Department of Computer Science
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Bahar Aameri

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Education

PhD in Computer Science ..... Sep. 2010 – Mar. 2016
University of Toronto, Canada
Thesis: "Reasoning about Change with Domain-Specific Process Ontologies"

M.Sc. in Computer Science ..... Sep. 2008 – Aug. 2010
Brock University, Canada
Thesis: "Extending RelAPS to First-Order Logic"

B.Sc. in Computer Engineering ..... Sep. 2003 – Mar. 2008
Amirkabir University of Technology, Iran
Thesis: "Design and Development of an Image Encryption Software using Cellular Automata"

Employment

University of Toronto, Department of Computer Science ..... Jan 2024 – present
Assistant Professor (CLTA), Teaching Stream

University of Toronto Mississauga, Dept of Math and Comp. Sciences ..... Apr 2022 – Dec 2023
Assistant Professor (CLTA), Teaching Stream

University of Toronto (MIE) and RBC ..... Dec 2020 - Mar 2022
Postdoctoral Fellow

University of Toronto (MIE) and Autodesk ..... Sep 2016 - Jan 2019
Postdoctoral Fellow

University of Toronto, Department of Computer Science ..... Mar 2016 - Mar 2022
Course Instructor

University of Toronto, Department of Computer Science ..... Sep 2010 - Mar 2016
Graduate Teaching and Research Assistant

Brock University, Department of Computer Science ..... Sep 2008 - Aug 2010
Graduate Teaching and Research Assistant

Teaching Experience

Course Instructor

CSC486/2502: Knowledge Representation & Reasoning (4rd-year/graduate)
75 students ..... Fall 2024
80 students ..... Fall 2021
66 students ..... Winter 2021

CSC384: Intro. to Artificial Intelligence (3rd-year course)
110 students (taught one section, coordination responsibility) ..... Winter 2024
78 students ..... Fall 2023
334 students (course coordination only, no teaching duties) ..... Winter 2022
125 students ..... Fall 2021
360 students (co-teaching and coordinating three sections) ..... Winter 2020

CSC263: Data Structures and Analysis (2nd-year)
537 students (taught two sections, coordination responsibility) ..... Winter 2024
54 students ..... Summer 2023
240 students (taught two sections) ..... Winter 2023
44 students ..... Summer 2022
218 students (taught two sections, coordination responsibility) ..... Fall 2018

CSC209: Software Tools and Systems Programming(2nd-year)
120 students ..... Winter 2023

CSC236: Intro. to the Theory of Computation (2nd-year course)
120 students ..... Summer 2021
560 students (co-teaching three sections) ..... Fall 2020
120 students ..... Summer 2020
390 students (taught three sections, coordination responsibility) ..... Fall 2019
120 students ..... Summer 2019
240 students (co-teaching two sections, coordination responsibility) ..... Winter 2019
260 students (taught two sections, coordination responsibility) ..... Fall 2017
260 students (taught two sections, coordination responsibility) ..... Winter 2016

CSC148: Introduction to Computer Science (1st-year)
300 students (taught two sections, coordination responsibility) ..... Fall 2024
255 students (taught two sections, coordination responsibility) ..... Summer 2023
202 students (taught two sections, coordination responsibility) ..... Summer 2022

CSC165: Mathematical Expression and Reasoning (1st-year)
150 students ..... Winter 2015

Guest Lecturer

CCT471: Knowledge Representation and Reasoning for Information Systems ..... Fall 2016

Undergraduate Student Supervision

- Anthony Di Maggio, *"RL Agents for Playing Hanabi"*, Summer 2024
- Chris Jiang, *"Automating Data Collection for Enhancing ASD Therapy Sessions"*, Summer 2024
- Ryan Merheby, *"Exploring Application of Logical Ontologies for Generative Design of Mechanical Assemblies"*, Summer 2024
- Jiheon Lee, *"Generative Design of Mechanical Assemblies"*, Summer 2024
- Junwei Quan, *"Application of Ontologies in Semantic Analyses of Social Media"*, Summer 2024
- Ryan Reza, Waleed Haddad, Jay Patel, Karanveer Singh, Peter Ghobrial, *"SquadUp! (Implementation Project)"*, Fall 2024
- Yazan Armoush, Ishav Sohal, Eileen Chen, Jasmine Guruparan, Abdullah Shahid, *"CarbonTrack (Implementation Project)"*, Fall 2024
- Jackson Lee, Ido Ben Haim, *"Hacklab Booking System (Implementation Project)"*, Summer 2023
- Akhil Choraria, Aditya Harish, Gunin Kakar, *"MyAcademia (Implementation Project)"*, Summer 2023
- Ethan Lam, Nipun Rustagi, Nicholas Ospina, Razeen Ali, Apollonia Savenko, *"Schedulr (Implementation Project)"*, Fall 2022
- Neha Sohail, Ishan Singh, Owais Zahid, Khubaib Ahmed Daksh Malhotra, *"elDEARly (Implementation Project)"*, Fall 2022

Research Interests

Applications of logic in computer science, knowledge representation and reasoning, design and verification of formal ontologies, semantic web.

Publications

[1] **Aameri, B.**, Poveda-Villalón, M., Sanfilippo, E. M., and Terkaj, W. (2024) Special Issue on Semantic Web for Industrial Engineering: Research and Applications, Semantic Web Journal, 15(2), 251-257.

[2] **Aameri, B.**, and Grüninger, M. (2022) Reducible Theories and Amalgamations of Models, ACM Transactions on Computational Logic (TOCL), 24(1), 1-24.

[3] **Aameri, B.**, Chui, C., Grüninger, M., Hahmann, T., and Ru, Y. (2020) The FOUnt Ontologies for Quantities, Units, and the Physical world, Applied Ontology, 15(3), 313-359.

[4] **Aameri, B.**, and Grüninger, M. (2020) Location Ontologies based on Mereotopological Pluralism, Applied Ontology, 15(2), 135-184.

[5] **Aameri, B.**, and Grüninger, M. (2019) A Representation Theorem for Change through Composition of Activities, ACM Transactions on Computational Logic (TOCL), 20(4), 1-31.

[6] **Aameri, B.**, Cheong, H., and Beck, J. Ch. (2019) Towards an Ontology for Generative Design of Mechanical Assemblies, Applied Ontology, 14(2), 127-153.

[7] Gruninger, M., **Aameri, B.**, Chui, C., Hahmann, T., and Ru, Y. (2018) Foundational Ontologies for Units of Measure, In Proc. of the 10th Int. Conference on Formal Ontology in Information Systems (FOIS 2018), IOS Press: 211-224.

[8] **Aameri, B.**, and Gruninger, M. (2017) Encountering the Physical World, In Proc. of the Joint Ontology Workshops (JOWO 2017), CEUR Workshop Series, vol. 2050.

[9] Gruninger, M., and **Aameri, B.** (2017) A New Perspective on the Mereotopology of RCC8, In Proc. of the 13th Conference on Spatial Information Theory (COSIT 2017), LIPIcs-Leibniz International Proceedings in Informatics, vol. 86.

[10] **Aameri, B.**, and Gruninger, M., and Chui, C. (2016) Anti-Modules., In Proc. of the Joint Ontology Workshops (JOWO 2016), CEUR Workshop Series, vol. 1660.

[11] **Aameri, B.**, and Gruninger, M. (2015) A New Look to Ontology Correctness, In Proc. of the Symposium on Logical Formalizations of Commonsense Reasoning (Commonsense 2015), AAAI Spring Symposium, AAAI Press.

[12] **Aameri, B.**, and Gruninger, M. (2014) Reuse with Domain and Process Ontologies, In Proc. of the 8th Int. Workshop on Modular Ontologies (WoMO 2014), CEUR Workshop Series, vol. 1248.

[13] Gruninger, M., and **Aameri, B.** (2014) Preservation of Modules, In Proc. of the 8th Int. Workshop on Modular Ontologies (WoMO2014), CEUR Workshop Series, vol. 1248.

[14] **Aameri, B.**, and Gruninger, M. (2013) A First-Order Axiomatization of Change in Mereotopology, the 27th Int. Workshop on Qualitative Reasoning (QR 2013), Bremen, Germany: pp. 115-121.

[15] **Aameri, B.** (2012) Using Partial Automorphisms to Design Process Ontologies, Proc. of the 7th Int. Conference on Formal Ontology in Information Systems (FOIS 2012), IOS Press: pp. 309-322.

[16] **Aameri, B.**, and Winter, M. (2011) A First-Order Calculus for Allegories. In Proc. of International Conference on Relational and Algebraic Methods in Computer Science, Lecture Notes in Computer Science 6663: pp. 74-91.

Professional Activities

Editorial: Guest editor of *"Special Issue on Semantic Web for Industrial Engineering: Research and Applications"*, Semantic Web Journal (2022-2024).

Journal Reviewer: Applied Ontology (2018, 2019, 2020, 2021, 2022).

Program Committee:
Workshop on Foundational Ontology (2021, 2022, 2023, 2024)
International Workshop on Formal Ontologies meet Industry (2021, 2022)
Linked Data in Architecture and Construction Workshop (2022)

Conference Reviewer:
Int. Conf. on Principles of Knowledge Representation & Reasoning (KR 2016)
Logic in Computer Science (LICS 2018)