th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP)*, 2011
- 10 Yu. Lierler, S. Smith, M. Truszczynski, and A. Westlund, **Weighted Sequence Problem: ASP vs CASP, Declarative vs Problem Oriented Solving**, *4th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP)*, 2011
- 11 M. Balduccini and Yu. Lierler, **ASP-Based Problem Solving with Cutting-Edge Tools**, *4th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP)*, 2011
- 12 J. Lee, Yu. Lierler, V. Lifschitz, and F. Yang, **Representing Synonymity in Causal Logic and in Logic Programming**, *13th International Workshop on Non-Monotonic Reasoning (NMR): Declarative Programming and Systems Sub-Workshop*, 2010
- 13 E. Giunchiglia, Yu. Lierler, M. Maratea, and A. Tacchella, **Experiments with SAT-based Answer Set Programming**, *1st Workshop on Search and Logic: Answer Set Programming and SAT (LaSh06)*, 2006
- 14 Yu. Lierler, **Disjunctive Answer Set Programming via Satisfiability**, *3rd International Workshop on Answer Set Programming*, 2005
- 15 Yu. Lierler, **Cmodels for Tight Disjunctive Logic Programs**, *19th Workshop on (Constraint) Logic Programming, W(C)LP*, 2005
- 16 E. Giunchiglia, Yu. Lierler, and M. Maratea, **A SAT-based Polynomial Space Algorithm for Answer Set Programming**, *10th International Workshop on Non-Monotonic Reasoning (NMR)*, 2004

- 17 Yu. Lierler and M. Maratea, **Computing Answer Sets of a Logic Program via-enumeration of SAT certificates**, *2nd International Workshop on Answer Set Programming*, 2003
- 18 Bernhard Nebel and Yu. Lierler, **Goal-Converging Behavior Networks and Self-Solving Planning Domains**, *IJCAI-03 Workshop on Agents in Real-time and Dynamic Environments*, 2003
- 19 Yu. Lierler, E. Erdem, and V. Lifschitz, **Fages' Theorem and Answer Set Programming**, *8th International Workshop on Non-Monotonic Reasoning (NMR)*, 2000

EDITORIAL CONTRIBUTIONS

- 1 Yu. Lierler, J. F. Morales: **Introduction to the 38th International Conference on Logic Programming Special Issue**. Theory Pract. Log. Program. 22(4): 499-504, 2022
- 2 Yu. Lierler, J. F. Morales: **Introduction to the 38th International Conference on Logic Programming Special Issue II**. Theory Pract. Log. Program. 22(5): 640, 2022
- 3 Yu. Lierler, J. F. Morales, C. Dodaro, V. Dahl, M. Gebser, T. Tekle: **Proceedings 38th International Conference on Logic Programming, ICLP 2022 Technical Communications / Doctoral Consortium**, Haifa, Israel, 31st July 2022 - 6th August 2022. EPTCS 364, 2022
- 4 M. Balduccini, Yu. Lierler, S. Woltran: **Preface**. Theory Pract. Log. Program. 21(3): 293-295, 2021
- 5 M. Balduccini, Yu. Lierler, S. Woltran: **Logic Programming and Nonmonotonic Reasoning - 15th International Conference**, LPNMR 2019, Philadelphia, PA, USA, June 3-7, 2019, Proceedings. Lecture Notes in Computer Science 11481, Springer 2019
- 6 Yu. Lierler, W. Taha: **Practical Aspects of Declarative Languages - 19th International Symposium**, PADL 2017, Paris, France, January 16-17, 2017, Proceedings. Lecture Notes in Computer Science 10137, Springer 2017
- 7 M. De Vos, Th. Eiter, Yu. Lierler, F. Toni: **Proceedings of the Technical Communications of the 31st International Conference on Logic Programming (ICLP 2015)**, Cork, Ireland, August 31 - September 4, 2015. CEUR Workshop Proceedings 1433, CEUR-WS.org 2015
- 8 E. Erdem, J. Lee, Yu. Lierler, D. Pearce: **Correct Reasoning - Essays on Logic-Based AI in Honour of Vladimir Lifschitz**. Lecture Notes in Computer Science 7265, Springer 2012

GRANTS

- 2024 Keeran Dhakal, Yu. Lierler, **EZSMTv3.0 Development and Benchmarking**, *UNO's Office of Research and Creative Activity*: the GRACA grant, **\$5,000**
- 2023 Josh Gryzen, Yu. Lierler, **Evaluating Open-Source Large Language Models on bAbI-Tasks**, *UNO's Office of Research and Creative Activity*: the Fund for Undergraduate Scholarly Experiences grant, **\$2,500**
- 2022 PI: Yu. Lierler, **Student Travel Grant for Thirty Eighth International Conference on Logic Programming and Doctoral Consortium**, *National Science Foundation (NSF)*, **\$10,000**
- 2021-2023 PI: Yu. Lierler, CoPI: J. Fandinno, **On the Way to Correctness in Constraint Answer Set Programming**, *Research Development Program, Office of Research and Creative Activity, UNO*, **\$86,000**
- 2019-2023 PI: Yu. Lierler, CoPI: M. Truszczynski, **Automated Optimization of Programs and Processing Tools in Answer Set Programming**, *REU Supplement, National Science Foundation (NSF)*, **\$39,000**

2017-2023	PI: Yu. Lierler, CoPI: M. Truszczynski, Automated Optimization of Programs and Processing Tools in Answer Set Programming , <i>National Science Foundation (NSF)</i> , \$500,000
2019	PIs: M. Balduccini, Yu. Lierler, S. Woltran, Student Travel Grant for Fifteenth International Conference on Logic Programming and Nonmonotonic Reasoning and Doctoral Consortium , <i>National Science Foundation (NSF)</i> \$10,000
2017	Da Shen, Yu. Lierler, SMT-based Constraint Answer Set Solvers for Nontight Programs , <i>UNO's Office of Research and Creative Activity</i> : the Fund for Undergraduate Scholarly Experiences grant, \$2,500
2016	Yu. Lierler, Constraint Answer Set Solver EZCSP meets Minizinc , <i>UNO's Office of Research and Creative Activity</i> : UCRCA Award, \$5,000
2016	M. Fry, Yu. Lierler, Knowledge-based Linguistic Reasoning , <i>UNO's Office of Research and Creative Activity</i> : the Fund for Undergraduate Scholarly Experiences grant, \$2,500
2016	J. Irvin, Yu. Lierler, Rewriting Techniques to Improve Performance in Answer Set Programming , <i>UNO's Office of Research and Creative Activity</i> : the Fund for Undergraduate Scholarly Experiences grant, \$2,500
2013-2014	Yu. Lierler, Semantic-based Natural Language Processing , <i>UNO's Office of Research and Creative Activity</i> : the Fund for Investing in the Research Enterprise grant, \$20,000
2013-2014	Yu. Lierler, Advances in Declarative Programming , <i>UNO's Office of Research and Creative Activity</i> : the Faculty Research International grant, \$4,000
2010-2012	Yu. Lierler, PI: Mirosław Truszczynski, Constraint Answer Set Programming , <i>National Science Foundation (NSF)</i> : CRA CIFellowship program, \$220,000

PROFESSIONAL ACTIVITIES

2011-present	Chairing <i>Program Chair</i> 38th International Conference on Logic Programming (ICLP), 2022 15th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR), 2019 19th International Symposium on Practical Aspects of Declarative Languages (PADL), 2017 11th ICLP Doctoral Consortium, 30th International Conference on Logic Programming, 2015 6th Workshop on Answer Set Programming and Other Computing Paradigms, 2013 5th Workshop on Answer Set Programming and Other Computing Paradigms, 2012 <i>Specialized Initiatives</i> <i>Workshop Chair</i>, 13th International Conference on Logic Programming and Non-Monotonic Reasoning, 2015 <i>Publicity Chair</i>, 27th International Conference on Logic Programming (ICLP), 2011 <i>University of Nebraska Omaha Initiatives</i> Speech Center Ambassador, Task Force Chair, AY 23/24 Speech Workshop, Workshop Organizer, 2023 UNO/KETV Interview: AI and its role at UNO, Interviewee, 2023 Seminars on Answer Set Programming, Zoom-based International Action Group, University of Nebraska Omaha, AY 21/22 9th Annual Computer Science Workshop, 2019 Beyond Grace Hopper Panel: Women in IT, University of Nebraska Omaha, 2015 Beyond Grace Hopper Panel: Women in IT, University of Nebraska Omaha, 2014
2020-present	Executive Committee Association for Logic Programming (ALP), Board member

2012-present	University Committees (<i>University of Nebraska Omaha, Department of Computer Science</i>) <i>Chairing</i> Graduate Program Committee, 2018-2020 Faculty Search Committee, 2019-2020 Doctoral Program AI Concentration, 2021-present <i>Member</i> Advisory Committee AI Advisory Committee Ad Hoc Committee on Grant Funding for In-load Research Time Doctoral Program Committee Graduate Program Committee Faculty Search Committee Exceptional Performance Review Committee RPT Committee Academic Planning Committee Personnel Committee Ad-Hoc Chaired Professorship Committee
2012, 2016, 2019	Tutorials Philadelphia Logic Week: <i>Processing Narratives by Means of Action Languages</i> 32nd International Conference on Logic Programming: <i>Relating Constraint Answer Set Programming and Satisfiability Modulo Theories</i> 26th AAAI Conference: <i>Theory and Practice of Answer Set Programming</i> (co-organized with E. Erdem and J. Lee)
2012-present	Editor <i>Theory and Practice of Logic Programming</i> Journal, Constraints Area Editor, 2024-present <i>Association for Logic programming (ALP) Newsletter</i>, KR & Non-monotonic Reasoning Area (co-editor with M. Balduccini), 2016-2017 <i>Technical Communications of the 31st International Conference on Logic Programming</i>, CEUR Proceedings 2015 (co-editor with M. De Vos, T. Eiter, and F. Toni) <i>Correct Reasoning: Essays on Logic-Based AI in Honour of Vladimir Lifschitz</i>, Lecture Notes in Computer Science / Theoretical Computer Science and General Issues, Springer 2012 (co-editor with E. Erdem, J. Lee, and D. Pearce)
2005-present	Program Committees <i>20th International Conference on Principles of Knowledge Representation and Reasoning (KR) (Main Track, Recently Published Research)</i>, 2023 <i>36th AAAI Conference on Artificial Intelligence (AAAI)</i>, 2022 <i>30th International Joint Conference on Artificial Intelligence (IJCAI)</i>, 2021 (senior program committee member) <i>29th International Joint Conference on Artificial Intelligence (IJCAI)</i>, 2020 (senior program committee member) <i>16th Reasoning Web Summer School (RW)</i>, 2020 (scientific advisory board) <i>17th International Conference on Principles of Knowledge Representation and Reasoning (KR)</i>, 2020 <i>24th European Conference on Artificial Intelligence (ECAI)</i>, 2020 <i>1st edition of the Declarative Problem Solving Workshop (DPSW)</i>, 2020 <i>27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence</i>, 2018 <i>34th International Conference on Logic Programming (ICLP)</i>, 2018 <i>14th International Conference on Logic Programming and Non-Monotonic Reasoning (LP-NMR)</i>, 2017 <i>Doctoral Consortium at the 14th International Conference on Logic Programming and Non-Monotonic Reasoning (DC-LPNMR)</i>, 2017 <i>30th AAAI Conference on Artificial Intelligence (AAAI)</i>, 2016

15th International Conference on Principles of Knowledge Representation and Reasoning (KR), 2016
IJCAI KnowProS Workshop, 2016
23rd RCRA International Workshop on "Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion", 2016
2nd Workshop on Natural Language Processing and Automated Reasoning, 2015
8th Workshop on Answer Set Programming and Other Computing Paradigms, 2015
13th International Conference on Logic Programming and Non-Monotonic Reasoning, 2015
28th AAAI Conference on Artificial Intelligence (AAAI), 2014
14th International Conference on the Principles of Knowledge Representation and Reasoning (KR), 2014
16th International Symposium on Practical Aspects of Declarative Languages (PADL), 2014
27th AAAI Conference on Artificial Intelligence (AAAI), 2013
29th International Conference on Logic Programming (ICLP), 2013
1st Workshop on Natural Language Processing and Automated Reasoning, 2013
13th International Conference on the Principles of Knowledge Representation and Reasoning (KR), 2012
28th International Conference on Logic Programming (ICLP), 2012
11th International Symposium on Functional and Logic Programming, 2012
22nd International Joint Conference on Artificial Intelligence (IJCAI), 2011
27th International Conference on Logic Programming (ICLP), 2011
3d Answer Set Programming Competition, 2011
4th Workshop on Answer Set Programming and Other Computing Paradigms, 2011
1st Workshop on Grounding and Transformations for Theories with Variables (GTTV), 2011
13th International Workshop on Non-Monotonic Reasoning (NMR), 2010
12th International Workshop on Non-Monotonic Reasoning (NMR), 2008
8th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR): System and Application Tracks, 2005

2005-present

Reviewing

Artificial Intelligence Journal; AI Communications; Theory and Practice of Logic Programming Journal; Algorithms Journal; Annals of Math and Artificial Intelligence; Journal of Artificial Intelligence Research; Journal of Logic and Computation; 11th and 12th International Conference on Principles of Knowledge Representation and Reasoning (KR); Fundamenta Informaticae; 9th International Symposium on Logical Formalizations of Commonsense Reasoning; 10th International Conference on Logic Programming and Nonmonotonic Reasoning; 24th AAAI

2019, 2023

National Science Foundation Panelist, CISE Directorate

2006-2011

Editorial Assistant

ACM Transactions on Computational Logic

INVITED TALKS

5/2024

Verification of Refactoring in Answer Set Programming

Keynote Speaker, the 17th International Symposium on Functional and Logic Programming (FLOPS), Kumamoto, Japan, 2024

1/2021

What SMT solving can do for Constraint Answer Set Programming

Invited Speaker, 23rd International Symposium on Practical Aspects of Declarative Languages (PADL), Online, 2021

1/2020

What is Constraint Answer Set Programming to Satisfiability Modulo Theories

Computer Science Colloquium, Iowa State University, USA

- 11/2019 **Answer Set Programming and Automatic Optimization Methods in its Realm**
Computer Science Colloquium, Iowa State University, USA
- 9/2019 **System PROJECTOR: An Automatic Program Rewriting Tool for Non-Ground Answer Set Programs**
Invited Speaker, 35th International Conference on Logic Programming, Las Cruces, New Mexico, USA
- 6/2019 **Processing Narratives by Means of Action Languages** *Invited Tutorial, Philadelphia Logic Week, USA*
- 1/2019 **Automatic Program Rewriting in Non-Ground Answer Set Programs**
Computer Science Colloquium, La Coruna University, Spain
- 11/2018, 11/2019 **What's Next? The Benefits of a Computer Science Graduate Degree from UNO**
Computer Science Colloquium, Creighton University, USA
Computer Science Colloquium, St. Ambrose University, USA
ACM Chapter Colloquium, University of Nebraska Omaha
- 10/2018 **SMT-based Constraint Answer Set Solver EZSMT,**
Midwest Verification Day (MVD), University of Iowa, USA
- 7/2016 **Constraint Answer Set Programming via Satisfiability Modulo Theories**
Computer Science Colloquium, University of Potsdam, Germany
- 1/2015 **On Propositional Phrase Attachment and Selectional Restrictions**
Computer Science Colloquium, IHS, Belarus
- 6/2014 **Integral Syntactic-Semantic Parsing**
Computer Science Colloquium, Catholic University Leuven (KU Leuven), Belgium
- 3/2014 **Constraint Answer Set Programming Overview**
Computer Science Colloquium, University of Iowa
Computer Science Colloquium, Catholic University Leuven (KU Leuven), Belgium
- 2/2013 **Answer Set Programming for a Tight Integration of Syntactic Parsing with Semantic Disambiguation**
CSE Colloquium Series, University of Nebraska-Lincoln
Computer Science Colloquium, Erlangen-Nuremberg University, Germany
- 3/2012 **Parsing Combinatory Categorical Grammar via Planning in Answer Set Programming**
Forum for Artificial Intelligence, University of Texas at Austin
Computer Science Colloquium, University of Cincinnati, USA
- 4/2011 **Discourse Representation Theory**
Invited Lecture, University of Texas at Austin
- 3/2011 **Answer Set Programming via Examples**
Invited Lecture, University of Texas at Austin
- 11/2010 **Abstract SAT, ASP, and PC(ID) Solvers**
Computer Science Colloquium, Texas Tech University
- 10/2010 **Transition Systems for Describing Combinatorial Search Procedures**
Computer Science Colloquium, University of Kentucky
- 1/2008 **Relational Nouns**
TAG Workshop, University of Texas at Austin

5/2007	Problem of Recognizing Textual Entailment <i>Computer Science Colloquium, Leipzig University, Germany</i> <i>Computer Science Colloquium, Potsdam University, Germany</i>
4/2005	Cmodels-3: SAT-based Disjunctive Answer Set Programming System <i>Seminar: Nonmonotonic Reasoning, Answer Set Programming and Constraints, Schloss Dagstuhl, Germany</i>
7/2003	Cmodels: an Answer Set Solver Based on Satisfiability <i>Computer Science Colloquium, University of Milan, Italy</i> <i>Computer Science Colloquium, University of Genoa, Italy</i>
9/2002	Cmodels: a Program for Computing Models of Completion <i>Seminar: Nonmonotonic Reasoning, Answer Set Programming and Constraints, Schloss Dagstuhl, Germany</i>

HONORS, AWARDS, AND SCHOLARSHIPS

2020-present	<i>Cheryl Prewett Diamond Professorship, University of Nebraska Omaha</i>
2016	<i>First-Order Modular Logic Programs and their Conservative Extensions (with Amelia Harrison)</i> <i>Best Student Paper Award</i> 32nd International Conference on Logic Programming
2013	<i>EZCSP</i> <i>Third Place, Model&Solve Track</i> 12th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR): Fourth Answer Set Programming Competition
2009	<i>CMODELS</i> <i>Second Place, Decision Problems in NP - Single System Team</i> 10th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR): Second Answer Set Programming Competition
2007	<i>CMODELS</i> <i>Second Place, Score (Solver, Core language) Category Disjunctive Programs</i> <i>Third Place, SCore Category</i> 9th International Conference on Logic Programming and Nonmonotonic Reasoning (LP-NMR): First Answer Set Programming Competition
2004	<i>16th European Summer School in Logic, Language, and Information Scholarship</i>
2002	<i>DAAD Spatial Cognition Priority Program Scholarship, German Academic Exchange Service</i>
2001	<i>DAAD Hi-Tech in Old Munich Scholarship, German Academic Exchange Service</i>
2000	<i>Dean's Excellence Award, College of Natural Sciences, University of Texas at Austin</i>
2000	<i>Honor for Successful Scientific Work, Russian Association of Artificial Intelligence</i>

LANGUAGES

English	Fluent
Russian	Native
Belarusian	Native
German	Fluent