# Son Cao Tran, Ph.D.

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# (a) Education and Training

Technical University of Dresden	Germany	Mathematics	M.S.; 1986
Asian Institute of Technology	Thailand	Computer Science	M.S.; 1993
University of Texas at El Paso	El Paso, TX	Computer Engineering	Ph.D.; 2000
Knowledge System Laboratory, Stanford University	Stanford, CA	Computer Science	Postdoc; 2001

# (b) Employment History

Year(s)	Title
2017-present	Head, Computer Science, New Mexico State University.
2010-present	Professor, Computer Science, New Mexico State University.
	Associate Director (Knowledge Representation, Logic, and Advanced Prog. Laboratory).
2012-2013	Visiting Scientist, Artificial Intelligence Center, SRI International.
2006-2010	Associate Professor, Computer Science, New Mexico State University
2001-2006	Assistant Professor, Computer Science, New Mexico State University
2001	Visiting Assistant Professor, KSL, Stanford University

# (c) Awards and Honors

- Invited speaker at the 19th International Workshop on Logic Programming and Non-Monotonic Reasoning, Hanoi, Vietnam 2021
- Invited speaker at the14th International Conference on Logic Programming and Non-Monotonic Reasoning, Espoo, Finland 2017
- Invited speaker at the 8th Hybrid Reasoning for Intelligent Systems, TU Dresden, Germany 2016.
- Best Non-Observable Non-Deterministic Planner Award, for the Conformant Planning system CpA(H), Sixth International Planning Competition, ICAPS-2008.
- Recipient of the "Junior Faculty/Staff Award," fourth annual University Council Award for Exceptional Achievements in Creative Scholarly Activity, New Mexico State University, 2004.
- Best Paper Award, for the paper "Towards the Creation of Accessibility Agents for Non-visual Navigation of the Web (A Progress Report)," ACM Conference on Universal Accessibility, British Columbia. Canada. 2003.
- Best Paper Award, for the paper "Extending ConGolog to allow partial ordering," Sixth International Workshop on Agent Theories, Architectures, and Languages, (ATAL-99), 1999.

# (d) Ten Peer-Reviewed Most Closely Related to the Proposed Project

- 1. C. Baral, G. Gelfond, E. Pontelli, T. C. Son. An action language for multi-agent domains. *Artificial Intelligence Journal*, 302:103601 (2022).
- 2. D. Buckingham, M. Scheutz, T.C. Son, F. Fabiano. Action Language mA\* with Higher-Order Action Observability. Proceedings of KRR, 210-220 (2024)
- 3. T. C. Son, E. Pontelli, M. Balduccini, T. Schaub. Answer Set Planning: a Survey. *Theory and Practice of Logic Programming*. Volume 23, Issue 1, 226-298 (2023).
- 4. J. Fandinno, F. Laferrière, J. Romero, T. Schaub, T.C. Son. Planning with incomplete information in quantified answer set programming. *Theory and Practice of Logic Programming* 21 (5), 663-679, 2021.
- 5. M Alviano, L Ly Trieu, T Cao Son, M Balduccini. The XAI system for answer set programming xASP2. *Journal of Logic and Computation* 34 (8), 1500-1525

- P. H. Tu, T. C. Son, M. Gelfond, and R. Morales. Approximation of action theories and its application to conformant planning. *Artificial Intelligence Journal*, 175(1):79–119, Jan. 2011.
- 7. T. C. Son, V. Nguyen, S. L. Vasileiou, W. Yeoh. Model Reconciliation in Logic Programs. JELIA 2021: 393-406.
- 8. S. T. To, T. C. Son, E. Pontelli. A generic approach to planning in the presence of incomplete information: Theory and implementation. *Artificial Intelligence Journal* 227: 1-51 (2015).
- T.C. Son, E. Pontelli, C. Baral. A non-monotonic goal specification language for planning with preference. Advances in Knowledge Representation, Logic Programming, and Abstract Argumentation: Essays Dedicated to Gerhard Brewka on the Occasion of His 60th Birthday, 202-217, Springer International Publishing (2015).
- 10. M. Gelfond, T. C. Son. Reasoning with prioritized defaults. International Workshop on Logic Programming and Knowledge Representation, 164-223, Springer (1997).

### (e) Ten Other Significant Publications Demonstrating Capabilities in The Broad Field

- 1. SL Vasileiou, A Kumar, W Yeoh, TC Son, F Toni. Dialectical Reconciliation via Structured Argumentative Dialogues. Proceedings of KRR 2024, 777-787 (2024).
- 2. T.C. Son, L. Pham, E. Pontelli. On Dealing with False Beliefs and Maintaining KD45n Property. Proceedings of the 23rd AAMAS, 1763-1771 (2024).
- 3. V. Tran, K. Nguyen, T. C. Son, E. Pontelli. A conformant planner based on approximation: CpA(H). *ACM Transactions on Intelligent Systems and Technology*, 4(2): 36 (2013).
- 4. L. Pham, T.C. Son, E. Pontelli. Planning in multi-agent domains with untruthful announcements. Proceedings of the ICPAS, Volume 33, 334-342 (2023).
- 5. L. L. Trieu, T.C. Son, M. Balduccini. xASP: An Explanation Generation System for Answer Set Programming. LPNMR, 363-369, Springer International Publishing (2022).
- 6. K. Nguyen, V. Tran, T. C. Son, E. Pontelli. On Computing Conformant Plans Using Classical Planners: A Generate-And-Complete Approach. ICAPS (2012). (**Best Student Paper**)
- 7. S. T. To, T. C. Son, E. Pontelli. On the Effectiveness of Belief State Representation in Contingent Planning. *AAAI* 2011.
- 8. S. McIlraith, T. C. Son, H. Zeng. Semantics Web Services, *IEEE Intelligent Systems* 16 (2), 46-53.
- 9. S. McIlraith, T. C. Son. Adapting Golog for Composition of Semantic Web Services. *Knowledge Representation and Reasoning*, 2000, 482-293.
- 10. F. Fabiano, T. Platt, T. C. Son, E. Pontelli. H-EFP: Bridging Efficiency in Multi-agent Epistemic Planning with Heuristics. Proceedings of PRIMA, 81-86, Springer Nature Switzerland (2024).

### (f) Patents

- 1. V. K. Chaudhri, T. C. Son: Reasoning in an under-specified knowledge bases. Patent, Filed in 2012.
- 2. V. K. Chaudhri, T. C. Son, S. Hyemans, M. Vessel: Object-oriented knowledge bases in Logic Programming. Patent, Filled in 2013.

### (g) Synergistic Activities

- Program Chair, General Chair, and Organizer of many Artificial Intelligence and Logic Programming conferences (International Conference on Logic Programming, International Conference on Principles of Knowledge Representation and Reasoning, International Conference on Principles and Practice of Multi-Agent Systems, etc.)
- 2. Tutorials on multi-agent path finding (AAAI Conference on Artificial Intelligence), reasoning about actions and changes (International Joint Conference on Artificial Intelligence), reasoning about trustworthiness (AAAI Conference on Artificial Intelligence)
- 3. Director of the Knowledge representation, Logic, and Advanced Programming laboratory, Computer Science Department, New Mexico State University.
- 4. Graduated 12 PhD students and several M.Sc. students. Currently supervising five PhD students, two undergraduate students, and two postdoctoral students.
- 5. Editorial Board Member of Artificial Intelligence Journal (2016-2020).