Carmen S. Chui

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Research Interests

- Ontology design, mapping, and integration
- Knowledge representation & modelling
- Automated reasoning of first-order ontologies
- Applications of ontologies to data and knowledge integration
- Engineering education

Education

Ph.D. in Industrial Engineering   **09/2013–present**
University of Toronto   Toronto, Canada
- Adviser: Michael Grüninger
- Candidacy achieved in 2015
- Currently enrolled in the Prospective Professors in Training (PPIT) Program
- Client and student mentor for an APS112 design group during the Winter 2017 semester

M.A.Sc. in Industrial Engineering   **09/2011–08/2013**
University of Toronto   Toronto, Canada
- Dissertation: "Axiomatized Relationships Between Ontologies"
- Adviser: Michael Grüninger
- Committee: Mark Fox, Michael Grüninger, L.H. Shu
- Received Teaching Fundamentals (TF) Certificate from the Teaching Assistants' Training Program (TATP) in 2012

B.A.Sc. (with honours) in Industrial Engineering   **09/2007–06/2011**
University of Toronto   Toronto, Canada
- Information Systems option stream
- Fourth year research thesis: "Reasoning About Changes"
- Adviser: Michael Grüninger

Publications

Identifiers

- ORCID: `http://orcid.org/0000-0001-9493-5912`

- DBLP page: http://dblp2.uni-trier.de/pers/hd/c/Chui:Carmen

Peer-Reviewed Conference Proceedings (Full Papers)

In the fields of knowledge representation and computer science, full paper contributions are subjected to *anonymous and external peer-review*, where results are presented at the conference; where applicable, acceptance rates are listed in each entry.

[P7] Aameri, B., Grüninger, M., **Chui, C.,** "Anti-Modules". In: *Proceedings of the Joint Ontology Workshops 2016 Episode 2: The French Summer of Ontology co-located with the 9th International Conference on Formal Ontology in Information Systems (FOIS 2016), Annecy, France, July 6-9, 2016.* 2016. URL: http://ceur-ws.org/Vol-1660/womocoe-paper2.pdf.

[P6] **Chui, C.**, Grüninger, M., "A Molecular Structure Ontology for Medicinal Chemistry". In: *Formal Ontology in Information Systems - Proceedings of the 9th International Conference, FOIS 2016, Annecy, France, July 6-9, 2016.* Acceptance Rate: 30.9% (25 papers of 80 submissions). 2016, pp. 285–298. DOI: 10.3233/978-1-61499-660-6-285. URL: http://dx.doi.org/10.3233/978-1-61499-660-6-285.

[P5] **Chui, C.**, Grüninger, M., Berkel, M., "Ontology Mapping in an e-Commerce Application". In: *Formal Ontologies Meet Industry - 7th International Workshop, FOMI 2015, Berlin, Germany, August 5, 2015, Proceedings.* Acceptance Rate: 61.1% (11 papers of 18 submissions). 2015, pp. 25–38. DOI: 10.1007/978-3-319-21545-7_3. URL: https://doi.org/10.1007/978-3-319-21545-7_3.

[P4] **Chui, C.**, Grüninger, M., "Mathematical Foundations for Participation Ontologies". In: *Formal Ontology in Information Systems - Proceedings of the Eighth International Conference, FOIS 2014, September, 22-25, 2014, Rio de Janeiro, Brazil.* Acceptance Rate: 29.6% (24 papers of 81 submissions). 2014, pp. 105–118. DOI: 10.3233/978-1-61499-438-1-105. URL: http://dx.doi.org/10.3233/978-1-61499-438-1-105.

[P3] **Chui, C.**, Grüninger, M., "Merging the DOLCE and PSL Upper Ontologies". In: *KEOD 2014 - Proceedings of the International Conference on Knowledge Engineering and Ontology Development, Rome, Italy, 21-24 October, 2014.* Acceptance Rate: 18% (78 submissions). An updated and revised version of this paper appears in [P2]. Nominated for Best Student Paper award. SciTePress, 2014, pp. 16–26. ISBN: 978-989-758-049-9. DOI: 10.5220/0005027100160026. URL: https://doi.org/10.5220/0005027100160026.

[P2] **Chui, C.**, Grüninger, M., "Techniques for Merging Upper Ontologies". In: *Knowledge Discovery, Knowledge Engineering and Knowledge Management - 6th International Joint Conference, IC3K 2014, Rome, Italy, October 21-24, 2014, Revised Selected Papers.* 2014, pp. 273–292. DOI: 10.1007/978-3-319-25840-9_18. URL: https://doi.org/10.1007/978-3-319-25840-9_18.

[P1] Grüninger, M., Hahmann, T., Katsumi, M., **Chui, C.,** "A Sideways Look at Upper Ontologies". In: *Formal Ontology in Information Systems - Proceedings of the Eighth International Conference, FOIS 2014, September, 22-25, 2014, Rio de Janeiro, Brazil.* Acceptance Rate: 29.6% (24 papers of 81 submissions). 2014, pp. 9–22. DOI: 10.3233/978-1-61499-438-1-9. URL: https://doi.org/10.3233/978-1-61499-438-1-9.

Recent Presentations (Outside of Conferences)

[R3] **Chui, C.** *Overview of Current Research Projects*. Toronto Semantic Web Meetup Group: What's Happening in the Semantic Technologies Lab? Event. 2012.

[R2] **Chui, C.** *Breaking Down DOLCE: Overview of the Verification of the DOLCE Ontology*. Toronto Ontology Festival (TOFFEE). Aug. 2012.

[R1] **Chui, C.** *Reasoning with Ontology Mappings*. MIE Scientific Writing Course run by Debby Repka. 2012.

Teaching and Mentoring Experience

University of Toronto   **09/2011–present**
Teaching Assistant   *Toronto, Canada*
In addition to invigilating faculty-wide exams, I designed and conducted tutorials, held office hours, graded progress and final reports, and designed and graded programming and theoretical assignments, tests, and exams for the following courses:
- MIE191: Introduction to Mechanical and Industrial Engineering
    - Winter 2015, Winter 2016, Winter 2017
- MIE350: Design & Analysis of Information Systems
    - Fall 2011, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016
- MIE457: Knowledge Modelling & Management
    - Winter 2015, Winter 2016, Winter 2017
- MIE1505: Enterprise Modelling
    - Fall 2016

University of Toronto   **01/2017–04/2017**
Client/Student Mentor   *Toronto, Canada*
As part of the APS 1203/1204 course offered with the Prospective Professors in Training (PPIT) program, I was a mentor for a group of six first-year undergraduate students taking their Engineering Strategies & Practice II (APS 112) course. The group's project is to redesign mathematics in the classroom to make the subject more engaging and interesting for high-school students. We have been featured in the UofT Engineering News in the following article: `http://news.engineering.utoronto.ca/engineering-educational-experience/`.

St. Clement's School   **09/2006–06/2007**
Grade 9 French Tutor   *Toronto, Canada*

Research and Industry Experience

Graduate Research Assistant   **09/2011–present**
Semantic Technologies Lab, University of Toronto   *Toronto, Canada*
- Help specify the metadata and formalize logical methods to relate ontologies to one another within the COmmon Logic Ontology REpository (COLORE) project.

Database Analyst   05/2010–08/2010
Mercer (Canada) Ltd.   *Toronto, Canada*

Web Application Support Specialist, Database Analyst   05/2009–08/2009
Mercer (Canada) Ltd.   *Toronto, Canada*

Web Application Support Specialist   05/2008–08/2008
Mercer (Canada) Ltd.   *Toronto, Canada*

Student Intern (Cell Culture of Myometrial Cells)   06/2006–08/2006
Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital   *Toronto, Canada*

Professional Activities & Associations

Student Member, International Association for Ontology & its Applications (IAOA)   2011–present
Student Member, ONTOLOG Forum   2011–present
Graduate Student Member, Ontario Society of Professional Engineers (OSPE)   2011–present
Graduate Student Member, Institute of Electrical and Electronics Engineers (IEEE) 2011–present
Graduate Student Member, Institute of Industrial Engineers (IIE)   2011–present

Personal

Languages: English (native), French (limited working proficiency)

Citizenship: Canadian

Last updated: *July 2, 2017*