

CURRICULUM VITÆ

Dr. Samira Sadaoui

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Research Interests

Software Engineering; Formal Methods; Multi-Agent Systems; Multi-Attribute & Reverse Auctions; Trust Management; Constraint Programming; Boolean Satisfiability.

Professional Experience

- 2006-present Associate Professor in Computer Science, Univ. of Regina.
- 2002-2006 Assistant Professor in Computer Science, Univ. of Regina.
- 2000-2002 Assistant Professor (Tenure Track) in Computer Science, Univ. of Lethbridge.
- Winter 2000 Sessional Lecturer in Computer Science, Univ. of Lethbridge.
- 1998-1999 Assistant Professor (Term position) in Computer Science, Univ. of Nancy I, France.
- 1995-1998 Lecturer in Computer Science, Univ. of Nancy I and Univ. of Nancy II, France.

Education

- 2000 Ph.D. in Computer Science, Univ. of Nancy I, France
Thesis Title: Assistance in the Reuse of Formal Specifications (in French).
- 1995 M.Sc. in Computer Science, Univ. of Nancy I, France
Thesis Title: Study, Implementation and Comparison of Algorithms for Computing Prime Implicates (in French).

Research Grants

- NSERC Individual Discovery Grant, \$100,000, 2010 to 2015.
- NSERC Individual Discovery Grant, \$60,000, 2005 to 2010.
- NSERC Research Tools and Instruments (RTI) Grant, \$17,061 (with two other faculty members), 2005.

- TEL (Technology of Enhanced Learning) Fund, \$15,000, U. of Regina, 2005-2006.
- TEL Fund, \$17,500, U. of Regina, 2003-2005.
- Vice President Research Fund, \$2,500, U. of Regina, 2002-2003.
- Start Up Research Grant, Faculty of Science, \$45,000, U. of Regina, 2002.
- NSERC Individual Discovery Grant, \$60,000, 2001 to 2005.
- Research Excellence Envelope, \$12,000, U. of Lethbridge, 2001-2002.
- University of Lethbridge Research Fund, \$4,500, U. of Lethbridge, 2001-2002.
- Start Up Research Grant, Faculty of Art & Science, \$10,000, U. of Lethbridge, 2000.

Teaching Experience

Graduate Courses:

- CS872 - Software Engineering (student evaluation: 3.68/4.00 with 14 students).
- Reading Courses: Formal Methods: Theory & Practice; Matchmaking Systems; Agent-Oriented Software Engineering; Specification Implementation; Agent Interaction Protocols; Agent Distributed Systems; Web Engineering; Monitoring of Online Auctions.

Undergraduate Courses:

- CS115 - Object-Oriented Design (student evaluation: 3.41/4.0 with 24 students; 3.34/4.0 with 31 students).
- CS230 - Fundamentals of Computer Science III (student evaluation: 3.16/4.0 with 28 students).
- CS372 - Software Engineering Methodology (student evaluation: 3.37/4.0 with 17 students; 3.39/4.0 with 11 students).
- CS373 - Specification and Software Design (as a reading course).
- CS476 - Software Development Project (as a reading course).
- Courses taught at the University of Lethbridge: CS1620 - Introduction to JAVA; CS1620 - Introduction to C++; CS3615 - Computer Architecture; CS3850c - Introduction to Formal Specifications.
- Reading Courses: Wireless Technologies; Object-Oriented Software Engineering; Projects in Multi-Agent Systems; Software Architecture.
- Courses taught in French: Graphics with JAVA; Logic Programming in Prolog; Functional Programming in CAML.

Publications

The authors with bolded names are my graduate students. When the authors are listed in the alphabetical order, they have the same involvement in the research work. Otherwise, the author contributing most is listed first.

Refereed International Journals:

1. **W. Jiang** and S. Sadaoui. Evaluating And Ranking Semantic Offers According to Users' Interests. *Journal of Electronic Commerce Research*, accepted in November 2011, 24 pages.
2. S. Sadaoui, M. Mouhoub and **B. Chen**. An Efficient Lotos-based Framework for Describing and Solving Temporal CSPs. *International Journal of Software Engineering & Knowledge Engineering*, IJSEKE, World Scientific Publishing, Volume 19, Number 6, pp. 765-789, Sept. 2009.
3. M. Mouhoub and S. Sadaoui. Solving Incremental Satisfiability. *International Journal on Artificial Intelligence Tools*, IJAIT, World Scientific Publishing, Volume 16, Number 1, pp. 139-147, 2007.
4. S. Sadaoui and **P. Yin**. Generalization and Instantiation for Component Reuse. *International Journal of Software Engineering & Knowledge Engineering*, IJSEKE, Volume 16, Number 2, pp. 175-200, April 2006.
5. **B. Chen** and S. Sadaoui. A Generic Formal Framework for Constructing Agent Interaction Protocols. *International Journal of Software Engineering & Knowledge Engineering*, IJSEKE, World Scientific Publishing, Volume 15, Number 1, pp. 61-85, February 2005.
6. S. Sadaoui. Assistance in the Reuse of Formal Specifications. *International Journal of Computers and Their Applications*, IJCA, ISCA Press, Volume 11, Number 4, pp. 234-245, December 2004.
7. S. Sadaoui. Composition of Structured Process Specifications. *Electronic Notes in Theoretical Computer Science*, Elsevier, Volume 82 Issue 5, pp 132-143, April 2003.

Refereed Book Chapters:

1. S. Sadaoui, M. Mouhoub and **X.F. Li**. An OCL-based CSP Specification and Solving Tool. *New Challenges in Applied Intelligence Technologies*. Studies in Computational Intelligence, Volume 134 Springer, N.T. Nguyen and R. Katarzyniak (Eds.), pp. 235-244, 2008.

Refereed Conference Publications:

1. **W. Jiang** and S. Sadaoui. Comparing the MNL Model with an Individual Interest Model. *International Conference on e-CASE and e-Tech*, 14 pages, 2012 (to appear).
2. S. Sadaoui and **W. Jiang**. An Offer Evaluation System based on Buyer's Interests. *26th Annual ACM Symposium On Applied Computing*, SAC'11, poster paper, March 2011, Taiwan.
3. **F. Ghavamifar**, S. Sadaoui and M. Mouhoub. Preference Elicitation and Winner Determination in Multi-Attribute Auctions. *Proc. of 24th Florida Artificial Intelligence Research Society Conference, FLAIRS-24*, poster paper, May 2011, USA.

4. **S. Abedinzadeh** and S. Sadaoui. A Rough Set Approach to Agent Trust Management. *International Symposium on Privacy and Security Applications, PSA-2010*, IEEE Computer Society, pp 1064-1071, Aug. 20-22 2010, Minnesota, USA (acceptance rate: 10%).
5. **F. Ghavamifar**, S. Sadaoui and M. Mouhoub. Winner Determination based on Preference Elicitation Methods. *Proceedings of Canadian Conference on Artificial Intelligence*, short paper, pp 332-335, Ottawa Canada, May 31-June 2 2010.
6. **N. Sharifimehr** and S. Sadaoui. Markovian Workload Modeling for Enterprise Application Servers. *Proceedings of Canadian Conference on Computer Science and Software Engineering, C3S2E'09*, pp. 161-168, ACM Press, Montreal, Canada, May 2009 (acceptance rate: 22%).
7. **N. Sharifimehr** and S. Sadaoui. A Dynamic Semi-Markovian Workload Modeling. *Proceedings of 10th International Conference on Enterprise Information Systems, ICEIS*, pp. 125-130, Barcelona, Spain, June 12-16 2008 (acceptance rate: 10%).
8. S. Sadaoui, M. Mouhoub and **X.F. Li**. An OCL-based CSP Specification and Solving Tool. *Poster paper in the 21st International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE'08* (acceptance rate: 30%).
9. **N. Sharifimehr** and S. Sadaoui. An Extended Concurrency Control Service for CORBA. *Proc. of 19th Australian Software Engineering Conference, ASWEC*, IEEE Computer Society, pp. 330-337, Perth, Western Australia, March 2008 (acceptance rate: 30%).
10. S. Sadaoui and **S. Srisodsai**. A Multi-Language Information Searching Tool. *Proc. of 2nd International Conference on Software Engineering Advances, ICSEA07*, IEEE Computer Society, pp. 49, France, August 2007 (acceptance rate: 32%).
11. **N. Sharifimehr** and S. Sadaoui. A Predeictive Automatic Tuning Service For Object Pooling Based On Dynamic Markov Modeling. *Proc. of 2nd International Conference on Software and Data Technologies, ICSoft07*, pp. 38-45, Spain, July 2007 (acceptance rate: 14%).
12. S. Sadaoui and **N. Sharifimehr**. A Novel Object Pool Service for Distributed Systems. *Proc. of International Symposium on Distributed Objects and Applications, DOA06*, pp. 1757-1771, LNCS, Montpellier, France, Oct 30-Nov 1 2006 (CiteSeer impact factor: 0.61).
13. S. Sadaoui and **S. Singh**. Implementation of CafeOBJ Specifications to Java Code. *Proc. of International Conference on Software Engineering & Knowledge Engineering, SEKE06*, pp. 446-449, San Fransisco, July 5-7 2006 (acceptance rate: 41.9%).
14. M. Mouhoub and S. Sadaoui. Improving Lotos Simulation using Constraint Propagation. *Proc. of 17th IEEE International Conference on Tools with Artificial Intelligence, ICTAI'05*, IEEE Computer Society, pp. 137-142, Hong Kong, Nov 14-16 2005 (acceptance rate: 12%)
15. M. Mouhoub, S. Sadaoui and **B. Chen**. *Lotos Simulator for CSPs. Proc. of the International Conference of Modeling and Simulation*, Mexico, MS 2005.
16. **B. Chen** and S. Sadaoui. Specification and Verification of Agent Interaction Protocols. *Proc. of International Conference on Software Engineering and Knowledge Engineering, SEKE'04*, pp. 300-305, Banff Alberta, June 20-24 2004 (acceptance rate: 38%)

17. M. Mouhoub, S. Sadaoui and **A. Sukpan**. Formal Description Techniques for CSPs and TCSPs. *Proc. of International Conference on Software Engineering and Knowledge Engineering, SEKE04*, pp. 406-410, Banff Alberta, June 20-24 2004 (acceptance rate: 38%).
18. M. Mouhoub and S. Sadaoui. Systematic Versus Non Systematic Methods for Solving Incremental Satisfiability. *Proc. of 17th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE*, pp. 543-551, LNCS 3029 Springer, Ottawa, Canada, May 2004.
19. S. Sadaoui and **P. Yin**. Generalization for Component Reuse. *Proc. of 42st Annual ACM Southeast Conference, ACM-SE'04*, pp. 134-139, Huntsville, Alabama, April 2004.
20. M. Mouhoub, **M. Istihad** and S. Sadaoui. Java with CREAM for Temporal Constraints. *13th International Conference on Intelligent & Adaptive Systems and Software Engineering, IASSE*, pp 281-283, 2004.
21. M. Mouhoub, S. Sadaoui and **X. Feng**. A New Branch and Bound Method for Incremental Satisfiability Problem. *International Conference on Computational Intelligence, ICCCI*, pp 424-427, Dec. 17-19 2004.
22. **B. Chen** and S. Sadaoui. Simulation and Verification of a Dynamic Online Auction. *Proc. of 7th International Conference on Software Engineering & Applications, SEA*, Marina del Rey, CA USA, pp. 385-390, November 3-5 2003.
23. S. Sadaoui. Assistance in the Reuse of Formal Specifications. *Proc. of 12th International Conference on Intelligent and Adaptive Systems and Software Engineering*, pp 217-222, July 9-11, San Francisco, 2003.
24. S. Sadaoui. Assistance in the Generalization of Algebraic Specifications. *Proceeding of the International Conference on Software Engineering and Applications SEA*, Innsbruck Austria, February 18-21, 2002.
25. P. Marquis and S. Sadaoui. A New Algorithm for Computing Theory Prime Implicates Compilations. *Proceedings of the American Association for Artificial Intelligence, AAAI-96*, pp. 504-509, Portland Oregon, August 4-8 1996 (CiteSeer impact factor: 1.87).

Refereed Workshop Publications:

1. S. Sadaoui and **W. Jiang**. An Interest-based Offer Evaluation System for Semantic Matchmakers. *Fourth International Workshop on Service Matchmaking and Resource Retrieval in the Semantic Web, SMR2*, pp 1-16, A. Bernstein, P. Grace, M. Klusch and M. Paolucci (eds), ISWC 2010.
2. S. Sadaoui, M. Mouhoub and **X.F. Li**. An UML-based Temporal Constraint Solver. *Workshop on Spatial and Temporal Reasoning, International Joint Conference on Artificial Intelligence, IJCAI-07*, Jan. 2007.
3. S. Sadaoui. Composition of Structured Process Specifications. *Workshop on Software Composition. European Joint Conferences on Theory and Practice of Software, ETAPS*, Poland, 2003.

Presentations:

1. S. Sadaoui, M. Mouhoub and **X. F. Li**. Extending OCL to Handle Constraints of CSPs. *CORS/Optimization Days 2008 joint conference*, Quebec City (abstract).
2. **N. Sharifimehr** and S. Sadaoui. Dynamic Semi-Markov Worload Modeling. *CORS/Optimization Days 2008 joint conference*, Quebec City (abstract).

Technical Papers:

1. **B. Chen** and S. Sadaoui. *A Generic Formal Framework for Multi-agent Interaction Protocols*. Department of Computer Science, U. of Regina, ISBN 0-7731-0454-02, October 2003.
2. **B. Chen** and S. Sadaoui. *LOTOS: Theories and Tools*. Department of Computer Science, U. of Regina, ISBN 0-7731-0464-X, CS 2003-12, November 2003.

Examination Committees

- P.hD. Thesis:
 1. External examiner of the PhD thesis defense of David J. Callele. “Experience Requirements”. Dept. of Computer Science, University of Saskatchewan, February 2011.
 2. External examiner of the PhD thesis defense of Nora Houari. “User Adaptive Decision Support based on Collaborative Agents”. Electrical & Computer Engineering, University of Calgary, January 2011.
 3. Internal/External member of the PhD supervisory committee of Sadia Mwangangi, Dept. of Mathematics & Statistics.
 4. Internal/External member of the PhD supervisory committee of Ali Kavousi, Faculty of Engineering & Applied Science.
 5. Internal member of the PhD thesis defense of Amrudee Suskpan. “Solving Dynamic (Temporal) CSPs with Preferences”, Dept. of Computer Science, July 2008.
 6. Internal member of the PhD supervisory committee of Ali Hmer, Dept. of Computer Science.
 7. Internal member of the PhD supervisory committee of Munira Al-Ageili, Dept. of Computer Science.
- External examiner of M.A.Sc thesis defense at the Faculty of Engineering and Applied Science:
 1. Mohamed Ata Elshenawy, “Hierarchical Location-Aware Content Delivery in a Vehicular Environment”, May 2010.
 2. Gabriel Martinez Escudero, “Vehicle to Vehicle Communications: Traffic Improvement Using an Artificial Intelligence Algorithm Based on Ants Behavior”, December 2009.

3. Daniel Nils Johannes Obst, “Monotonic Versioning of Ontologies in a Peer-to-Peer Environment”, September 2009.
 4. Robert W. Harrison, “Tools for Industrial Knowledge Modeling and Management”, May 2008.
 5. Yong Zang, “Visual Servoing of a 5-DOF Mobile Manipulator using a Panoramic Vision System”, June 2007.
- Internal member of MSc thesis defense: Eisa Ayed - September 2011; Yang Zhou - November 2010; Bahareh Jafari - March 2010; Chantal Laplante - December 2009; Fei Yan - December 2008; Nurul Anwar - July 2008; Rasem Suwan - June 2008; Roger Barbour - April 2008; Minxiao Lei - March 2008; Jia Liu - March 2008; Colin Witow - October 2006; Xinkai Feng - June 2005; Wang Chonghai - June 2005; Syed Bahelvi - May 2005; Hongwei Qi - April 2004.
 - Examiner of B.Sc. Honours Oral of: Seng Ear - Winter 2005; Ryan Smulan - Winter 2004; Camilo Rostoker - Winter 2003.

Supervision of Students

Completed Graduate Students:

1. Wei Jiang, MSc (Jan. 2009 - June 2011). “An Interest-based Offer Evaluation System for Semantic Matchmaking” - Nominated for the President’s Distinguished Graduate Student Award, CS dept.
2. Hadeel Bin Amer, MSc (Jan. 2009 - Jan. 2011). “Design and Implementation of a Forward English Auction” (project-based).
3. Farnaz Ghavamifar, MSc (Jan. 2008 - Oct. 2010). “A Novel Trustful Multi-Attribute Reverse Auctions” (co-supervision).
4. Nima Sharifimehr, MSc (Jan. 2006 - May 2008). “Markovian Workload Modeling for Enterprise Application Servers”.
5. Chang Feng, MSc (Sept. 2005 - Jan. 2008). “XML Query Evaluation using Constraint Satisfaction” (co-supervision).
6. Siritorn Srisodsai, MSc (Jan. 2005 - Sept. 2006). “A Multi-Language Information Searching Tool with Agent-based Web Services”.
7. Xiao Feng Li, MSc (Sept. 2004 - Sept. 2006). “An UML-based Solver Tool for Constraint Programming” (co-supervision).
8. Sudhanshu Singh, MSc (Sept. 2003 - April 2006). “Code Generation from (Un) Parameterized Algebraic Specifications”.
9. Bo Chen, MSc (Sept. 2002 - April 2004). “Formal Specification of AIPs and CSPs” - Nominated for Governor General’s Academic Medal, CS dept.
10. Pengzhou Yin, MSc (Sept. 2002 - April 2004). “Component Generalization and Instantiation”.

Graduate Students in Progress:

1. Sadra Abedinzadeh, PhD (since Jan. 2008). Trust Management for Agent-based Information Retrieval Systems.
2. Mamun Kazi, PhD (since May 2011). Security Management and Real-Time Monitoring of Multi-Attribute Reverse Auctions.
3. Shubhashis Kumar Shil, MSc (since Winter 2012). Improving MAUT for Multi-Attribute Reverse Auctions.
4. Tahani Mansour, MSc (since Winter 2012). Fairness Verification of Reverse Auctions.

Completed Undergraduate Students:

1. Seng Ear, NSERC-USRA, U. of Regina (Winter 2004). “Projects in Multi-agent Systems”.
2. Angela Mlyanarski, U. of Lethbridge (Spring 2002). “Software Reuse Tools”.
3. Elspeth Nickle, U. of Lethbridge (Spring 2002). “Software Reuse: an Overview”.

Other Research Activities

- External reviewer for Fonds de Recherche du Québec - Nature et Technologies, 2011.
- Invited speaker at the department of Computer Science, U. of Calgary. Research talk: *Software Reuse through Formal Methods*, March 28, 2003.
- Session chair at the International Conference on Modeling and Simulation, May 2005.
- Program committee member:
 - International Conference on Software Engineering & Knowledge Engineering, SEKE 2009, SEKE 2010 and SEKE 2011.
 - Canadian Conference on Artificial Intelligence, 2011.
 - International Conference on Computer Science and its Applications, 2011.
 - 8th International Conference on Software Engineering Research, Management and Applications, SERA 2010.
 - Canadian Conference on Computer Science & Software Engineering, C3S2E 2008, C3S2E 2009, C3S2E 2010 and C3S2E'10P.
 - International Conference on Intensive Applications and Services, INTENSIVE 2009 and INTENSIVE 2010.
 - International Conference on Software Engineering Advances, ICSEA 2006, ICSEA 2007 and ICSEA 2009.
 - 11th International Conference on Computer Science & Informatics, CSI 2008.
 - International Workshop on Advanced Multimedia Technology and Applications, 2006.
 - International Conference on Software Engineering & Applications, SEA 2003, SEA 2004, SEA 2005, SEA 2006 and SEA 2007.
 - 8th International Conference on Computer Science and Informatics, CSI 2005.

- International Conference in Software Engineering, Research and Practice, SERP 2003.
- Invited referee :
 - International Journal of Computational Intelligence, May 2011 and September 2011.
 - IEEE Transactions on Parallel and Distributed Systems, April 2010.
 - Journal of Universal Computer Science, March 2010.
 - International Journal of Computational Intelligence, May 2010.
 - International Journal of Software Engineering & Knowledge Engineering, 2004 & 2005.
 - International Conference on Advances in Computer Science and Technology, ACST 2006.
 - International Conference on Computing, Communications and Control Technologies, CCCT 2004.

Administrative Duties

- Dept. of Computer Science:
 - Seminar committee chair, 2003-2004 and 2010-2011.
 - Graduate committee chair, 2007-2008.
 - Graduate committee member, 2006-2007 and 2011-2012.
 - Co-op committee member, 2010-2012.
 - Planning committee member, 2005-2006.
 - Technical papers coordinator, 2005-2006.
 - Curriculum committee member, 2003-2004.
 - Seminar committee member, 2002-2003 and 2009-2010.
- Faculty of Science:
 - Representative to Faculty of Education, 2011-2012.
 - Scholarship committee member, 2006-2010.
- Univ. of Regina:
 - URFA Status of Women Committee, 2010-2012.
 - FGSR executive council member, 2006-2008.
 - Student appeals committee alternate member, 2007-2010.
 - NSERC-USRA selection committee member, 2003-2004.
 - Library committee member, 2003-2004.

Public Service (volunteer)

- Volunteer for Girl Guides of Canada, Regina.
- Maintained the Web site of Montessori School of Regina over several years.

- Developed a Web site for Univ. of Regina Women.