CURRICULUM VITAE : Joohyung Lee

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Work Address	School of Computing and AI Systems Engineering, Fulton Schools of Engineering, Arizona State University, AZ, USA

POSITION

Associate Professor	School of Computing and AI, Fulton Schools of Engineering, Arizona State University

EDUCATION

Ph.D. in Computer Science, University of Texas at Austin, TX, USA
B.S. in Computer Engineering, Seoul National University, South Korea

RESEARCH INTERESTS

knowledge representation, machine learning, logic programming, commonsense reasoning, nonmonotonic reasoning, reasoning under uncertainty, computational logics, security, ontology, cognitive robotics, question answering

HONORS

- **Overseas Study Scholarship**, The Korea Foundation for Advanced Studies, 1998–2003.
- **Outstanding Paper Honorable Mention Award**, AAAI 2004.
- Four of my dissertation/thesis advisees received the best graduating student awards from the school (2010, 2012, 2013, 2016, 2017).
- Brain Pool Korea Fellow (2014 – 2015).

Publications

(In most papers, authors are listed alphabetically following the convention in the area. My student names are underlined. All papers are available electronically at http://peace.eas.asu.edu/joolee/papers.)

PAPERS IN REFEREED CONFERENCES

1. Adam Ishay, Zhun Yang, Joohyung Lee, Ilgu Kang, Dongjae Lim. Think before You Simulate: Symbolic Reasoning to Orchestrate Neural Computation for Counterfactual Question Answering. In Proceedings of the *IEEE/CVF Winter Conference on Applications of Compu ter Vision (WACV)*, to appear, 2024.

2. Zhun Yang, Adam Ishay, Joohyung Lee. Coupling Large Language Models with Logic Programming for Robust and General Reasoning from Text. In *Findings of ACL: ACL 2023*, pages 5186–5219, 2023.

3. Zhun Yang, Adam Ishay, Joohyung Lee. Leveraging Large Language Models to Generate Answer Set Programs. In Proceedings of the *20th International Conference on Principles of Knowledge Representation and Reasoning (KR 2023)*, pages 374–383, 2023.

4. Joonyoung Kim, Kangwook Lee, Haebin Shin, Hurnjoo Lee, Sechun Kang, Byunguk Choi, Dong Shin, Joohyung Lee. Intuitive Access to Smartphone Settings Using Relevance Model Trained by Contrastive Learning. In Proceedings of the *35th Conference on Innovative Applications of Artificial Intelligence (IAAI 2023)*, pages 15689-15695, 2023.

5. Zhun Yang, Joohyung Lee, and Chiyoun Park. Injecting Logical Constraints into Neural Networks via Straight-Through Estimators. In Proceedings of the *39th International Conference on Machine Learning (ICML 2022)*, 2022. (acceptance rate: 21.9% (1235/5630))

6. Zhun Yang, Adam Ishay, and Joohyung Lee. NeurASP: Embracing Neural Networks into Answer Set Programming In Proceedings of the *29th International Joint Conference on Artificial Intelligence (IJCAI 2020)*, 2020. (acceptance rate: 12.6% (592/4717))

7. Zhun Yang, Adam Ishay, and Joohyung Lee. A Simple Extension of Answer Set Programs to Embrace Neural Networks (Extended Abstract), *36th International Conference on Logic Programming (ICLP 2020)*, 2020.

8. Naser Ahmadi, Joohyung Lee, Paolo Papotti, and Mohammed Saeed. Explainable Fact Checking with Probabilistic Answer Set Programming. *Conference for Truth and Trust Online (TTO 2019)*, CoRR abs/1906.09198, 2019.

9. Yi Wang and Joohyung Lee. Elaboration Tolerant Representation of Markov Decision Process via Decision Theoretic Extension of Action Language pBC+. In Proceedings of the *15th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2019)*, pages 224-238, 2019.

10. Joohyung Lee and Man Luo. Strong Equivalence for LPMLN Programs. In Technical Communications of the *35th International Conference on Logic Programming (ICLP 2019)*, pages 196–209, 2019.

11. Joohyung Lee and Yi Wang. Weight Learning in a Probabilistic Extension of Answer Set Programs. In Proceedings of the *16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018)*, pages 22–31, 2018.

12. Joohyung Lee and Zhun Yang. Representing Logic Programs with Ordered Disjunction in asprin. In Proceedings of the *16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018)*, pages 57–61, 2018.

13. Shailaja Keyur Sampat and Joohyung Lee. Visual Reasoning on CNLVR Dataset Using Answer Set Programming. In Proceedings of the *16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018)*, pages 62–66, 2018.

14. Joohyung Lee and Zhun Yang. LP^{MLN}, Weak Constraints, and P-log. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI 2017)*, pages 1170–1177, 2017.

15. Yi Wang, Joohyung Lee and Doo Soon Kim. A Logic Based Approach to Answering Questions about Alternatives in DIY Domains. In *Proceedings of the 29th Conference on Innovative Applications of Artificial Intelligence (IAAI 2017)*, pages 4753–4759, 2017.

16. Joohyung Lee and Yi Wang. Weighted Rules under the Stable Model Semantics. In Proceedings of the *15th International Conference on Principles of Knowledge Representation and Reasoning (KR 2016)*, pages 145–154, 2016.

17. Joseph Babb and Joohyung Lee. Online Action Language o$\mathcal{BC}$+. In Proceedings of the *13th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2015)*, pages 97–111, 2015.

18. Joohyung Lee, Yunsong Meng and Yi Wang. Markov Logic Style Weighted Rules under the Stable Model Semantics. In Technical Communications of the 31st International Conference on Logic Programming (ICLP 2015), 2015.

19. Joohyung Lee and Yi Wang and Yu Zhang. Automated Reasoning about XACML 3.0 Delegation Using Answer Set Programming. In Technical Communications of the 31st International Conference on Logic Programming (ICLP 2015), 2015.

20. Aditya et al. Recognizing Social Constructs from Textual Conversation. In Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT 2015), pages 1293–1298, 2015.

21. Joseph Babb and Joohyung Lee. Action Language $\mathcal{BC}$+: Preliminary Report. In Proceedings of the *29th AAAI Conference on Artificial Intelligence (AAAI 2015)*, pages 1424–1430, 2015.

22. Yi Wang and Joohyung Lee. Handling Uncertainty in Answer Set Programming. In Proceedings of the *29th AAAI Conference on Artificial Intelligence (AAAI 2015)*, pages 4218–4219, 2015.

23. Joohyung Lee and Yi Wang. Stable Models of Fuzzy Propositional Formulas. In Proceedings of the *14th European Conference on Logics in Artificial Intelligence (JELIA 2014)*, 326–339, 2014.

24. Michael Bartholomew and Joohyung Lee. System ASPMT2SMT: Computing ASPMT Theories by SMT Solvers. In Proceedings of the *14th European Conference on Logics in Artificial Intelligence (JELIA 2014)*, 529–542, 2014.

25. Michael Bartholomew and Joohyung Lee. Stable Models of Multi-Valued Formulas: Partial vs. Total Functions. In Proceedings of the *14th International Conference on Principles of Knowledge Representation and Reasoning (KR 2014)*, 583–586, 2014.

26. Joseph Babb and Joohyung Lee. Cplus2ASP: Computing Action Language $\mathcal{C}$+ in Answer Set Programming. In Proceedings of the *12th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2013)*, 122–134, 2013.

27. Joohyung Lee and Yunsong Meng. Answer Set Programming Modulo Theories and Reasoning about Continuous Changes. In Proceedings of the *23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)*, 2013. (acceptance rate: 28% (413/1473))

28. Michael Bartholomew and Joohyung Lee. Functional Stable Model Semantics and Answer Set Programming Modulo Theories. In Proceedings of the *23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)*, 2013. (acceptance rate: 28% (413/1473))

29. Joohyung Lee, Vladimir Lifschitz, and Fangkai Yang. Action Language BC: Preliminary Report In Proceedings of the *23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)*, 2013. (acceptance rate: 28% (413/1473))

30. Topi Pulkkinen, Young-Sung Son, Joohyung Lee, Yann-Hang Lee, Mikko Sallinen and Jun-Hee Park. Progressive Monitoring and Treatment Planning of Diabetes Mellitus in Smart Home Environment. The International Conference on Consumer Electronics (ICCE) 2013.

31. Nico Franz, Joohyung Lee and Chao Zhang. Using Answer Set Programming to Simulate the Interplay of Taxonomic and Nomenclatural Change. In TDWG 2013 Annual Conference, 2013.

32. Joohyung Lee and Ravi Palla. Reformulating Temporal Action Logics in Answer Set Programming. In Proceedings of the *26th AAAI Conference on Artificial Intelligence (AAAI 2012)*, pages 786–792, 2012. (acceptance rate: 26% (294/1129))

33. Michael Bartholomew and Joohyung Lee. Stable Models of Formulas with Intensional Functions. In Proceedings of the *13th International Conference on Principles of Knowledge Representation and Reasoning (KR 2012)*, pages 2-12, 2012. (acceptance rate: 26% (53/202))

34. Joohyung Lee and Yunsong Meng. Stable Models of Formulas with Generalized Quantifiers. In Technical Communications of the 28th International Conference on Logic Programming (ICLP 2012), pages 61–71, 2012.

35. Michael Bartholomew, Joohyung Lee, and Yunsong Meng. First-Order Extension of the FLP Stable Model Semantics via Modified Circumscription. In Proceedings of the *22nd International Joint Conference on Artificial Intelligence (IJCAI 2011)*, pages 724–730, 2011. (accepted as both oral and poster; acceptance rate: 17% (227/1325))

36. Michael Casolary and Joohyung Lee. Representing the Language of the Causal Calculator in Answer Set Programming. Michael Casolary and Joohyung Lee. In Technical Communications of the *27th International Conference on Logic Programming (ICLP 2011)*, LIPICS 11:51–61, 2011.

37. Joohyung Lee and Ravi Palla. Integrating Rules and Ontologies in the First-Order Stable Model Semantics (Preliminary Report). In Proceedings of the *11th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2011)*, pages 248–253, 2011.

38. Joohyung Lee and Ravi Palla. Situation Calculus as Answer Set Programming. In Proceedings of the *24th AAAI Conference on Artificial Intelligence (AAAI 2010)*, pages 309–314, 2010. (acceptance rate: 26.9% (264/982))

39. Michael Bartholomew and Joohyung Lee. A Decidable Class of Groundable Formulas in the General Theory of Stable Models. In Proceedings of the *12th International Conference on Principles of Knowledge Representation and Reasoning (KR 2010)*, pages 477–485, 2010. (acceptance rate: 25.1% (53/211))

40. Gail-Joon Ahn, Hongxin Hu, Joohyung Lee, and Yunsong Meng. Representing and Reasoning about Web Access Control Policies. In Proceedings of the *34th Annual IEEE Computer Software and Applications Conference (COMPSAC 2010)*, pages 137–146, 2010. (acceptance rate: 20% (39/193))

41. Tae-Won Kim, Joohyung Lee, and Ravi Palla. Circumscriptive Event Calculus as Answer Set Programming. In Proceedings of the *21st International Joint Conference on Artificial Intelligence (IJCAI 2009)*, pages 823–829, 2009. (acceptance rate: 25.7% (331/1290))

42. Paolo Ferraris, Joohyung Lee, Vladimir Lifschitz, and Ravi Palla. Symmetric Splitting in the General Theory of Stable Models. In Proceedings of the *21st International Joint Conference on Artificial Intelligence (IJCAI 2009)*, pages 797–803, 2009. (acceptance rate: 25.7% (331/1290))

43. Joohyung Lee and Yunsong Meng. On Reductive Semantics of Aggregates in Answer Set Programming. In Proceedings of the *10th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2009)*, pages 182–195, 2009.

44. Joohyung Lee and Ravi Palla. System F2LP - Computing Answer Sets of First-Order Formulas. In Proceedings of the *10th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2009)*, pages 515–521, 2009.

45. Joohyung Lee, Vladimir Lifschtiz and Ravi Palla. A Reductive Semantics for Counting and Choice in Answer Set Programming. In Proceedings of the *23rd AAAI Conference on Artificial Intelligence (AAAI 2008)*, pages 472–479, 2008. (acceptance rate: 24.2% (227/937))

46. Joohyung Lee and Yunsong Meng. On Loop Formulas with Variables. In Proceedings of the *11th International Conference on Principles of Knowledge Representation and Reasoning (KR 2008)*, pages 444-453, 2008. (acceptance rate: 27.5% (69/251))

47. Joohyung Lee, Vladimir Lifschitz and Ravi Palla. Safe Formulas in the General Theory of Stable Models (Preliminary Report). In Proceedings of the *19th International Conference on Logic Programming (ICLP 2008)*, pages 672-676, 2008. (acceptance rate: 35.6% (63/177))

48. Paolo Ferraris, Joohyung Lee and Vladimir Lifschitz. A New Perspective on Stable Models. In Proceedings of the *20th International Joint Conference on Artificial Intelligence (IJCAI 2007)*, pages 372–379, 2007. (acceptance rate: 15.7% (212/1353))

49. Martin Gebser, Joohyung Lee and Yuliya Lierler. Head-Elementary-Set-Free Logic Programs. In Proceedings of the *9th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2007)*, pages 149–161, 2007.

50. Martin Gebser, Joohyung Lee and Yuliya Lierler. Elementary Sets for Logic Programs. In Proceedings of the *21st AAAI Conference on Artificial Intelligence (AAAI 2006)*, pages 244–249, 2006. (acceptance rate: 22% (171/774))

51. Joohyung Lee. A Model Theoretic Counterpart of Loop Formulas. In Proceedings of the *19th International Joint Conference on Artificial Intelligence (IJCAI 2005)*, pages 503–508, 2005. (acceptance rate: 18% (240/1329))

52. Joohyung Lee and Fangzhen Lin. Loop Formulas for Circumscription. In Proceedings of the *19th AAAI Conference on Artificial Intelligence (AAAI 2004)*, pages 281–286, 2004. (acceptance rate: 26.7% (121/453))
Received Outstanding Paper Honorable Mention Award.

53. Joohyung Lee. Nondefinite vs. Definite Causal Theories. In Proceedings of the *7th International Conference on Logic Programming and Non-Monotonic Reasoning (LPNMR 2004)*, pages 141–153, 2004.

54. Joohyung Lee and Vladimir Lifschitz. Describing Additive Fluents in Action Language $\mathcal{C}+$. In Proceedings of the *18th International Joint Conference on Artificial Intelligence (IJCAI 2003)*, pages 1079–1084, 2003. (acceptance rate: 20.7% (189/913))

55. Joohyung Lee and Vladimir Lifschitz. Loop Formulas for Disjunctive Logic Programs. In Proceedings of the *19th International Conference on Logic Programming (ICLP 2003)*, pages 451–465, 2003. (acceptance rate: 28.4% (23/81)) runner-up for Test of Time Award at ICLP 2013.

PAPERS IN REFEREED JOURNALS

1. Michael Bartholomew and Joohyung Lee. First-Order Stable Model Semantics with Intensional Functions. *Artificial Intelligence*, 273:56–93, 2019.

2. Yi Wang, Shiqi Zhang, and Joohyung Lee. Bridging Commonsense Reasoning and Probabilistic Planning via a Probabilistic Action Language. Journal of Theory and Practice of Logic Programming (TPLP), 19(5-6), 1090-1106, 2019.

3. Joohyung Lee and Zhun Yang. Translating LPOD and CR-Prolog2 into Standard Answer Set Programs. Journal of Theory and Practice of Logic Programming (TPLP), 18(3-4), 589-606, 2018.

4. Joohyung Lee and Yi Wang. A probabilistic extension of action language BC+. Journal of Theory and Practice of Logic Programming (TPLP), 18(3-4), 607-622, 2018.

5. Joohyung Lee, Nikhil Loney and Yunsong Meng. Representing Hybrid Automata by Action Language Modulo Theories. Journal of Theory and Practice of Logic Programming (TPLP):17(5–6): 924–941, 2017.

6. Joohyung Lee, Samidh Talsania, and Yi Wang. Computing LPMLN Using ASP and MLN Solvers. Journal of Theory and Practice of Logic Programming (TPLP):17(5–6):942–960, 2017.

7. Nico Franz, Chao Zhang and Joohyung Lee. A Logic Approach to Modeling Nomenclatural Change. Cladistics, ISSN 1096-0031, 2017.

8. Joohyung Lee and Yi Wang. Fuzzy Propositional Formulas under the Stable Model Semantics. The IfCoLog Journal of Logics and their Applications, 4(7):1927–1972, 2017.

9. Joseph Babb and Joohyung Lee. Action Language $\mathcal{BC}$+. Journal of Logic and Computation, 2015.

10. Michael Bartholomew and Joohyung Lee. On the Stable Model Semantics for Intensional Functions. *Journal of Theory and Practice of Logic Programming (TPLP)*, 13(4–5), 2013.

11. Joohyung Lee and Ravi Palla. Reformulating the Situation Calculus and the Event Calculus in the General Theory of Stable Models and in Answer Set Programming. *Journal of Artificial Intelligence Research (JAIR)*, 43:571–620, 2012.

12. Joseph Babb and Joohyung Lee. Module Theorem for the General Theory of Stable Models. *Journal of Theory and Practice of Logic Programming (TPLP)*, 12(4–5):719–735, 2012.

13. Paolo Ferraris, Joohyung Lee, Yuliya Lierler, Vladimir Lifschitz, and Fangkai Yang. Representing First-Order Causal Theories by Logic Programs. *Journal of Theory and Practice of Logic Programming (TPLP)*, 12(3) 383–412, 2012.

14. Joohyung Lee and Yunsong Meng. First-Order Stable Model Semantics and First-Order Loop Formulas. *Journal of Artificial Intelligence Research (JAIR)*, 42:125–180, 2011.

15. Martin Gebser, Joohyung Lee, and Yuliya Lierler. On Elementary Loops of Logic Programs. *Journal of Theory and Practice of Logic Programming (TPLP)*, 11(6), 953–988, 2011.

16. Paolo Ferraris, Joohyung Lee, and Vladimir Lifschitz. Stable Models and Circumscription. *Artificial Intelligence*, 175(1):236–263, 2011.

17. Joohyung Lee and Fangzhen Lin. Loop Formulas for Circumscription. *Artificial Intelligence*, 170(2):160–185, 2006.

18. Paolo Ferraris, Joohyung Lee, and Vladimir Lifschitz. A Generalization of the Lin-Zhao Theorem. *Annals of Mathematics and Artificial Intelligence*, 47:79-101, 2006.

19. Enrico Giunchiglia, Joohyung Lee, Vladimir Lifschitz, Norman McCain, and Hudson Turner. Nonmonotonic Causal Theories. *Artificial Intelligence*, 153:49–104, 2004.

20. Varol Akman, Selim T. Erdoğan, Joohyung Lee, Vladimir Lifschitz, and Hudson Turner. Representing the Zoo World and the Traffic World in the Language of the Causal Calculator. *Artificial Intelligence*, 153:105–140, 2004.

PAPERS IN REFEREED WORKSHOPS

1. Joohyung Lee and Man Luo. Strong Equivalence for LPMLN Programs. In Working Notes of the *12th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2019)*.

2. Joohyung Lee and Zhun yang. Implementing Logic Programs with Ordered Disjunction Using asprin. In Working Notes of the *17th International Workshop on Non-Monotonic Reasoning (NMR 2018)*

3. Joohyung Lee and Yi Wang. On the Semantic Relationship between Probabilistic Soft Logic and Markov Logic. In Working Notes of the *6th International Workshop on Statistical Relational AI (StarAI 2016)*, 2016.

4. Joohyung Lee and Yi Wang and Yu Zhang. Automated Reasoning about XACML 3.0 Delegation Using Answer Set Programming. In Working Notes of the Workshop on Action Languages, Process Modeling, and Policy Reasoning (ALPP 2015), 2015.

5. Joohyung Lee and Yi Wang. A Probabilistic Extension of the Stable Model Semantics. In Working Notes of the *12th International Symposium on Logical Formalizations of Commonsense Reasoning (Commonsense 2015)*, 2015.

6. Joohyung Lee and Yi Wang. Stable Models of Fuzzy Propositional Formulas. In Working Notes of the *1st Workshop on Logics for Reasoning about Preferences, Uncertainty, and Vagueness (PRUV 2014)*, 114–126.

7. Joseph Babb and Joohyung Lee. Action Language $\mathcal{BC}$+: Preliminary Report. In Working Notes of the *6th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2014)*.

8. Michael Bartholomew and Joohyung Lee. A Functional View of Strong Negation. In Working Notes of the *6th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2013)*.

9. Joohyung Lee and Yunsong Meng. Two New Definitions of Stable Models of Logic Programs with Generalized Quantifiers. In Working Notes of the *5th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2012)*.

10. Joohyung Lee and Yunsong Meng. Stable Models of Formulas with Generalized Quantifiers. In Proceedings of the *14th International Workshop on Nonmonotonic Reasoning (NMR 2012)*.

11. Michael Bartholomew, Joohyung Lee, and Yunsong Meng. First-Order Extension of the FLP Semantics. In Working Notes of *Common Sense 2011: 10th Symposium on Logical Formalizations of Commonsense Reasoning*.

12. Joohyung Lee and Ravi Palla. Integrating Rules and Ontologies in the First-Order Stable Model Semantics (Preliminary Report). In Working Notes of *Common Sense 2011: 10th Symposium on Logical Formalizations of Commonsense Reasoning*.

13. Joohyung Lee, Yuliya Lierler, Vladimir Lifschitz, and Fangkai Yang. Representing Synonymity in Causal Logic and in Logic Programming. In Proceedings of the *13th International Workshop on Nonmonotonic Reasoning (NMR 2010)*.

14. Gail-Joon Ahn, Hongxin Hu, Joohyung Lee, and Yunsong Meng. Reasoning about XACML Policy Descriptions in Answer Set Programming (Preliminary Report). In Proceedings of the *13th International Workshop on Nonmonotonic Reasoning (NMR 2010)*.

15. Joohyung Lee and Ravi Palla. Classical Logic Event Calculus as Answer Set Programming. In Working Notes of *Answer Set Programming and Other Computing Paradigms (ASPOCP 2008)*, pages 119-133, 2008.

16. Joohyung Lee and Ravi Palla. Yet Another Proof of the Strong Equivalence between Propositional Theories and Logic Programs. In Proceedings of the *Correspondence and Equivalence for Nonmonotonic Theories (CENT 2007)*, pages 1–12, 2007. (CEUR Vol 265).

17. Martin Gebser, Joohyung Lee and Yuliya Lierler. Elementary Sets for Logic Programs. In Working Notes of *11th International Workshop on Nonmonotonic Reasoning (NMR 2006)*.

18. Joohyung Lee and Vladimir Lifschitz. A Knowledge Module: Buying and Selling. In Working Notes of *AAAI Spring Symposium on Formalizing and Compiling Background Knowledge and Its Applications to Knowledge Representation*, 2006.

19. Joohyung Lee and Vladimir Lifschitz. Additive Fluents. In Working Notes of *AAAI Spring Symposium on Answer Set Programming*, pages 116–123, 2001. (**Selected as one of the four long presentations among 29 presentations**)

20. Joohyung Lee, Vladimir Lifschitz, and Hudson Turner. A Representation of the Zoo World in the Language of the Causal Calculator. In Working Notes of *Common Sense 2001: 5th Symposium on Logical Formalizations of Commonsense Reasoning*, pages 174–185, 2001.

21. Varol Akman, Selim T. Erdoğan, Joohyung Lee, and Vladimir Lifschitz. A Representation of the Traffic World in the Language of the Causal Calculator. In Working Notes of *Common Sense 2001: 5th Symposium on Logical Formalizations of Commonsense Reasoning*, pages 1–10, 2001.

22. Enrico Giunchiglia, Joohyung Lee, Vladimir Lifschitz, and Hudson Turner. Causal Laws and Multi-valued Fluents. In Working Notes of *4th Workshop on Nonmonotonic Reasoning, Action and Change (NRAC 2001)*, 2001.

BOOKS / BOOK CHAPTERS / OTHERS

- Joohyung Lee and Zhun Yang, Statistical Relational Extension of Answer Set Programming. In 18th Reasoning Web Summer School, to appear, 2023.
- Esra Erdem, Joohyung Lee, Yuliya Lierler, and David Pearce (Editors). Correct Reasoning: Essays on Logic-Based AI in Honor of Vladimir Lifschitz. Springer LNCS Vol 7265, 2012.
- Joohyung Lee. Reformulating Action Language $\mathcal{C}+$ in Answer Set Programming. In Correct Reasoning: Essays on Logic-Based AI in Honor of Vladimir Lifschitz. Springer LNCS Vol 7265, 2012.
- Esra Erdem, Evelina Lamma, Joohyung Lee and Terrance Swift. Conference report:ICLP 2013. ALP Newsletter, 2013.

EDITED PROCEEDINGS

- Wolfgang Faber and Joohyung Lee. Workshop Proceedings of 2nd International Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2009), 2009.
- Wolfgang Faber and Joohyung Lee. Workshop Proceedings of 1st International Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2008), 2008.

INVITED TALKS

1. **Automated Reasoning about Actions**. Translational Genomics Research Institute (TGEN), Phoenix, AZ, 2003.
2. **Loop Formulas for Disjunctive Logic Programs**. Texas Action Group Meeting, Las Cruces, New Mexico, 2003.
3. **Loop Formulas for Nonmonotonic Logics**. Hong Kong University of Science and Technology, Hong Kong, 2003.
4. **A Model-Theoretic Counterpart of Loop Formulas**. Dagstuhl Seminar on Nonmonotonic Reasoning, Answer Set Programming and Constraints, Germany, 2005.
5. **Answer Set Programming**. 7th KOCSEA technical symposium (KOCSEA 2006), Phoenix, AZ, 2006.
6. **AQUAINT Phase 3 Kick-off Meeting**. Santa Fe, NM, Oct 2006.
7. **InfoX PI Meeting**. Dallas, TX, Mar 2007.
8. **AQUAINT 6 month PI Meeting**. Washington DC, May 2007.
9. **AQUAINT 12 month PI Meeting**. San Antonio, TX, Oct 2007.
10. **Action Language $\mathcal{C}+$**. US Korea Conference on Science, Technology, and Entrepreneurship (UKC), San Diego, CA, 2008.
11. **Circumscriptive Event Calculus as Answer Set Programming**. Forum for Artificial Intelligence, University of Texas at Austin, Apr 3, 2009.

12. **On Reductive Semantics of Aggregates in Answer Set Programming**. ISL seminar, University of Western Sydney, May, 2009.

13. **A Reformulation of Circumscriptive Event Calculus as Answer Set Programming**. IIIS/ICT seminar, Griffith University, June, 2009.

14. **Answer Set Programming — An Effective Way to Talk to Computers**. Chung-Ang University, June, 2009.

15. **Answer Set Programming — An Effective Way to Talk to Computers**. POSTECH, June, 2009.

16. **Answer Set Programming — An Effective Way to Talk to Computers**. KAIST, June, 2009.

17. **Assertion Defense**. IARPA SCIL Joint PI Meeting, Washington DC, March, 2010.

18. **Elaboration Tolerance and Action Language $\mathcal{C}$+**. KAIST (formerly the Korea Advanced Institute of Science and Technology), South Korea, March 2012.

19. **Integrating Rules and Ontologies for the Home Information Remote Aggregation and Context Inference Prediction Technology**. Electronics and Telecommunications Research Institute, South Korea, March 2012.

20. **Theory and Practice of Answer Set Programming**. AAAI 2012 Tutorial, July 2012.
Tutorial homepage: `http://peace.eas.asu.edu/aaai12tutorial`.

21. **High Level Context Reasoning via Answer Set Programming**. Expert Seminar, Electronics and Telecommunications Research Institute, South Korea, July 2013.

22. **Functional Stable Model Semantics, Answer Set Programming Modulo Theories, and Action Languages**. Keynote address, International Workshop on Nonmonotonic Reasoning, Action and Change (NRAC 2013), August 2013.

23. **Functional Stable Model Semantics and Answer Set Programming Modulo Theories**. SFB/TR8 Colloquium, University of Bremen, December 2013.

24. **Introduction to Answer Set Programming**. Tutorial, University of Bremen, December 2013.

25. **High Level Context Reasoning via Answer Set Programming**. 14th KOCSEA technical symposium (KOCSEA 2013), San Jose, CA, December 2013.

26. **Answer Set Programming Modulo Theories**. Texas Action Group, University of Texas at Austin, October, 2014.

27. **Commonsense Reasoning: ASP Based Approach**. Inha University, South Korea, November 2014.

28. **Reasoning for IoT Devices**. Electronics and Telecommunications Research Institute, South Korea, December 2014.

29. Expert Seminar Series, SaltLux, Inc, South Korea.

    (a) **Introduction to AI**. February 4, 2015.

    (b) **AI Areas and Methods**. February 11, 2015.

    (c) **Knowledge Representation and Watson**. February 27, 2015.

(d) **Automated Reasoning: Theory and Practice**. March 6, 2015.

30. **Current Trends in Artificial Intelligence**. Agency for Defense Development, South Korea, February 2015.

31. **Back to Strong AI? A Unifying Language for Deep Reasoning**. Seoul National University, South Korea, March 2015.

32. **Artificial Intelligence Reasoning and Healthcare**. Electronics and Telecommunications Research Institute @ Taegu, South Korea, March 2015.

33. **AI minus DL: AI that DL can't do well**. KOCSEA Technical Symposium 2017 (Best presentation award).

34. **Closing the Gap between Machine Learning and Knowledge Representation**. Samsung Research, South Korea, June, 2018.

35. **AI minus DL: AI that DL can't do well**. Electronics and Telecommunications Research Institute, South Korea, June 2018.

36. **Model-Based vs. Data-Driven AI**. Medtronic, Tempe, August 2018.

37. **Towards Thinking Machines We Can Understand**. Samsung Electronics, South Korea, March 2019.

38. **Towards Thinking Machines We Can Understand**. Samsung Advanced Institute of Technology, South Korea, March 2019.

39. **DeepLPMLN: A neural probabilistic logic programming language**. 6th Workshop on Probabilistic Logic Programming, September 2019.

40. **What is Neuro-Symbolic AI**. Seoul National University, June, 2020.

41. **Industrial Trends in Artificial Intelligence**. Seoul National University, June, 2021.

42. **Modular Enhancements to a Neuro-Symbolic Model with Causal and Temporal Constraints**, ICCV'21 MAIR2 Workshop, 2021.

43. **Industrial Trends in Artificial Intelligence**. Seoul National University, June, 2022.

44. **Injecting Logical Constraints into Neural Networks**. Samsung AI neurosymbolic workshop 2022. Virtual, June, 2022. `https://research.samsung.com/sanw`

45. **How to marry neural networks and answer set programming**. School on Logic Programming 2022 (co-located with ICLP 2022). Haifa, Israel, August, 2022. `https://sites.google.com/view/iclpdc2022/school-on-logic-programming`

46. **Statistical Relational Extensions of Answer Set Programming**. 18th Reasoning Web Summer School 2022 (co-located with Declarative AI 2022). Virtual, September, 2022. `https://2022.declarativeai.net/events/reasoning-web`

SOFTWARE DEVELOPMENT

1. **Causal Calculator (**CCALC**) Version 2** (`http://www.cs.utexas.edu/users/tag/ccalc`): A system for automated commonsense reasoning about actions.
2. **System** F2LP (`http://reasoning.eas.asu.edu/f2lp`): An implementation of the stable model semantics for first-order formulas. Can be used to compute the situation calculus and the event calculus.
3. **System** ECASP (`http://reasoning.eas.asu.edu/ecasp`): An implementation of the event calculus as answer set programming. Listed in Wikipedia under the section "Event calculus".
4. **System** XACML2ASP: an implementation of XACML in answer set programming.
5. **System** CPLUS2ASP (`http://reasoning.eas.asu.edu/cplus2asp`): an implementation of action language $\mathcal{C}+$ in answer set programming.
6. **System** ASPMT2SMT (`http://reasoning.eas.asu.edu/aspmt`): an implementation of ASPMT theories using SMT solvers.
7. **System** MVSM (`http://reasoning.eas.asu.edu/mvsm`): an implementation of multi-valued formulas using ASP solvers.
8. **System** CPLUS2ASPMT (`http://reasoning.eas.asu.edu/cplus2aspmt`): an implementation of action language C+ using the ASPMT solver.
9. **System** LPMLN (`http://reasoning.eas.asu.edu/lpmln`): an implementation of LPMLN using ASP and MLN solvers.
10. **System** LPOD2ASPRIN (`http://reasoning.eas.asu.edu/lpod2asprin`): an implementation of Logic Programs with Ordered Disjunction using ASPRIN
11. **System** NEURASP (`https://github.com/azreasoners/NeurASP`): an implementation of NeurASP
12. **System** CL-STE (`https://github.com/azreasoners/cl-ste`): an implementation of Constraint Loss via Straight-Through Estimators

RESEARCH GRANTS

1. **DTO AQUAINT** Contract no: N61339-06-C-0123. Title: *Compiling AnsProlog to First-Order Theories — An Approach to Integrate AnsProlog Knowledge Bases with First-Order Knowledge Bases*. Sponsor: DOD-Navy. Amount: $106,736. Period: 9/30/2006 – 9/29/2007. PI: Chitta Baral, co-PI: Joohyung Lee (90%).
2. **NSF** Grant number: IIS-0839821. Title: *SGER: Grounding-independent Reasoning in Answer Set Programming.* Amount: $80,000. Period: 9/1/2008 – 8/31/2009. PI (100%).
3. **NSF** Grant number: IIS-0916116. Title: *Enhancing Nonmonotonic Declarative Knowledge Representation and Reasoning by Merging Answer Set Programming with Other Computing Paradigms*. Amount: $275,000. Period: 9/1/2009 – 8/31/2012. PI (100%).

4. **NSF** Grant number: IIS-1036509. Title: *REU: Enhancing Nonmonotonic Declarative Knowledge Representation and Reasoning by Merging Answer Set Programming with Other Computing Paradigms*. Amount: $15,668. Period: 9/1/2010 – 8/31/2011. PI (100%).

5. **IARPA SCIL** Title: *Integrating Machine Learning and Knowledge Representation for Discovery of Social Goals of Groups and Group Members from Their Language Usage*. Amount: $1,420,160. Period: 8/24/2009-10/23/2012. co-PI (20%).

6. **Siemens Corporate Research** Title: *Reasoning about Causes with Preferences and Uncertainty in Dynamic Biomedical Domains*. Amount: $24,045. PI (100%).

7. **Electronics and Telecommunications Research Institute (ETRI)** Title: *Home Information Remote Aggregation and Context Inference Prediction Technology Development*, Amount: $450,000. Period: 10/1/2010-9/30/2015. co-PI (50%).

8. **NSF** Grant number: IIS-1319794. Title: *Answer Set Programming Modulo Theories*. Amount: $315,000. Period: 8/15/2013 – 7/31/2016. PI (100%).

9. **NSF** Grant number: IIS-1526301. Title: *Knowledge Representation and Reasoning under Uncertainty with Probabilistic Answer Set Programming*. Amount: $342,795. Period: 8/1/2015 – 7/31/2019. PI (100%).

10. **Bosch** Title: *Application of Probabilistic Answer Set Programming*. Amount: $40,000. Period: 1/19/2016 – 11/30/2017. PI (100%).

11. **Electronics and Telecommunications Research Institute (ETRI)** Title: *Artificial Intelligence Based Medical Decision Support System Framework Design*, Amount: $60,000. Period: 6/1/2016 –11/30/2016. PI (100%).

12. **Electronics and Telecommunications Research Institute (ETRI)** Title: *AI Reasoning Based Method for Drug-Taking Behavior Prediction*, Amount: $60,000. Period: 4/1/2017 –12/5/2017. PI (100%).

13. **Electronics and Telecommunications Research Institute (ETRI)** Title: *Application of statistical relational learning on analysis of electronic health record*, Amount: $60,000. Period: 2018–2019. PI (100%).

14. **NSF** Grant number: IIS-1815337. Title: *Expressive Reasoning and Learning about Actions under Uncertainty via Probabilistic Extension of Action Language*. Amount: $363,799. Period: 8/1/2018 – 7/31/2021. PI (100%).

15. **NSF** Grant number: IIS-2006747. Title: *Embracing Deep Neural Networks into Probabilistic Answer Set Programming*. Amount: $458,499. Period: 10/01/2020 – 09/30/2023. PI (100%).

STUDENT ADVISING

Graduated:

- Ravi Palla (Ph.D., 2012). Dissertation title: *Bridging the Gap between Classical Logic Based Formalisms and Logic Programs*. Recipient of the Outstanding Computer Science Ph.D. student award in 2012. First employment: research scientist at Siemens Corporate Research (SCR) in New Jersey.

- Yunsong Meng (Ph.D., 2013). Dissertation title: *Answer Set Programming and Other Computing Paradigms*. First employment: research scientist at Samsung Information Systems America (SISA) R&D Center, San Jose, CA.
- Michael Bartholomew (Ph.D., 2016). Dissertation title: *Answer Set Programming Modulo Theories*. Dean's Scholarship recipient. CS Distinguished Senior Award recipient (2010), CS Outstanding Dissertation Award (2016). First employment: software engineer at Amazon, Seattle.
- Yi Wang (Ph.D., 2019). Dissertation title: *Reasoning and Learning with Probabilistic Answer Set Programming*. First employment: Autodesk Research, San Francisco.
- Tae-Won Kim (MS, 2009). MS thesis title: *Experimenting with Answer set Programming Based Event Calculus Reasoner*. Current employment: Samsung Mobile, New Jersey, NJ.
- Michael Casolary (MS, 2011). MS thesis title: *Representing the Language of the Causal Calculator in Answer Set Programming*. First employment: Celestech in Phoenix.
- Sunjin Kim (MCS, 2011). Worked on SCIL IARPA project. First employment: Samsung Techwin, Korea.
- Yu Zhang (MCS, 2013). Worked on HiConcept project. First employment: Intel.
- Joseph Babb (MS, 2014). MS thesis title: *Towards Efficient Online Reasoning about Actions*. SMART scholarship recipient. CSE Outstanding Graduating Student Award in 2013. Supported by NSF REU and FURI. First employment: Electronics Engineer at US Airforce 76th SMXG, Oklahoma.
- Manjula Malaiarasan (MCS student, 2016). Worked on Smart Home Project. First employement: Apttus, San Mateo, CA.
- Nikhil Loney (MS, 2017). MS thesis title: *Representing Hybrid Transition Systems in an Action Language Modulo ODEs*. First employment: 4C Insights, Chicago, IL.
- Zhun Yang (MS, 2017). MS thesis title: *On the Relationships Among Probabilistic Extensions of Answer Set Semantics*.
- Samidh Talsania (MS, 2017). MS thesis title: *Computing a Probabilistic Extension of Answer Set Program Language Using ASP and Markov Logic Solvers*. First employment: Audible.com, Newark, NY.
- Anish Pradhan (MS, 2018). MS thesis title: *Explainable Fact Checking by Combining Automated Rule Discovery with Probabilistic Answer Set Programming*. First employment: Software engineer, Q-Sensei, San Francisco, CA.

Ongoing:

- Zhun Yang (Ph.D. student, 2017 -)
- Adam Ishay (Ph.D. student, 2019 -)

PROFESSIONAL ACTIVITIES

- **Editorial Board**
  - **Area editor** of ALP Newsletter (2018 –)
- **Organizer**
  - Co-Chair (with Alessandro dal Palu and Amelia Harrison) of Research Challenges in Logic Programming Track, 35th International Conference on Logic Programming (ICLP 2019)
  - Local Co-Chair (with Son Cao Tran), 16th International Conference on Principles of Knowledge Representation and Reasoning (KR 2018) (`http://kr2018.org`).
  - Local Co-Chair (with Son Cao Tran), 30th International Workshop on Description Logics (DL 2018) (`http://www.dcs.bbk.ac.uk/~michael/dl2018`).
  - Local Co-Chair (with Son Cao Tran), 17th International Workshop on Non-Monotonic Reasoning (NMR 2018) (`http://www4.uma.pt/nmr2018`).
  - Workshop Chair, 14th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2017)
  - Doctoral Consortium Co-Chair (with Meghyn Bienvenu), 15th International Conference on Principles of Knowledge Representation and Reasoning (KR 2016)
  - Co-organizer (with Gail-Joon Ahn), 1st International Workshop on Action Languages, Process Modelling, and Policy Reasoning (ALPP 2015), an LPNMR workshop
  - General Co-Chair (with Esra Erdem), 29th International Conference on Logic Programming (ICLP 2013)
  - Workshop Chair, 27th International Conference on Logic Programming (ICLP 2011)
  - Co-Organizer (with Wolfgang Faber), 2nd Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2009) (`http://www.mat.unical.it/ASPOCP09/`)
  - Co-Founder and Co-Organizer (with Wolfgang Faber), 1st Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP 2008) (`http://www.mat.unical.it/ASPOCP08/`)
  - Organizing Committee, AAAI 2006 Spring Symposium on Formalizing and Compiling Background Knowledge and Its Applications to Knowledge Representation and Question Answering
  - Local Chair, KOCSEA Technical Symposium, 2006.
  - **Volunteer**
    - Head judge representing AAAI at Intel Science and Engineering Fair 2019, May 2019.
- **Program Committee**
  - 2023
    - 37th AAAI Conference on Artificial Intelligence (AAAI 2023): Senior Program Committee
  - 2022
    - 31st International Joint Conference on Artificial Intelligence (IJCAI 2022) Senior Program Committee

    - 36th AAAI Conference on Artificial Intelligence (AAAI 2022): Senior Program Committee
- 2021
    - 30th International Joint Conference on Artificial Intelligence (IJCAI 2021): Area Chair
    - 35th AAAI Conference on Artificial Intelligence (AAAI 2021): Senior Program Committee
- 2020
    - 29th International Joint Conference on Artificial Intelligence (IJCAI 2020): Senior Program Committee
    - 34th AAAI Conference on Artificial Intelligence (AAAI 2020): Senior Program Committee & PC for Student Abstract and Poster Program
    - 24th European Conference on Artificial Intelligence (ECAI 2020): Senior Program Committee
- 2019
    - 28th International Joint Conference on Artificial Intelligence (IJCAI 2019): Senior Program Committee
    - 15th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2019)
    - 35th International Conference on Logic Programming (ICLP 2019)
    - 33rd AAAI Conference on Artificial Intelligence (AAAI 2019)
    - 16th European Conference on Logics in Artificial Intelligence (JELIA 2019)
    - 12th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2019)
    - 5th International Workshop on Grounding and Transformations for Theories with Variables (GTTV2019)
- 2018
    - 27th International Joint Conference on Artificial Intelligence (IJCAI 2018): Senior Program Committee
    - 32nd AAAI Conference on Artificial Intelligence (AAAI 2018), Senior Program Committee
    - 1st International Workshop Artificial Intelligence for Question Answering (AI*QA 2018)
- 2017
    - 26th International Joint Conference on Artificial Intelligence (IJCAI 2017): Senior Program Committee
    - 31st AAAI Conference on Artificial Intelligence (AAAI 2017)
    - 14th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2017)
    - 10th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2017)
    - 33rd International Conference on Logic Programming (ICLP 2017)
    - 4th International Workshop on Grounding and Transformations for Theories with Variables (GTTV 2017)
    - IJCAI Workshop on Cognitive Knowledge Acquisition and Applications (Cognitum 2017)

    - IJCAI Workshop on Cognition and Artificial Intelligence for Human-Centered Design (CAID 2017)
    - ICLP Workshop on Answer Set Programming and Its Applications (ASPIA 2017)
- 2016
    - 30th AAAI Conference on Artificial Intelligence (AAAI 2016)
    - 25th International Joint Conference on Artificial Intelligence (IJCAI 2016): Area Chair
    - IJCAI Workshop on Cognitive Knowledge Acquisition and Applications (Cognitum 2016)
    - 15th European Conference on Logics in Artificial Intelligence (JELIA 2016)
    - 10th International Conference on Web Reasoning and Rule Systems (RR 2016)
    - 9th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2016)
- 2015
    - 24th International Joint Conference on Artificial Intelligence (IJCAI 2015): Senior Program Committee
    - 29th AAAI Conference on Artificial Intelligence (AAAI 2015)
    - 13th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2015)
    - ADT/LPNMR Doctoral Consortium (2015)
    - 31st International Conference on Logic Programming (ICLP 2015)
    - 9th International Conference on Web Reasoning and Rule Systems (RR 2015)
    - 3rd International Workshop on Grounding and Transformations for Theories with Variables (GTTV 2015)
    - 1st Global Conference on Artificial Intelligence (GCAI 2015)
- 2014
    - 14th International Conference on the Principles of Knowledge Representation and Reasoning (KR 2014)
    - 15th International Workshop on Nonmonotonic Reasoning (NMR 2014)
    - 7th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2014)
    - 8th International Conference on Web Reasoning and Rule Systems (RR 2014)
    - Doctoral Consortium of RR 2014
    - 28th AAAI Conference on Artificial Intelligence (AAAI 2014)
    - 21st European Conference on Artificial Intelligence (ECAI 2014)
    - 16th International Symposium on Practical Aspects of Declarative Languages (PADL 2014)
    - 16th International Conference on Artificial Intelligence: Methodology, Systems, Applications (AIMSA 2014)
    - 14th European Conference on Logics in Artificial Intelligence (JELIA 2014)
- 2013
    - 29th International Conference on Logic Programming (ICLP 2013)
    - 12th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2013)

    - 7th International Conference on Web Reasoning and Rule Systems (RR 2013)
    - 10th International Workshop on Nonmonotonic Reasoning, Action and Change (NRAC 2013)
    - 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)
    - 6th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2013)
    - 1st International Workshop on Knowledge Representation and Reasoning in Robotics (KRR 2013)
    - 2nd International Workshop on Grounding and Transformations for Theories with Variables (GTTV 2013)
- 2012
    - 13th International Conference on the Principles of Knowledge Representation and Reasoning (KR 2012)
    - KR 2012 Doctoral Consortium (KR-DC 2012): Mentor for Stef De Pooter (K.U. Leuven, Belgium)
    - 26th AAAI Conference on Artificial Intelligence (AAAI 2012)
    - 28th International Conference on Logic Programming (ICLP 2012)
    - Spatio-Temporal Dynamics (STeDy 2012) as part of ECAI 2012
    - 5th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2012)
- 2011
    - 22nd International Joint Conference on Artificial Intelligence (IJCAI 2011): Senior PC
    - 10th International Symposium on Logical formalizations of Commonsense Reasoning (Commonsense 2011) as part of AAAI Spring Symposium 2011.
    - 11th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2011)
    - 27th International Conference on Logic Programming (ICLP 2011)
    - 4th International Workshop on Answer Set Programming and Other Computing (ASPOCP 2011)
- 2010
    - 3rd International Workshop on Answer Set Programming and Other Computing (ASPOCP 2010)
    - 24th AAAI Conference on Artificial Intelligence (AAAI 2010)
    - 12th European Conference on Logics in Artificial Intelligence (JELIA 2010)
    - 12th International Conference on the Principles of Knowledge Representation and Reasoning (KR 2010)
    - KR 2010 Doctoral Consortium (KR-DC 2010)
    - 13th International Workshop on Nonmonotonic Reasoning (NMR 2010): Action and Belief Change (ABC)
    - 13th International Workshop on Nonmonotonic Reasoning (NMR 2010): Declarative Programming for NMR (DPNMR)
    - Nonmonotonic Reasoning at 30 (2010)
- 2009
    - 21st International Joint Conference on Artificial Intelligence (IJCAI 2009)

    - 10th International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR 2009)
    - 9th International Symposium on Logical formalizations of Commonsense Reasoning (Commonsense 2009)
  - 2008
    - 23rd AAAI Conference on Artificial Intelligence (AAAI 2008)
    - 12th International Workshop on Nonmonotonic Reasoning (NMR 2008)
  - until 2007
    - 8th International Symposium on Logical formalizations of Commonsense Reasoning (Commonsense 2007)
    - 11th International Workshop on Nonmonotonic Reasoning (NMR 2006)
    - 19th International Joint Conference on Artificial Intelligence (IJCAI 2005)
    - Latin American Workshop on Non-Monotonic Reasoning (LANMR 2004)

- NSF Panel (2013, 2016)
- KR, Inc. Steering Committee, 2016-2019.
- KR, Inc. Advisory Committee, 2019- .
- **Secretary** Korean Computer Scientists and Engineers Association in America, 2006-2007.
- Member of KIAT Global Technology Cooperation Group.
- External Dissertation Committee: Manfred Eppe (U of Bremen, 2013), Tobias Kaminski (TU Wien, 2020).

Internal Services (ASU):

- **Ph.D. Dissertation Committee** Defended: Ravi Palla (chair, 2012), Yunsong Meng (chair, 2013), Michael Bartholomew (chair, 2016), Yi Wang (char, 2019), Jicheng Zhao (member, 2010), Saadat Anwar (member, 2013), Tuan A. Nguyen (member, 2014), Young Wn Song (member, 2015), Nguyen Vo (member, 2015), Robert Trevino (member, 2016), Mike Mabey (member, 2017), Gregory Gelfond (member, 2018), Somak Aditya (member, 2018), Kangjin Kim (member, 2019), Arpit Sharma (member, 2019), Arindam Mitra (member, 2019), Abdurrahman Alshareef (member, 2019).
- **Master Thesis Committee** Defended: Matt Hunsaker (member, 2007), Seungchul Jung (member, 2010), Tae-Won Kim (chair, 2009), Michael Casolary (chair, 2011), Rohit Raghunathan (member, 2011), Barry Lumpkin (member, 2012), Jeong-Jin Seo (member, 2014), Joseph Babb (chair, 2014), Arpit Sharma (member, 2014), Nikhil Loney (chair, 2017), Zhun Yang (chair, 2017).
- **Undergraduate Honors Thesis Committee** Michael Bartholomew (chair, 2010), Alex Wallace (member), Patrick Krecker (member).
- **Fulton Engineering Schools Executive Committee** 2018 -
- **Dean's Sabbatical Committee** 2016-.
- **CS Graduate Program Committee** 2016-.

- **CS Graduate Admission Committee** 2012.
- **ABET Committee** 2008–2010.
- **TA Committee** 2007–2008.
- **Computing Resources Committee** 2006–2007.
- **Undergraduate Admission Committee** 2005–2006.