**Curriculum Vitae**

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# Executive Summary

- PhD in Computer Science in 1999 from Simon Fraser University.
- Professor at the University of Alberta since 1999. Full Professor since 2009.
- Scientific Director of the Alberta Machine Intelligence Institute 2009-2020.
- Canada CIFAR AI Chair
- Fellow of the Canadian Academy of Engineering
- Lifetime Achievement Award: CS-Can 2023, CAIAC 2025
- H-Index: 77 (Google Scholar)
- Number of citations: 27,997 (Google Scholar)
- Publications: 120+ Journal papers;
  250+ Conference papers;
  40+ Workshop papers;
  20+ Book chapters
- Past supervision: 11 PDF; 14 PhD; 89 MSc students
- Current supervision: 1 PDF; 6 PhD; 8 MSc students

# 1. Education and Work Experience

## 1.1 Education

- PhD in Computer Science, Simon Fraser University, Burnaby, British Columbia, Canada, March 1999. Topic: *Web Mining and Multimedia Mining*. Supervisor: Dr. Jiawei Han
  Title: **Resource and Knowledge Discovery from the Internet and Multimedia Repositories**
- MSc in Computer Science, Laval University, Sainte-Foy, Quebec, Canada, April 1992.
  Topic: *Distributed and Mobile databases on smartcards*. Supervisor: André Gamache.
  Title: **Logical access and small sized data compression in portable medical records managed by smartcards**
- MSc (equivalent) (DEA) in Electronics, University Paris XI, Paris, France, September 1989.
  Topic: *Natural Language Processing*. Supervisor: Dr. Fethi Debili
  Title: **Morphological Analysis of Written Arabic**
- BSc (equivalent) in Computer Science, University of Tunis, Tunis, Tunisia, June 1988.
  Internship at the Centre National de la Recherche Scientifique (CNRS), Paris, France

## 1.2 Languages

Speaks, reads, and writes fluently in both official languages of Canada: **English** and **French**.

## 1.3 Work Experience

- 2009 to Present: Professor, Computing Science, University of Alberta, Edmonton, Canada
- 2005 to 2009: Associate Professor, Computing Science, University of Alberta, Edmonton, Canada
- 1999 to 2005: Assistant Professor, Computing Science, University of Alberta, Edmonton, Canada
- 2009 to 2020: Scientific Director, Alberta Machine Intelligence Institute (Amii), formerly Alberta Innovates Centre for Machine Learning (AICML)
- 2017 to 2021: Member of the Board of Directors of SamDesk Corporation.
- 2017 (June–July): Visiting Professor, Jean Monnet University, Saint Etienne, France
- 2014 (May): Visiting Professor, School of Information Technology, University of Sydney, Sydney, Australia
- 2014 (February–March): Visiting Professor, Jean Monnet University, Saint Etienne, France
- 2010 to 2014: IBM Alberta CAS Advisory Board, Edmonton, Canada
- 2006 (January–April): Distinguished Professor, School of Electrical and Electronics Engineering, Chung-Ang University, Seoul, Korea
- 2005 (July–December): Visiting Professor, School of Information Technology, University of Sydney, Sydney, Australia
- 2003 (October–November): Visiting Professor, Faculty of Information Technology, University of Technology Sydney, Sydney, Australia
- 2000 to 2005: Technical Advisory Committee member, Cel Corporation, Edmonton, Canada
- 1995 to Present: Manager / Owner, ROMZ Consulting
- 1998 to 1998: Sessional Instructor, Computing Science, Simon Fraser University, Vancouver, Canada
- 1996 to 1997: Research Associate, Computing Science, Simon Fraser University, Vancouver, Canada
- 1993 to 1995: Research Assistant, Computing Science, Simon Fraser University, Vancouver, Canada
- 1993 to 1995: Teaching Assistant, Computing Science, Simon Fraser University, Vancouver, Canada
- 1992 to 1993: Research Associate, Computing Science, Laval University, Quebec City, Canada
- 1990 to 1992: Research Assistant, Computing Science, Laval University, Quebec City, Canada
- 1990 to 1990: Teaching Assistant, Computing Science, Laval University, Quebec City, Canada
- 1985 to 1989: Software Engineer, AII Informatics, Tunisia
- 1988 to 1989: Research Assistant, Centre National de la Recherche Scientifique - URA 962, France
- 1987 to 1987: Research Assistant, Computing Science, Laval University, Quebec, Canada
- 1985 to 1987: Teaching Instructor, Computing Science, Institut Supérieur de Gestion - University of Tunis, Tunisia

# 2. Awards, Honours and Patents

## 2.1 Awards and Honours

- **Best Paper Award**, International Conference on Advances in Social Networks Analysis and Mining, 2026
- CAIAC **Lifetime Achievement Award** 2025
- ACM **Senior Member**, 2025
- **Best Paper Award**, IEEE International Conference on Digital Economy, 2025
- 2022-2024: **World's Top 2% Scientists List**, by Stanford/Elsevier (in category Artificial Intelligence & Image Processing)
- CS-Can/Info-Can **Lifetime Achievement Award** 2023
- **Fellow** of the Canadian Academy of Engineering, 2023
- **Fellow** of the Asia-Pacific Artificial Intelligence Association, 2023
- **Best paper Award**, International Symposium on Foundations and Applications of Big Data Analytics, 2023
- **Best Paper Award**, 36th Canadian Conference on Artificial Intelligence, 2023
- Canada CIFAR AI **Chair**, 2021
- **Best paper Award**, International Symposium on Foundations and Applications of Big Data Analytics, 2022
- IEEE **Senior Member**, 2021
- Member of the Task Force of AI for the Royal College of Physicians and Surgeons of Canada, 2018–2020
- Member of the Advisory Board, Artificial Intelligence Center of Applied Technologies for Agriculture (CTA-IA-Agro), Brazil, since 2020.
- Member of the Advisory Board, Competence Center for Machine Learning, Rhine-Ruhr, Germany, since 2019
- **Best Paper Award**, International Conference on Intelligent Text Processing and Computational Linguistics, 2019
- **Great Supervisor Award**, Faculty of Graduate Studies, University of Alberta, 2018
- **Best Paper Award**, International Symposium on Foundations and Applications of Big Data Analytics, 2022
- **Best Paper Award**, 29$^{th}$ International Conference on Database and Expert Systems Applications, 2018
- Outstanding Paper Award, International Conference on Educational Technologies, 2017
- **Best Paper Award**, International Conference on Brain Informatics, 2017
- **Best Paper Award**, IEEE International Conference on Digital Economy, 2016
- **Best Paper Award**, IEEE International Conference of Hybrid Information Systems, 2013
- Best Student Paper Runner-Up, Advanced Data Mining and Applications Conference, 2013
- ACM – SIGKDD Service Award 2010
- Killam Annual Professorship for 2009–2010
- IEEE – ICDM Outstanding Service Award 2009
- McCalla Research Professorship for 2008–2009
- Best Paper Runner-Up, Pacific-Asia Conference on Knowledge Discovery and Data Mining, 2006

- Canadian Advanced Technology Alliance (CATA), Computer Science and Software Engineering Award, June 1999 (One award is given each year in Computer Science and Software Engineering in Canada.)
- British Columbia Advanced Systems Institute, ASI Exchange Communication Award, March 1999
- Simon Fraser University Centre for System Science, Excellent Poster Award, March 1999
- Three Ebco/Eppich Scholarships in Expert Systems, January 1999
- Simon Fraser University Graduate Fellowship: January 1998 and September 1998
- Intelligent Database Systems Laboratory (SFU) Award for R&D Achievement in Data Mining: October 1996, September 1998, and November 1998
- Simon Fraser University Centre for System Science, Excellent Poster Award, March 1997
- British Columbia Advanced Systems Institute Special Graduate Research Fellowship: January 1994
- Scholarship Fond pour la Formation de Chercheurs et l'Aide à la Recherche, Québec: 1993–1996
- Tunisian National Merit Scholarship with Canadian International Development Agency funds: 1990–1992
- Merit Scholarship from the Centre National des Œuvres Universitaires et Scolaires, France: 1988–1989

## 2.2 Patents

- **Image Creation and Assessment Method and System**, Nathaniel Rossol, Osmar R. Zaïane, Issue: US 10,867,562 B2. Place: United States
- **Method of Producing Web Search Result**, Osmar R. Zaïane, Jiyang Chen, and Randy Goebel, Provisional Patent Application serial number 61/120,568

# 3. Major Research and Research Funding

## 3.1 Research Interests

**Topics:** Big Data, Data Mining, Web Mining, Machine Learning, Natural Language Processing, Social Network Analysis, Content-Based Information Retrieval, Precision Health, Educational Data Mining, Explainable Artificial Intelligence.

Current research leverages artificial intelligence and machine learning for knowledge discovery, natural language processing, and information retrieval across large databases, specifically focusing on data mining from disparate heterogeneous sources. Research projects center on developing analytical tools that enhance decision-making across business and medicine through data-driven insight.

## 3.2 Research Funding

- [2026-2027] Cisco-University of Alberta Consortium for Agentic Research (CUACAR), How Bounded Agents Build Shared Understanding, $110,000
- [2024-2027] Alberta Innovates, Enabling Better Health Through Artificial Intelligence, $799,447.
- [2024–2026] Mitsubishi Electric Corporation, Title: Adaptive Machine with RL After Failure, $218,750
- [2022-2028] (NSERC CREATE) National Sciences & Engineering Research Council of Canada, Title: From Data to Decision (D2D): Artificial Intelligence from Data Value Chain to Human Value, $1,649,900, Co-Applicant with D. Baumgart, M. Cutumisu, R. Goebel, N. Hegde, M-Y. Kim, R. Mitchell, P. Musilek, G. Rockwell, M. Serpe.
- [2022–2024] Mitsubishi Electric Corporation, Title: Adaptive Machine with RL After Failure, $623,000
- [2021–2025] Canada CIFAR AI Chair Funding, $500,000
- [2021–2024] (SSHRC) Social Sciences & Humanities Council, University of Alberta, Alberta Teachers' Association, College of Alberta Superintendents, Title: Educational Leadership and Administration at the Intersections of Gender, $311,183, Co-Applicant with S. ElAtia, M. Purcell, E. Gouthro, E. Corsi, S. Ghoul, A. Hammad, B. Stelmach
- [2021-2024] (MITACS) The Mood Disorders Society of Canada (MDSC) Virtual Assistant: A machine learning and artificial intelligence chatbot to support the mental health of frontline healthcare workers, Co-PI: E. Stroulia, $145,000
- [2021–2022] Mitsubishi Electric Corporation, Title: Adaptive Machine with RL After Failure, $239,000
- [2021] The Mood Disorders Society of Canada (MDSC) Virtual Assistant: A machine learning and artificial intelligence chatbot to support the mental health of frontline healthcare workers, $30,000
- [2020–2026] (NSERC) National Sciences & Engineering Research Council of Canada, Title: Automatic Response Generation with Reasoning, Personalized Knowledge Graphs, and Emotional Intelligence, $156,000
- [2020] MITACS Accelerate, $15,000
- [2019–2022] Alberta Machine Intelligence Institute, $10,000,000, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, D. Schuurmans, R. Sutton, C. Szepesvari, Y. Yasui, P. Pilarski, O. Sheffet, M. White, A. Fyshe, J. Wright
- [2019–2022] (CIHR/NSERC) Canadian Institutes of Health Research and Natural Sciences and Engineering Research Council of Canada, Collaborative Health Research, Title: Development of an Artificial Intelligence Chatbot supporting coaching and optimal service for individuals with Neurodevelopmental disabilities and their families, $1,431,288, Co-applicant with F. Bolduc
- [2019–2021] Mitsubishi Electric Corporation, Title: Adaptive Machine with RL After Failure, $705,272
- [2019–2020] Mitsubishi Electric Corporation, Title: Machine Failure Prediction, $138,888
- [2019–2020] Mitsubishi Collaboration Grant, $605,160
- [2017–2018] (WCB) Alberta Workers' Compensation Board Research program, Title: Validation and refinement of the work assessment triage tool for selecting rehabilitation interventions for injured workers, $32,213, Co-applicant with D. Gross

- [2017–2017] Kule Institute for Advanced Study, Title: Mapping the University's Graduate Attributes to Faculty-Specific Professional Competencies and Standards, $7500, co-applicant with S. ElAtia
- [2016–2021] AICML Industry Affiliates Program, Huawei Technologies Canada, $25,000
- [2016–2018] Mitsubishi Collaboration Grant, $509,999, Co-applicant with R. Greiner, R. Sutton, P. Pilarski
- [2016–2018] Alberta Economic Development and Trade, $4,000,000, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, D. Schuurmans, R. Sutton, C. Szepesvari, Y. Yasui, P. Pilarski, O. Sheffet
- [2016–2018] (NSERC) Natural Sciences and Engineering Research Council of Canada (Strategic Project Grants), Title: “Social Web Mining and Sentiment Analysis for Mental Illness Detection”, $464,100, Co-applicant with D. Inkpen, R. Goebel, G. Kondrak
- [2016–2018] Centre for Teaching and Learning, Blended Learning Award, University of Alberta, $36,000, co-applicant with P. Lu, D. Szafron
- [2015–2017] Operating Grants from the Cancer Research Society, Title: “Mapping children's cancer and environmental carcinogenic emissions in Canada”, $119,761, Co-applicant with A. Osornio Vargas, D. Eisenstat, P.l Villeneuve, et al.
- [2015–2017] Teaching and Learning Enhancement Fund (TLEF), Office of the Provost and Vice-President (Academic), University of Alberta, Title: "Graduating Attributes Assessment Tool", $134,318, co-applicant with S. ElAtia, D. Ipperciel, H. Kanuka
- [2013–2016] (CIHR) Canadian Institutes of Health Research, Title: Spatial data mining exploring co-location of adverse birth outcomes and environmental variables, $801,858
- [2014–2016] Alberta Innovates/ Centre Program: Alberta Innovates Centre for Machine Learning, $4,000,000, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, D. Schuurmans, R. Sutton, C. Szepesvari, Y. Yasui
- [2014–2015] Commercialization support for Alberta Innovates Centre for Machine Learning, $354,800, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, D. Schuurmans, R. Sutton, C. Szepesvari, Y. Yasui
- [2013–2017] (NSERC) Natural Sciences and Engineering Research Council of Canada (Discovery Grant) Title: “Reinforcing pattern mining with uncertain and connectivity”, $125,000
- [2013–2014] Teaching and Learning Enhancement Fund (TLEF), Office of the Provost and Vice-President (Academic), University of Alberta, Title: "Developing a Computer-Based Assessment System to Support the Rapid Expansion of Online Teaching and Learning at the University of Alberta", $108,633, co-applicant with M. Gierl, T. Hillier, C. Poth, Y. Cui, G. Bostick, M. Hall, M. Robers, K. Cor, H. Lai
- [2013–2014] Workers Compensation Board of Manitoba, Title: “Clinical Decision Support Tools for Managing Disabling Musculoskeletal Disorders”, $88,085, Co-applicant with D. Gross, I. Steenstra, B. Shaw, N. Shaw, K. Williams-Whitt, T. Amell, G. McIntosh, L. Warren, L. Seale, R. Salus
- [2012–2013] (NSERC) Natural Sciences and Engineering Research Council of Canada (Discovery Grant) Title: “Bolstering pattern mining by taking into account relationships and uncertainty in data”, $22,000

- [2011–2013] Canadian Institute of Health Research (CIHR) Operating Grant, Title: "Population-based evaluation of quality and timeliness of breast cancer care", $341,538, co-applicant with M. Winget, K. King, Y. Yasui
- [2010–2012] University of Alberta, Title "Mapping children's cancer and environmental carcinogenic emissions in Canada: A GIS-based framework for supporting multidisciplinary research and surveillance", $300,000, Co-applicant with A. Osornio Vargas, I. Buka, A. Sanchez-Azofeira, et al.
- [2009–2014] Alberta Ingenuity Fund / Centre Program: Alberta Ingenuity Centre for Machine Learning, $10,000,000, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, D. Schuurmans, R. Sutton, C. Szepesvari, R. Mitchell, Y. Yasui
- [2008–2009] Alberta Ingenuity Fund / Centre Program: Alberta Ingenuity Centre for Machine Learning, $2,000,000, Co-applicant with M. Bowling, R. Goebel, R. Greiner, R. Holte, J. Schaeffer, D. Schuurmans, R. Sutton, C. Szepesvari, S. Lee, R. Mitchell, Y. Yasui
- [2008–2009] Google Research Award, Title: "Generating an Encyclopedic Entry About a Query Subject", $50,000 US, Co-applicant with R. Greiner and D. Wishart.
- [2008–2009] McCalla Award, $32,000
- [2007–2012] (NSERC) Natural Sciences and Engineering Research Council of Canada (Discovery Grant) Title: "Off-line and Integrated Data Mining for Intelligent Systems", $165,000 ($33,000 per year)
- [2007] (NSERC) Natural Sciences and Engineering Research Council of Canada (Research Tools and Instruments Grant) $64,720, Co-applicant with D. Rafiei, M. Nascimento and J. Sander
- [2003–2007] (NSERC) Natural Sciences and Engineering Research Council of Canada (Discovery Grant) Title: "Web Mining for Advanced Intelligent e-Learning Systems", $128,000 ($32,000 per year)
- [2005] Alberta Innovation & Science, Title: "Research and Technology Exchange Planning Workshop", $22,000. Co-applicant with R. Goebel and M. Nascimento
- [2005] Government of Canada Going Global, Title: "Research and Technology Exchange Planning Workshop", $10,000. Co-applicant with R. Goebel and M. Nascimento
- [1999–2003] (NSERC) Natural Sciences and Engineering Research Council of Canada (Operating Grant) Title: "Web Mining: Extracting useful information from the Web", $67,200 ($16,800 per year)
- [2002] (TeleLearning-NCE) Canada Networks of Centres of Excellence, Research Project Grant, extension of project "Web Mining for Intelligent Restructuring of Web-Based Learning Environment", Project Leader, $14,200
- [2002] (NSERC) Natural Sciences and Engineering Research Council of Canada (Equipment Grant) Title: "Upgrading the database laboratory equipment at the University of Alberta", $46,206, Co-PI with J. Sanders, D. Rafiei and M. Nascimento
- [2002–2004] (NSERC) Natural Sciences and Engineering Research Council of Canada (Strategic Grant) Title: "Using Protomics to establish an extracytosolic plant proteins database (EPPdb) and identify root-specific promoters for improved stress tolerance in plants", $401,575, Co-PI with M. Taylor, A. Good, and R. Goebel
- [2000–2001] (TeleLearning-NCE) Canada Networks of Centres of Excellence, Research Project Grant, Title: "Web Mining for Intelligent Restructuring of Web-Based Learning Environment", Project Leader, Total of $100,000 ($50,000 per year) with J. Han

- [2000–2001] (CFI) Canada Foundation for Innovation, New Opportunities Fund (with matching funds from Alberta Innovation and Science and other funds from TELUS), Title: "Laboratory for Advanced Computer and Network Systems: End-to-end Performance and Availability", $297,802, Co-PI with P. Lu, M. MacGregor, and M. Nascimento
- [2001] (Project funds) TR-Labs, Research Project, Title: "Educational Software for Micromachines And Related Technologies (eSMART)", $4,000, Co-PI with A. Bhattacharia
- [2000] (NSERC) Natural Sciences and Engineering Research Council of Canada (Equipment Grant) Title: "Improving and supplementing the database laboratory infrastructure at the University of Alberta", $30,671, Co-PI with M. Nascimento
- [1999–2000] (Start-Up) Faculty of Science, University of Alberta, Research Grant, $60,000

# 4. Refereed Research Publications

**Underlined names are student co-authors**

## 4.1 Publications in Journals

J1. Shahin Atakishiyev, Housam K.B. Babiker, Jiayi Dai, Nawshad Farruque, Teruaki Hayashi, Nafisa Sadaf Hriti, Md Abed Rahman, Iain Smith, Mi-Young Kim, Osmar R. Zaiane, Randy Goebel, **Explainability of large language models: Opportunities and challenges toward generating trustworthy explanations**, Accepted in Neurocomputing (Elsevier), October 2026

J2. Wenju Yang, Yuhao Cao, Juan Liu, Yang Wang, Qingshan Hou, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, Fei Wang, **MDSNet: Exploring Refined Speech Representations for Screening Mental Disorders**, Accepted in IEEE Journal of Biomedical and Health Informatics, September 2026, doi: 10.1109/JBHI.2026.3732124.

J3. Zhiqiang Shen, Qingshan Hou, Peng Cao, Jinzhu Yang, Huazhu Fu, Osmar R. Zaiane, Zhaolin Chen, **Segmentation-synthesis co-training for semi-supervised domain generalizable medical image segmentation**, Accepted for publication August 2026, Artificial Intelligence in Medicine, August, 2026

J4. Mohammad Amin Kamaleddin, Mina Mirjalili, Reza Barzegar, Nghia Trung Le, Zachary Cote, Olga Winkler, Lisa Burback, Yanbo Zhang, Osmar R. Zaiane, Candice Monson, Divya Sharma, Sri Krishnan, Andrew Greenshaw, Richard Zeifman, Peter Selby, Venkat Bhat, **Multi-Agent Large Language Model Framework for Psychotherapy Fidelity Assessment in Motivational Interviewing and Cognitive Behavioral Therapy Training: A Cross-Sectional, Simulation-Based Evaluation,** Journal of Medical Internet Research (JMIR) Medical Education, Accepted July 2026.

J5. Kun Hu, Peng Cao, Junjie Liang, Jinzhu Yang, Osmar R. Zaiane, **Generalized multiview margin distribution learning with margin consistency**. Expert Systems With Applications, Accepted May 2026.

J6. Junjie Liang, Peng Cao, Wenju Yang, Jinzhu Yang, Fei Wang, Osmar R. Zaiane, **From Emotion to Depression: How to leverage Emotional Representations for Multimodal Depression Diagnosis**. IEEE Transactions on Affective Computing. Accepted May 2026.

J7. Maochun Hao, Peng Cao, Guangqi Wen, Jinzhu Yang, Osmar R. Zaiane, **BrainUMA: A Unified Multi-Atlas Learning Framework for Brain Disorders Diagnosis**, Medical and Biological Engineering and Computing, 64: 2305-2319, 2026.

J8. Tianqi Wang, Qingshan Hou, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, **C2Net: A Co-Occurrence and Consistency-Aware Framework for Structured Multi-Label Fundus Diagnosis**, Medical and Biological Engineering and Computing, 64: 2209–2223, 2026.

J9. Junjie Liang, Peng Cao, Kun Hu, Jinzhu Yang, Fei Wang, Osmar R. Zaiane, **MoDEpression: Exploring Individual Differences in personalized Depression Diagnosis using Mixture-of-Expert**, IEEE Transactions on Multimedia, 17: 670-679, 2026.

J10. Kartik Vishal Deshpande, Dheeraj Kumar, Osmar R. Zaiane, **dnccVAT : A Fully Distributed Approach for Clustering Tendency Assessment of IoT Generated Spatio-Temporal Data** , IEEE Transactions on Parallel and Distributed Systems, 37(4): 762-774, 2026.

J11. Zhiqiang Shen, Peng Cao, Junming Su, Jinzhu Yang, Osmar R. Zaiane, **Adaptive Mix for Semi-Supervised Medical Image Segmentation**, Medical Image Analysis, Volume 108, Feb. 2026

J12. Amir Salimi, Abram Hindle, Osmar R. Zaiane, **Evaluating Sound Similarity Metrics for Differentiable, Iterative Sound-Matching**, IEEE Transactions on Audio, Speech and Language Processing, Volume 33, pp. 4983-4994, 2025.

J13. Junjie Liang, Peng Cao, Chongxiao Wang, Jinzhu Yang, Fei Wang, Osmar R. Zaiane, **Modeling Multimodal Depression Diagnosis from the perspective of Local Depressive Representation**, IEEE Transactions on Affective Computing, volume 17, Issue 1, pp. 497-510, DOI 10.1109/TAFFC.2025.3625612, 2026.

J14. Ruoxian Song, Peng Cao, Guanggi Wen, Lanting Li, Wei Liang, Weiping Li, jinzhu Yang, Osmar R. Zaiane, **CGMAE: Self-Supervised Masked Auto-Encoder with Cross-Graph Node Alignment for Node Classification**, Engineering Applications of Artificial Intelligence, Volume 163, Part 1, 2025.

J15. Liuzeng Zhang, Lanting Li, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, Fei Wang, **An Efficient Transfer Learning with Prompt Learning for Brain Disorders Diagnosis**, IEEE Journal of Biomedical and Health Informatics, DOI: 10.1109/JBHI.2025.3625375, Accepted October 2025.

J16. Guiliang Guo, Guangqi Wen, Lingwen Liu, Ruoxian Song, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, **BrainOSM: Outlier Screening for Multi-View Functional Brain Network Analysis**, Computer Methods and Programs in Biomedicine, Volume 273, 2025.

J17. Zahin Sufiyan, Shadan Golestan, Shotaro Miwa, Yoshihiro Mitsuka, and Osmar R. Zaiane, **A Study of the Efficacy of Generative Flow Networks for Robotics and machine Fault-Adaptation**, The International Scientific Journal Engineering Applications of Artificial Intelligence, Vol 160, Part B, 111904, November 2025.

J18. Zhiqiang Shen, Peng Cao, Qinghua Zhou, Jinzhu Yang, and Osmar R. Zaiane, **Collaborative Learning of Augmentation and Disentanglement for Semi-Supervised Domain Generalized Medical Image Segmentation**, IEEE Transactions on Medical Imaging, 45(1):281-295, 2026

J19. Qingshan Hou, Yaqi Wang, Peng Cao, Jianguo Ju, Huijuan Tu, Xiaoli Liu, Jinzhu Yang, Huazhu Fu, Yih Chung Tham, and Osmar R. Zaiane, **Pathology-Preserving Transformer Based on Multicolor Space for Low-Quality Medical Image Enhancement**, IEEE Transactions on Multimedia, Volume 27, pp 6661-6676, 2025.

J20. Guangqi Wen, Xin Gao, Wenhui Tan, Peng Cao, Jinzhu Yang, WeipingcLi, Osmar R. Zaiane, **Exploring Attention and Self-supervised Learning Mechanism for Graph Similarity Learning**, IEEE Transactions on Neural Networks and Learning Systems, Volume 44, Issue 3, pp. 1581-1595, March 2025.

J21. Guangqi Wen, Peng Cao, Lingwen Liu, Maochun Hao, Siyu Liu, Junjie Zheng, Jinzhu Yang, Osmar R. Zaiane and Fei Wang. **Heterogeneous Graph Representation Learning Framework**

**for Resting-State Functional Connectivity Analysis**, IEEE Transactions on Medical Imaging, 44(3):1581-1595, 2024.

J22. Qingshan Hou, Yaqi Wang, Linqi Lan, Peng Cao, Jinzhu Yang, Xiaoli Liu, Meng Wang, Yih Chung Tham, Osmar R. Zaiane, **A Reference-Free Quality Enhancement Framework for Low-quality Fundus Images**, IEEE Transactions on Circuits and Systems for Video Technology, Volume 35, Issue 4, pp. 3541-3556, April 2025.

J23. Kai Zhang, Wei Liang, Peng Cao, Zhaoyang Mao, Jinzhu Yang, Osmar R. Zaiane, **CorLabelNet: A Comprehensive Framework for Multi-Label Chest X-ray Image Classification with Correlation Guided Discriminant Feature Learning and Oversampling**, Medical and Biological Engeneering and Computing, Volume 63, pp 1045-1058, November 2024.

J24. Mr Mehran Taghian Jazi, Shotaro Miwa, Yoshihiro Mitsuka, Johannes Gunther, Shadan Golestan, Osmar R. Zaiane, **Explainability of deep reinforcement learning algorithms in robotic domains by using Layer-wise Relevance Propagation**, International Scientific Journal Engineering Applications of Artificial Intelligence, Volume 137, Part A, November 2024.

J25. Haonan Wang, Peng Cao, Xiaoli Liu, Jinzhu Yang, Osmar Zaiane, Osmar R.Zaiane, **Narrowing the semantic gaps in U-Net with learnable skip connections: The case of medical image segmentation**, Neural Network, Volume 178, October 2024.

J26. Ruoxian Song, Peng Cao, Guangqi Wen, Pengfei Zhao, Ziheng Huang, Xizhe Zhang, Jinzhu Yang, Osmar R. Zaiane, **BrainDAS: Structure-aware Domain Adaptation Network for Multi-site Brain Network Analysis**, Medical Image Analysis, Volume 96, 103211, 2024

J27. Ashwani Singla, Ritvik Khanna, Manpreet Kaur, Karen Kelm, Osmar R Zaiane, Cory Rosenfelt, Truong An Bui, Navid Rezaei, David B Nicholas, Marek Z Reformat, Annette Majnemer, Tatiana Ogourtsova, François V Bolduc, **Developing a chatbot to support individuals with neurodevelopmental disorders: a Tutorial**, Journal of Medical Internet Research, Volume 26, 2024.

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## 4.2 Publications in Refereed International Conferences

H-Index = **77;** Total **27,997** citations
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**2026**

1. Shivaansh Bhatia, Osmar R. Zaiane, **U-Net based Image Restoration for Diabetic Retinopathy Classification**, International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics, Rabat, Morocco, 24-27 August 2026
2. Yashar Talebirad, Osmar R. Zaiane, and Christine Largeron, **JASPER: Jaccard-Based Community Search on Uncertain Graphs**, 18th IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM), Rabat, Morocco, August 24-27, 2026
3. Zahin Sufiyan, Shadan Golestan, Yoshihiro Mitsuka, Shotaro Miwa, Osmar R. Zaiane, **WINFlowNets: Warm-up Integrated Networks Training of Generative Flow Networks for Robotics and Machine Fault Adaptation**, Conference Towards Autonomous Robotics Systems (TAROS), Manchester, UK, September 7-9, 2026
4. Yashar Talebirad, Eden Redman, Ali Parsaee, Osmar R. Zaiane, **From Signals to Structure: How Memory Architecture Drives Language Emergence in LLM Agents**, Artificial Life Conference (ALIFE), Waterloo, Canada, August 17-21, 2026.
5. Siyu Liu, Guangqi Wen, Peng Cao, Jinzhu Yang, Xiaoli Liu, Fei Wang, Osmar R. Zaiane, **Exploring Subnetwork Interactions in Heterogeneous Brain Network via Prior-Informed Graph Learning**, 29th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Strasbourg, France, September 27-October 1, 2026.
6. Guiliang Guo, Lanting Li, Qi Liu, Guangqi Wen, Lingwen Liu, Ruoxian Song, Peng Cao, Jinzhu Yang, Fei Wang, Xiaoli Liu, Osmar R. Zaiane, **BrainACU: Asynchronous Coordination Unit Modeling for Dynamic Brain Network Analysis**, 29th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Strasbourg, France, September 27-October 1, 2026.
7. Guiliang Guo, Guangqi Wen, Lingwen Liu, Ruoxian Song, Peng Cao, Jinzhu Yang, Fei Wang, Xiaoli Liu, Osmar R. Zaiane, **BrainSTR: Spatio-Temporal Contrastive Learning for Interpretable Dynamic Brain Network Modeling**, 29th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Strasbourg, France, September 27-October 1, 2026.
8. Jingfeng Tang, Peng Cao, Guangqi Wen, Jinzhu Yang,Xiaoli Liu, Osmar R. Zaiane, **Learning the Hierarchical Organization in Brain Network for Brain Disorder Diagnosis**, 29th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Strasbourg, France, September 27-October 1, 2026.
9. Zhuolin Jia, Guangqi Wen, Lingwen Liu, Peng Cao, Osmar Zaiane, Jinzhu Yang, **MEGSA: Adaptive Motif-Level Structural Alignment for Graph Similarity Learning**, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases - ECML PKDD, Naples, Italy, September 7-11, 2026
10. Yoshihiro Mitsuka, Shadan Golestan, Zahin Sufiyan, Shotaro Miwa, Osmar Zaiane, **TLXML: Task-Level Explanation of Meta-Learning via Influence Functions**, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases - ECML PKDD, Naples, Italy, September 7-11, 2026

11. Kartik Vishal Deshpande, Osmar R Zaiane, Dheeraj Kumar, **Finding Prominent Clusters using VAT Algorithms**, 28th International Conference on Big Data Analytics and Knowledge Discovery (DAWAK), Graz, Austria, 11-13 August 2026.
12. Mahvash Siavashpour, Erin McCabe, Andrew Nataraj, Niketh Pareek, Osmar R. Zaiane, Douglas Gross, **Can LLMs Mimic Experienced Neurosurgeons in Real-World Spine Surgery Triage?**, 24th International Conference on AI in Medicine, Ottawa, Canada, July 7-10, 2026
13. Moriom Chowdhury Kumu, Iain Smith, Osmar R. Zaiane, **BARBiE: An Associative Rule-Based Interactive Framework for Explaining Black-Box Model**, 39th Canadian Conference on Artificial Intelligence, Vancouver, Canada, 25-29 May 2026
14. Iain Smith, Osmar R. Zaiane, **Enhancing Stability in Rule-Based Post-Hoc Explanations**, 39th Canadian Conference on Artificial Intelligence, Vancouver, Canada, 25-29 May 2026
15. Bruce Matichuk, Randy Goebel, Osmar R. Zaiane, **Toward Believable Health & Wellness Conversational Agents: A Post-LLM Turing-like Evaluation Framework**, 39th Canadian Conference on Artificial Intelligence, Vancouver, Canada, 25-29 May 2026
16. Zhenguang Wang, Bo Li, Wenhui Tan, Peng Cao, Yang Wang, Jia Duan, Fei Wang, Osmar Zaiane, **Rethinking Depression Prediction from a Fine-Grained Subscore Modeling Perspective via Multi-Task Learning**, 64th Annual Meeting of the Association for Computational Linguistics (ACL), San Diego, USA, July 2–7, 2026
17. Chenyang Huang, Osmar R. Zaiane, **Dive into the Decoding Space of Non-Autoregressive Models via Lexically Constrained Search**, 64th Annual Meeting of the Association for Computational Linguistics (ACL), San Diego, USA, July 2–7, 2026
18. Zhiqiang Shen, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, Zhaolin Chen, Style Content Decomposition-based Data Augmentation for Domain Generalizable Medical Image Segmentation, Medical Imaging with Deep Learning, Taipei, 08—10 July 2026.

**2025**

19. Hadi Sheikhi, Chenyang Huang, Osmar R. Zaiane, **Improving LLM's Attachment to External Knowledge In Dialogue Generation Tasks Through Entity Anonymization**, International Joint Conference on natural language Processing & Asia-Pacific Chapter of the Association for Computational Linguistics, 20-24 December 2025, Mumbai, India.
20. Yashar Talebirad, Amirhossein Nadiri, Osmar R. Zaiane, Christine Largeron, **Enhancing Algorithms with LLMs: A Case Study**, 27th International Conference on Information Integration and Web Intelligence, 8-10 December 2025, Matsue, Japan.
21. Zhihao Wang, Wenju Yang, Peng Cao, Fei Wang, Osmar R. Zaiane, **Interpretable Modeling of Multi-Scale Temporal Patterns in Depressive Speech**, 32nd International Conference on Neural Information Processing (ICONIP), 20-24 November 2025, Okinawa, Japan.
22. Xi Chen, Zhiqiang Shen, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, **ConStyX: Content Style Augmentation for Generalizable Medical Image Segmentation**, 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 23-27 September 2025, Daejeon, Korea.
23. Liuzeng Zhang, Lanting Li, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, **BrainPrompt: Domain Adaptation with Prompt Learning for Multi-site Brain Network Analysis**, 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 23-27 September 2025, Daejeon, Korea.

24. Yuqing Li, Qingshan Hou, Peng Cao, Jianguo Ju, Tianqi Wang, Meng Wang, Ke Zou, Yih Chung Tham, Huazhu Fu, Osmar R. Zaiane, **RIFNet: Bridging Modalities for Accurate and Detailed Ocular Disease Analysis**, 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 23-27 September 2025, Daejeon, Korea.
25. Xinzhe Zhang, Junjie Liang, Peng Cao, Jinzhu Yang, Osmar R. Zaiane, **Structure-aware MRI Translation: Multi-Modal Latent Diffusion Model with Arbitrary Missing Modalities**, 28th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 23-27 September 2025, Daejeon, Korea.
26. Sheila Schoepp, Masoud Jafaripour, Yingyue Cao, Tianpei Yang, Fatemeh Abdollahi, Shadan Golestan, Zahin Sufiyan, Osmar R. Zaiane, and Matthew E. Taylor, **The Evolving Landscape of LLM- and VLM-Integrated Reinforcement Learning**, International Joint Conference on Artificial Intelligence (IJCAI), Montreal, Canada, August 16-22, 2025
27. Iain N. Smith, Osmar R. Zaiane, **Faithful Perturbations and Evaluations for Post-Hoc Local Explanation Methods**, 38th Canadian AI conference, Calgary, May 26-29, 2025
28. Varshini Prakash, Mohamad Ali Gharaat, Alex Lambe Foster, Dylan Merrick, Emilie Desnoyers, Jasmine M. Noble, Ken Porter, Andrew J. Greenshaw, Osmar R. Zaiane, **Mental Health Resource Retrieval using Semantic Similarity and Knowledge Graphs**, 10th International Conference on Digital Economy (ICDEc), Tunis, May 15-17, 2025
29. Mahvash Siavashpour, Osmar R. Zaiane, **A Multimodal Deep Learning Ensemble Framework for Building a Radiology Triage System**, MedInfo - 20th World Congress on Medical and Health Informatics, Taipei, August 9-13, 2025
30. Ali Rafiei, Osmar R. Zaiane, **Sharper Detection: Enhanced Techniques for Diabetic Retinopathy Grading**, MedInfo - 20th World Congress on Medical and Health Informatics, Taipei, August 9-13, 2025
31. Lingwen Liu, Peng Cao, Guangqi Wen, Zhuolin Jia, Jinzhu Yang, Weiping Li, Osmar R. Zaiane, **Structure-aware Self-supervised Graph Representation Learning**, The 30th International Conference on Database Systems for Advanced Applications (DASFAA), May 26-29, 2025, Singapore
32. Mahvash Siavashpour, Erin McCabe, Andrew Nataraj, Niketh Pareek, Osmar R. Zaiane, Douglas Gross, **Developing a triage model for surgical referral from primary care based on spinal radiology reports using natural language processing (NLP) and large language models (LLMs)**, 19th International Forum for Back and Neck Pain Research in Primary Care, Davos, Switzerland, 24-27 June 2025

**2024**

33. Chenyang Huang, Hao Zhou, Cameron Jen, Kangjie Zheng, Osmar R. Zaiane, Lili Mou, **A Decoding Algorithm Based on Directed Acyclic Transformers for Length-Control Summarization**, EMNLP Findings, Conference on Empirical Methods in Natural Language Processing, Miami, USA, Nov 12-16, 2024
34. Chunzhen Jin, Eliot Huang, Heng Chang, Yaqi Wang, Peng Cao, Osmar Zaiane, **Reusing Transferable Weight Increments for Low-resource Style Generation**, Conference on Empirical Methods in Natural Language Processing (EMNLP), Miami, USA, Nov 12-16, 2024
35. Varshini Prakash, Alex Lambe Foster, Jasmine Noble, Osmar R. Zaiane. **Integrating Conversational Pathways with a Chatbot Builder Platform**, 26th International

Conference on Information Integration and Web Intelligence, 2-4 December 2024, Bratislava, Slovakia.

36. Wenju Yang, Yong Hao, Peng Cao, Osmar R. Zaiane, Leyang Li. **Optimizing Learnable Frequency-domain Filterbanks for Depression Detection via Speech Representation Disentanglement**, 31th International Conference on Neural Information Processing (ICONIP), 2-6 December 2024, Auckland, New Zealand.
37. Chunzhen Jin, Peng Cao, Osmar Zaiane. **Role-playing based on Large Language Models via Style Extraction**, 31th International Conference on Neural Information Processing (ICONIP), 2-6 December 2024, Auckland, New Zealand.
38. Chunzhen Jin, Yongfeng Huang, Yaqi Wang, Peng Cao and Osmar Zaiane. **SETTP: Style Extraction and Tunable Inference via Dual-level Transferable Prompt Learning**, 27th European Conference on Artifical Intelligence (ECAI), 19-24 October 2024, Santiago de Compostela, Spain.
39. Yaqi Wang, Qingshan Hou, Peng Cao, Linqi Lan, Jinzhu Yang, Xiaoli Liu and Osmar Zaiane. **Progressively Correcting Soft Labels via Teacher Team for Knowledge Distillation in Medical Image Segmentation**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
40. Yaqi Wang, Qingshan Hou, Peng Cao, Leqi Chen, Jinzhu Yang, Liu Xiaoli, Osmar Zaiane. **A Clinical-oriented Lightweight Network for High-resolution Medical Image Enhancement**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
41. Qingshan Hou, Shuai Cheng, Peng Cao, Jinzhu Yang, Xiaoli Liu, Yih Chung Tham, Osmar Zaiane. **A Clinical-oriented Multi-level Contrastive Learning Method for Disease Diagnosis in Low-quality Medical Images**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
42. Lanting Li, Liuzeng Zhang, Peng Cao, Jinzhu Yang, Fei Wang, Osmar Zaiane. **Exploring Spatio-Temporal Interpretable Dynamic Brain Function with Transformer for Brain Disorder Diagnosis**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
43. Junjie Liang, Peng Cao, wenju yang, Jinzhu Yang, Osmar Zaiane. **3D-SAutoMed: Automatic Segment Anything Model for 3D Medical Image Segmentation from Local-Global Perspective**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
44. Junming Su, Zhiqiang Shen, Peng Cao, Jinzhu Yang, Osmar R. Zaiane. **Self-Paced Sample Selection for Barely-Supervised Medical Image Segmentation**, 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 6-10 October 2024, Marrakesh, Morocco.
45. Chenyang Huang, Abbas Ghaddar, Ivan Kobyzev, Mehdi Rezagholizadeh, Osmar R. Zaiane, Boxing Chen, **OTTAWA: Optimal TransporT Adaptive Word Aligner for Hallucination and Omission Translation Errors Detection**, ACL Findings, The 62nd Annual Meeting of the Association for Computational Linguistics, Bangkok, Thailand, August 11-16, 2024
46. Zhiyong Jin, Guangqi Wen, Peng Cao, Lingwen Liu, Jinzhu Yang, Xinrong Zhu, Osmar R. Zaiane, Fei Wang, **Towards Disease-Aware Self-Supervised Dynamic Brain Network**

**Learning For Mental Diagnosis**, IEEE International Conference on Acoustics, Speech and Signal Processing, Seoul, Korea, 14-19 April 2024

47. Lingwen Liu, Guangqi Wen, Peng Cao, Jinzhu Yang, Weiping Li, Osmar R. Zaiane, **Capturing temporal node evolution via Self-supervised learning: A New Perspective on dynamic graph learning**, 17th International Conference on Web Search and Data Mining, Merida, Mexico, 4-8 March 2024

**2023**

48. Yashar Talebirad, Mohammadmahdi Zafarmand, Osmar Zaiane and Christine Largeron, **USIWO: A Local Community Search Algorithm for Uncertain Graphs**, IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM), Kusadasi, Turkey, 6-9 November 2023
49. Md Rayhan Kabir, Seeratpal Jaura and Osmar Zaiane, **CFAR++: Enhancing Rule Based Classifier**, International Symposium on Foundations and Applications of Big Data Analytics, in conjunction with The IEEE/ACM Int. Conf. on Advances in Social Network Analysis and Mining, Kusadasi, Turkey, 6-9 November 2023
50. Qingshan Hou, Peng Cao, Jiaqi Wang, Liu Xiaoli, jinzhu Yang, Osmar Zaiane, **A Reference-free Self-supervised Domain Adaptation Framework for Low-quality Fundus Image Enhancement**, ACM Multimedia, October 2023, Ottawa, Canada
51. Pengshuai Zhang, Guangqi Wen, Peng Cao, Jinzhu Yang, JinYu Zhang, Xizhe Zhang, Xinrong Zhu, Osmar Zaiane, Fei Wang, **BrainUSL: Unsupervised Graph Structure Learning for Functional Brain Network Analysis**, 26th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 8-12 October 2023, Vancouver, Canada
52. Shuai Cheng, Qingshan Hou, Peng Cao, Xiaoli Liu, Jinzhu Yang, Osmar Zaiane, **Lesion-aware Contrastive Learning for Diabetic Retinopathy Diagnosis**, 26th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 8-12 October 2023, Vancouver, Canada
53. Wei Liang, Kai Zhang, Peng Cao, Pengfei Zhao, Xiaoli Liu, Jinzhu Yang, Osmar R. Zaiane, **Modeling Alzheimer's Disease Progression from Multi-task and Self-supervised Learning Perspective with Brain Networks**, 26th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 8-12 October 2023, Vancouver, Canada
54. Ali Zamani, Matthew Reeson, Tyler Marshall, Mohamad Ali Gharaat, Alex Lambe Foster, Jasmine Noble, Osmar R. Zaiane, **Intent and Entity Detection with Data Augmentation for a Mental Health Virtual Assistant Chatbot**, 23rd ACM International Conference on Intelligent Virtual Agents, 19-22 September 2023, Würzburg, Germany
55. Guangqi Wen, Peng Cao, Zhiyong Jin, Jinyu Zhang, Ruoxian Song, Xiaoli Liu, Jinzhu Yang and Osmar R. Zaiane, **Towards time-variant-aware Link Prediction in Dynamic Graph through Self-supervised Learning**, 19th International Conference Advanced Data Mining and Applications (ADMA), 21-23 August 2023, Shenyang, China.
56. Kai Zhang, Wei Liang, Peng Cao, Jinzhu Yang, Weiping Li, Osmar Zaiane, **Label Correlation guided Feature Selection for Multi-label Learning**, 19th International Conference Advanced Data Mining and Applications (ADMA), 21-23 August 2023, Shenyang, China.
57. Wei Liang, Kai Zhang, Peng Cao, Xiaoli Liu, Jinzhu Yang, Osmar Zaiane, **csl-MTFL: Multi-task feature learning with joint correlation structure learning for Alzheimer's**

**disease cognitive performance prediction**, 19th International Conference Advanced Data Mining and Applications (ADMA), 21-23 August 2023, Shenyang, China.

58. Mohammad Motallebi, Md Tanvir Alam Anik, Osmar R. Zaiane, **Explaining Decisions of Black-box Models using BARBE**, 34th International Conference on Database and Expert Systems Applications (DEXA 2023), Penang, Malaysia, 28-30 August, 2023
59. Maliha Sultana, Osmar R. Zaiane, **Exploring Dialog Act Recognition in Open Domain Conversational Agents**, 25th International Conference on Big Data Analytics and Knowledge Discovery (DAWAK 2023), Penang, Malaysia, 28-30 August, 2023
60. Zhiqiang Shen, Peng Cao, Hua Yang, Xiaoli Liu, Jinzhu Yang, Osmar R. Zaiane, **Co-training with High-Confidence Pseudo Labels for Semi-supervised Medical Image Segmentation**, 32nd International Joint Conference on Artificial Intelligence (IJCAI), Macao, China, 19-25 August, 2023
61. Paritosh Goyal, Chenyang Huang, Amine Trabelsi and Osmar R. Zaiane, **Exploring Preferential Label Smoothing for Neural Network-based Classifiers**, 36th Canadian Conference on Artificial Intelligence, Montreal, Canada, June 5-9, 2023
62. Michael Strobl, Amine Trabelsi and Osmar R. Zaiane, **FREDA: Flexible Relation Extraction Data Annotation**, ACM Symposium on Applied Computing (Knowledge and Natural Language Processing track), Tallinn Estonia. March 27-31, 2023
63. Md Rayhan Kabir and Osmar R. Zaiane, **Classification by Frequent Association Rules**, ACM Symposium on Applied Computing (Data Mining track), Tallinn Estonia. March 27-31, 2023

**2022**

64. Abhishek Dhankar, An Bui Truong, Jeremy Costello, Manpreet Kaur, Osmar Zaiane, Francois Bolduc, **Automated Fact-Checking of Articles Related to Neurodevelopmental Disorders**, 15th IEEE International Conference on Social Computing and Networking, Melbourne, Australia, December 17-19, 2022
65. Eric Austin, Osmar R. Zaiane, Christine Largeron, **Hierarchical topic model inference by community discovery on word co-occurrence networks**, 20th Australian Data Mining Conference, Western Sydney, Australia, December 12-16, 2022
66. Md Rayhan Kabir and Osmar R Zaiane, **Dynamic Ensemble Associative Learning**, International Symposium on Foundations and Applications of Big Data Analytics, in conjunction with The IEEE/ACM Int. Conf. on Advances in Social Netweork Analysis and Mining, Istanbul, Turkey, 10-13 November 2022 [Best Paper Award]
67. Md Rayhan Kabir, Samridhi Vaid, Nitakshi Sood, and Osmar R. Zaiane, **Deep Associative Classifier**, International Conference on Knowledge Graph, Orlando, USA, November 30-December 1, 2022
68. Eric Austin, Osmar R. Zaiane, Christine Largeron, **Community Topic: Topic model inference by consecutive word community discovery**, 29th International Conference on Computational Linguistics (Coling), Gyeongju, Korea, October 12-17, 2022
69. Abhishek Nan, Anandh Perumal, Osmar R. Zaiane, **Sentiment and Knowledge Based Algorithmic Trading with Deep Reinforcement Learning**, 33rd International Conference on Database and Expert Systems Applications (DEXA), Vienna, Austria, August 22-24, 2022
70. Michael Strobl, Amine Trabelsi and Osmar R. Zaiane, **Named Entity Recognition for Partially Annotated Datasets**, 27th International Conference on Natural Language & Information Systems (NLDB), Valencia, Spain, June 15-17, 2022

71. Michael Strobl, Amine Trabelsi and Osmar R. Zaiane, **Enhanced Entity Annotations for Multilingual Corpora**, 13th Language Resources and Evaluation Conference (LREC), Marseille, France, June 21-23, 2022
72. Nouha Dziri, Sivan Milton, Mo Yu, Osmar Zaiane, Siva Reddy, **On the Origin of Hallucinations in Conversational Models: Is it the Datasets or the Models?**, Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), Seattle, USA, July 10-15, 2022
73. Chenyang Huang, Hao Zhou, Osmar R. Zaiane, Lili Mou, Li Lei, **Non-Autoregressive Translation with Layer-Wise Prediction and Deep Supervision**, Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI), Feb 22 - Mar 1, 2022, Vancouver, Canada.
74. Haonan Wang, Peng Cao, Jiaqi Wang, Osmar R. Zaiane, **UCTransNet: Rethinking the Skip Connections in U-Net from a Channel-wise Perspective with Transformer**, Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI), Feb 22 - Mar 1, 2022, Vancouver, Canada. (Acceptance rate 14.58%)

**2021**

75. Peng Cao, Guangqi Wen, Lanting Li, Xiaoli Liu, Osmar R. Zaiane, Jinzhu Yang, **Temporal Graph Representation Learning for Autism spectrum disorder Brain Networks**, IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2021), December 9-12, 2021 (Acceptance rate 39%)
76. Nawshad Farruque, Randy Goebel, Osmar Zaiane, Sudhakar Sivapalan, **Explainable Zero-shot Modeling of Clinical Depression Symptoms from Text**, 20th IEEE International Conference on Machine Learning and Applications, Pasadena, CA, USA, December 13-16, 2021.
77. Nouha Dziri, Andrea Madotto, Osmar R. Zaiane, Avishek Joey Bose, **Neural Path Hunter: Reducing Hallucination in Dialogue Systems via Path Grounding**, Conference on Empirical Methods in Natural Language Processing (EMNLP), Punta Cana, Dominican Republic, November 7-11, 2021.
78. Chengzhang Dong, Chenyang Huang, Osmar Zaiane, Lili Mou, **Simulated Annealing for Emotional Dialogue Systems**, 30th ACM International Conference on Information and Knowledge Management (CIKM), Gold Coast, Australia, November 1-5, 2021. (Acceptance rate 28%)
79. Abhishek Dhankar, Hamman Samuel, Fahim Hassan, Nawshad Farruque, Francois Bolduc and Osmar Zaiane, **Analysis of COVID-19 Misinformation in Social Media using Transfer Learning**, 33rd IEEE International Conference on Tools with Artificial Intelligence, November 1-3, 2021.
80. Mohomed Shazan Mohomed Jabbar, Luke Kumar, Hamman Samuel, Mi-Young Kim, Sankalp Prabhakar, Randy Goebel, Osmar R. Zaiane, **DeepDup: Cross-Domain Duplicate Question Detection in Community Question Answering**, 5th International Conference on Deep Learning Technologies, Qingdao, China, July 23-24, 2021.
81. Esha, Osmar R. Zaiane, **Pairing Tweets with the Right Location**, 6th International Conference on Digital Economy, Tallinn, Estonia, July 15-17, 2021.
82. Chenyang Huang, Amine Trabelsi, Xuebin Qin, Nawshad Farruque, Lili Mou, Osmar R. Zaiane**, Seq2Emo: A Sequence to Multi-Label Emotion Classification**, Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT), Mexico City, Mexico, (Online), 6-11 June, 2021.

83. Hamman Samuel, Osmar R. Zaiane, François Bolduc, **Evaluation of Applied Machine Learning for Health Misinformation Detection via Survey of Medical Professionals on Controversial Topics in Pediatrics**, 5th International Conference on Medical and Health Informatics, Kyoto, Japan, 14-16 May 2021.
84. Hamman Samuel, Fahim Hassan, Osmar R. Zaiane, **The Need for Medical Professionals to Join Patients in the Online Health Social Media Discourse**, 14th International Conference on Health Informatics, Vienna, Austria (Online), 11-13 February, 2021.

**2020**

85. Ruoxian Song, Peng Cao, Jinzhu Yang, Dazhe Zhao, Osmar R. Zaiane, **A Domain Adaptation Multi-instance Learning for Diabetic Retinopathy Grading on Retinal Images**, IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM), Seoul, South Korea (Virtual), 16-19 December 2020. (Acceptance rate 19.4%) doi:10.1109/BIBM49941.2020.9313398
86. Michael Strobl, Joerg Sander, Ricardo Campello, Osmar R. Zaiane, **Model-based Clustering with HDBSCAN***, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), Ghent, Belgium, 14-18 September, 2020. (Acceptance rate 19%)
87. Nitakshi Sood, Osmar Zaiane, **Building a Competitive Associative Classifier**, 22nd International Conference on Big Data Analytics and Knowledge Discovery (DAWAK), Bratislava, Slovakia, 14-17 September 2020. https://doi.org/10.1007/978-3-030-59065-9_18
88. Nitakshi Sood, Leepakshi Bindra, Osmar R. Zaiane, **Bi-Level Associative Classifier using Automatic Learning on Rules**, 31st International Conference on Database and Expert Systems Applications (DEXA), Bratislava, Slovakia, 14-17 September 2020. (Acceptance rate 20%) https://doi.org/10.1007/978-3-030-59003-1_14
89. Michael Strobl, Amine Trabelsi, and Osmar Zaïane, **WEXEA: Wikipedia EXhaustive Entity Annotation**, 12th International Conference on Language Resources and Evaluation, Marseilles, France, 11-16 May 2020
90. Chang Liu, Christine Largeron, Osmar Zaïane, Shiva Zamani Gharaghooshi, **A Late-fusion Approach to Community Detection in Attributed Networks**, Symposium on Intelligent Data Analysis, (IDA'20), Lake Constance, Germany, 27-29 April 2020
91. Shiva Zamani Gharaghooshi, Osmar Zaïane, Christine Largeron, Mohammadmahdi Zafarmand, Chang Liu, **Addressing the Resolution Limit and the Field of View Limit in Community Mining**, Symposium on Intelligent Data Analysis, (IDA'20), Lake Constance, Germany, 27-29 April 2020. https://doi.org/10.1007/978-3-030-44584-3_17

**2019**

92. Peng Cao, Shanshan Tang, Min Huang, Jinzhu Yang, Danzhe Zhao, Amine Trabelsi, and Osmar R. Zaïane, **Feature-aware Multi-task Feature Learning for Predicting Cognitive Outcomes in Alzheimer's Disease**, IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM), San Diego, USA, 18-21 November 2019 (36% = 198/543 acceptance rate)
93. Reza Sobhannejad, Liam Rourke, and Osmar R. Zaïane, **Evaluating Image Training Systems for Medical Students**, International Conference on Web-based Learning, pp. 323-326, Magdeburg, Germany, 23-25 September 2019
94. Samuel Bushi and Osmar R. Zaïane, **APNEA: Intelligent Ad-Bidding Using Sentiment Analysis**, IEEE/WIC/ACM International Conference on Web Intelligence, pp.76-83, Thessaloniki, Greece, 14-17 October 2019 (18.4% acceptance rate)

95. Mansour Saffar Mehrjardi, Amine Trabelsi, and Osmar R. Zaïane, **Self-attentional Models Application in Task-oriented Dialogue Generation Systems**, Recent Advances in Natural Language Processing, pp. 1031-1040, Varna, Bulgaria, 2-4 September 2019
96. Nawshad Farruque, Osmar R. Zaïane, and Randy Goebel, **Augmenting semantic representation of depressive language: From forums to microblogs**, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), Würzburg, Germany, 16-20 September 2019 (17.7% = 130/734 acceptance rate)
97. Mohammad Riazi, Osmar R. Zaïane, Tomoharu Takeuchi, Johannes Gunther, and Micheal Lipsett, **Detecting the Onset of Machine Failure Using Anomaly Detection Methods**, 21st International Conference on Big Data Analytics and Knowledge Discovery (DAWAK), pp. 3-12, Linz, Austria, 26-29 August 2019
98. Chenyang Huang, Amine Trabelsi, and Osmar R. Zaïane, **ANA at SemEval-2019 Task 3: Contextual Emotion Detection in Conversations through Hierarchical LSTMs and BERT**, SemEval 2019 at the Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT), Minneapolis, USA, 2-7 June 2019
99. Amine Trabelsi and Osmar R. Zaïane, **Unsupervised Phrase Topic Viewpoint Framework for Contrastive Reasons Summarization from Online Debate**, International AAAI Conference on Web and Social Media (ICWSM 2019), Munich, Germany, 11-14 June 2019
100. Amine Trabelsi and Osmar R. Zaïane, **Contrastive Reasons Detection and Clustering from Online Polarized Debates**, 20th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing), La Rochelle, France, 7-13 April 2019
101. Nawshad Farruque, Chenyang Huang, Osmar R. Zaïane, and Randy Goebel, **Basic and depression specific emotion identification in Tweets: Multi-label classification experiments**, 20th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing), La Rochelle, France, 7-13 April 2019
102. Nouha Dziri, Ehsan Kamalloo, Kory Mathewson, and Osmar R. Zaïane, **Evaluating Coherence in Dialogue Systems Using Entailment**, NAACL Annual Conference of the North American Chapter of the Association for Computational Linguistics, pp. 3806-3812, Minneapolis, USA, 2-7 June 2019
103. Chi Zhang and Osmar R. Zaïane, **Neighbor-based Link Prediction with Edge Uncertainty**, 23rd Pacific-Asia Conference on Knowledge Discovery and Data Mining, Macau, China, 14 & 17 April 2019

**2018**

104. Hamman Samuel, Benyamin Noori, Sara Farazi, and Osmar R. Zaïane, **Context Prediction in the Social Web using Applied Machine Learning: A Study of Canadian Tweeters**, IEEE/WIC/ACM International Conference on Web Intelligence, pp. 230-237, Santiago, Chili, 3 & 6 December 2018
105. Chenyang Huang and Osmar R. Zaïane, **Generating Responses Expressing Emotion in an Open-domain Dialogue System**, CONVERSATIONS: 2nd International Workshop on Chatbot Research, in conjunction with the International Conference on Internet Science, pp. 100-112, St. Petersburg, Russia, 26 October 2018
106. Shiven Sharma, Colin Bellinger, Bartosz Krawczyk, Nathalie Japkowicz, and Osmar R. Zaïane, **Synthetic oversampling with the majority class: A new perspective on handling**

**extreme imbalance**, IEEE International Conference on Data Mining (ICDM), pp. 447-456, Singapore, 17-20 November 2018

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219. M. El-Hajj and O.R. Zaïane, **Mining with Constraints by Pruning and Avoiding Ineffectual Processing**, The 18th Australian Joint Conference on Artificial Intelligence, pp. 1001-1004, Sydney, Australia, 5-9 December 2005
220. O.R. Zaïane and M-L. Antonie, **On Pruning and Tuning Rules for Associative Classifiers**, 9th International Conference on Knowledge-Based Intelligence Information & Engineering Systems, LNCS 3683, pp. 966-973, Melbourne, Australia, September 2005
221. M. El-Hajj and O.R. Zaïane, **Finding All Frequent Patterns Starting From the Closure**, International Conference on Advanced Data Mining and Applications (ADMA), pp. 67-74, Wuhan, China, 22-24 July 2005
222. R. Rak, W. Stach, O.R. Zaïane, and M-L. Antonie, **Considering Re-occurring Features in Associative Classifiers**, 9th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp. 240-248, Hanoi, Vietnam, May 2005
223. M. El-Hajj and O.R. Zaïane, **On Frequent Itemset Mining with Closure**, International Conference on Information Technology, pp. 21-30, Amman, Jordan, May 2005

**2004**

224. M-L. Antonie and O.R. Zaïane, **Mining Positive and Negative Association Rules: An Approach for Confined Rules**, 8th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), pp. 27-38, Pisa, Italy, 20-24 September 2004

225. J. Li and O.R. Zaïane, **Combining Usage, Content, and Structure Data to Improve Web Site Recommendation**, 5th International Conference on Electronic Commerce and Web Technologies (EC-Web), pp. 305-315, Zaragoza, Spain, 30 August – 3 September 2004
226. S.R Oliveira, O.R. Zaïane, and Y. Saygin, **Secure Association Rule Sharing**, 8th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'04), pp. 74-85, Sydney, Australia, 26-28 May 2004

**2003**

227. S.R. Oliveira and O.R. Zaïane, **Protecting Sensitive Knowledge By Data Sanitization**, 3rd IEEE International Conference on Data Mining (ICDM'03), pp. 613-616, Melbourne, USA, 19-22 November 2003
228. M. El-Hajj and O.R. Zaïane, **Inverted Matrix: Efficient Discovery of Frequent Items in Large Datasets in the Context of Interactive Mining**, International Conference on Data Mining and Knowledge Discovery (ACM SIGKDD), pp. 109-118, Washington, USA, 24-27 August 2003
229. S.R. Oliveira and O.R. Zaïane, **Privacy Preserving Clustering By Data Transformation**, 18th Brazilian Symposium on Databases (SBBD), pp. 304-318, Manaus, Brazil, 6-8 October 2003
230. M. El-Hajj and O.R. Zaïane, **Non-Recursive Generation of Frequent K-itemsets from Frequent Pattern Tree Representations**, 5th International Conference on Data Warehousing and Knowledge Discovery (DaWak), pp. 371-380, Prague, Czech Republic, 3-5 September 2003
231. S.R Oliveira, and O.R. Zaïane, **Algorithms for Balancing Privacy and Knowledge Discovery in Association Rule Mining**, International Database Engineering and Applications Symposium, pp. 54-63, Hong Kong, China, 16-18 July 2003
232. W. Cheung and O.R. Zaïane, **Incremental Mining of Frequent Patterns Without Candidate Generation or Support Constraint**, International Database Engineering and Applications Symposium (IDEAS 2003), pp. 111-116, Hong Kong, China, July 16-18 2003
233. Y. Zhang, M.A. Nascimento, and O.R. Zaïane, **Building Image Mosaics: An Application of Content-based Image Retrieval**, IEEE International Conference on Multimedia and Expo, Baltimore, USA, 6-9 July 2003

**2002**

234. M-L. Antonie and O.R. Zaïane, **Text Document Categorization by Term Association**, IEEE International Conference on Data Mining (ICDM), pp. 19-26, Maebashi City, Japan, 9-12 December 2002
235. A. Foss and O.R. Zaïane, **A Parameterless Method for Efficiently Discovering Clusters of Arbitrary Shape in Large Datasets**, IEEE International Conference on Data Mining (ICDM), pp. 179-186, Maebashi City, Japan, 9-12 December 2002
236. O.R. Zaïane and C-H. Lee, **Clustering Spatial Data When Facing Physical Constraints**, IEEE International Conference on Data Mining (ICDM), pp. 737-740, Maebashi City, Japan, 9-12 December 2002
237. O.R. Zaïane, **Building a Recommender Agent for e-Learning Systems**, International Conference on Computers in Education, pp. 55-59, Auckland, New Zealand, December 2002
238. O.R. Zaïane and C-H. Lee, **Clustering Spatial Data in the Presence of Obstacles: A Density-Based Approach**, International Database Engineering and Applications Symposium, pp. 214-223, Edmonton, Canada, 17-19 July 2002
239. C-H. Lee and O.R. Zaïane, **Density-based clustering of spatial data in the presence of physical obstacles**, The World Congress of Korean and Korean-Ethnic Scientists and Engineers, session on Information & Communication Technology, Seoul, Korea, 8-13 July 2002

240. O.R. Zaïane, and M-L. Antonie, **Classifying text documents by associating terms with text categories**, 13th Australasian Database Conference, pp. 215-222, Melbourne, Australia, 28 January – 1 February 2002

**2001**

241. O.R. Zaïane, M. El-Hajj, and P. Lu, **Fast Parallel Association Rule Mining Without Candidacy Generation**, IEEE International Conference on Data Mining (ICDM), pp. 665-668, San Jose, USA, 29 November – 2 December 2001
242. A. Ammoura, O.R. Zaïane, and R. Goebel, **Towards a Novel OLAP Interface for Distributed Data Warehouses**, 3rd International Conference on Data Warehousing and Knowledge Discovery (DaWak), pp. 174-185, Munich, Germany, 5-7 September 2001
243. O.R. Zaïane and J. Luo, **Towards Evaluating Learners' Behaviour in a Web-based Distance Learning Environment**, IEEE International Conference on Advanced Learning Technologies (ICALT), pp. 357-360, Madison, USA, 6-8 August 2001
244. A. Ammoura, O.R. Zaïane, and Y. Ji, **Immersed Visual Data Mining: Walking The Walk**, 18th British National Conference on Databases (BNCOD), LNCS 2097, pp. 202-218, Oxford, UK, 9-11 July 2001
245. O.R. Zaïane, **Web Usage Mining for a Better Web-Based Learning Environment**, Conference on Advanced Technology for Education, pp. 60-64, Banff, Alberta, 27-28 June 2001

**2000**

246. O.R. Zaïane, J. Han, and H. Zhu, **Mining Recurrent Items in Multimedia with Progressive Resolution Refinement**, IEEE International Conference on Data Engineering (ICDE), pp. 461-470, San Diego, USA, February 2000
247. O.R. Zaïane and J. Han, **Finding Spatial Associations in Images**, Data Mining and Knowledge Discovery: Theory, Tools, and Technology II, SPIE 14th International Symposium on Aerospace/Defense Sensing, Simulation and Controls, pp. 138-147, Orlando, USA, April 2000

**1998**

248. O.R. Zaïane, J. Han, Z.N. Li, S.H. Chee, and J.Y. Chiang, **MultimediaMiner: A System Prototype for Multimedia Data Mining**, International Conference on Management of Data (ACM-SIGMOD), pp. 581-583, Seattle, June 1998
249. O.R. Zaïane, M. Xin, and J. Han, **Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs**, Advances in Digital Libraries, pp. 19-29, Santa Barbara, April 1998
250. O.R. Zaïane, J. Han, Z-N. Li, and J. Hou, **Mining Multimedia Data**, CASCON: Meeting of Minds, pp. 83-96, Toronto, Canada, November 1998

**1997**

251. J. Han, J. Chiang, S. Chee, J. Chen, Q. Chen, S. Cheng, W. Gong, M. Kamber, K. Koperski, G. Liu, Y. Lu, N. Stefanovic, L. Winstone, B. Xia, O.R. Zaïane, S. Zhang, and H. Zhu, **DBMiner: A System for Data Mining in Relational Databases and Data Warehouses**, CASCON: Meeting of Minds, pp. 249-260, Toronto, Canada, November 1997
252. O.R. Zaïane, A. Fall, S. Rochefort, V. Dahl, P. Tarau, **On-Line Resource Discovery Using Natural Language**, Conference on Computer-Assisted Searching on the Internet, pp. 336-355, Montreal, Canada, 25-27 June 1997

**1996**

253. J. Han, Y. Fu, W. Wang, J. Chiang, W. Gong, K. Koperski, D. Li, Y. Lu, A. Rajan, N. S., B. Xia, and O.R. Zaïane, **DBMiner: A System for Mining Knowledge in Large Relational Databases**,

International Conference on Data Mining and Knowledge Discovery (ACM SIGKDD), pp. 250-255, Portland, USA, August 1996

254. J. Han, Y. Fu, W. Wang, J. Chiang, O.R. Zaïane, and K. Koperski, **DBMiner: Interactive Mining of Multiple-Level Knowledge in Relational Databases**, International Conference on Management of Data (ACM-SIGMOD'96), pp. 550, Montreal, Canada, June 1996

**1995**

255. O.R. Zaïane and J. Han, **Resource and Knowledge Discovery in Global Information Systems: A Preliminary Design and Experiment**, 1st International Conference on Knowledge Discovery in Databases, pp. 331-336, Montreal, Canada, August 1995
256. J. Han, O.R. Zaïane, and Y. Fu, **Resource and Knowledge Discovery in Global Information Systems: A Scalable Multiple Layered Database Approach**, Conference on Advances in Digital Libraries, Washington, USA, May 1995

**1992 and before**

257. A. Gamache and R.O. Zaïane, **Integration of a smartcard in a distributed medical record system**, IFIP WG8.4 Conference, Ottawa, Canada, June 1992
258. A. Gamache and R.O. Zaïane, **La technologie de la carte à puce et la sécurité**, conference du CRISP, R.A.M.Q., Québec, January 1992
259. A. Gamache, P. Ardouin, and R.O. Zaïane, et al., **Design constraints and implementation of a PMR smartcard based software**, ACT-91 Conference, Toronto, Canada, November 1991

## 4.3 Publications in Refereed International Workshops

Citations are based on Google Scholar (December 2024) (When available, acceptance rates are provided)

### 4.3.1 Workshop publications with 40 or more citations:

260. Nouha Dziri, Ehsan Kamalloo, Kory Mathewson, and Osmar R. Zaïane, **Augmenting Neural Response with Context-aware Topical Attention**, First Workshop on NLP for Conversational AI, pp 18-31, in conjunction with the 57th Annual Meeting of the Association for Computational Linguistics (ACL), 2019, (**94** citations)
261. R. Rabbany-Khorasgani, J. Chen, and Osmar R. Zaïane, **Top Leaders Community Detection Approach in Information Networks**, 4th SNA-KDD Workshop on Social Network Mining and Analysis Washington, USA, 25 July 2010 (**157** citations)
262. O.R. Zaïane, J. Chen, and R. Goebel, **DBConnect: Mining Research Community on DBLP Data**, Web Mining and Social Network Analysis Workshop in conjunction with ACM SIGKDD conference, pp. 74-81, San Jose, USA, 12 August 2007 (**79** citations) (50% acceptance rate)
263. J. Kay, N. Maisonneuve, K. Yacef, and O.R. Zaïane, **Mining Patterns of Events in Students' Teamwork Data**, Educational Data Mining Workshop, held in conjunction with Intelligent Tutoring Systems (ITS), Taiwan, 26 June 2006 (**123** citations)
264. M-L. Antonie and O.R. Zaïane, **An Associative Classifier Based on Positive and Negative Rules**, 9th ACM SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery (DMKD), pp. 64-69, Paris, France, June 2004 (**162** citations) (32% = 11/34 acceptance rate)
265. S.R. Oliveira and O.R. Zaïane, **Achieving Privacy Preservation When Sharing Data For Clustering**, Workshop on Secure Data Management in a Connected World in conjunction with VLDB, LNCS 3178, pp. 67-82, Toronto, Canada, 30 August 2004 (**222** citations)

266. S.R Oliveira and O.R. Zaïane, **Privacy-Preserving Clustering by Object Similarity-Based Representation and Dimensionality Reduction Transformation**, Workshop on Privacy and Security Aspects of Data Mining, in conjunction with the 4th IEEE International Conference on Data Mining (ICDM), pp. 21-30, Brighton, UK, 1 November 2004 (**77** citations)
267. S.R. Oliveira and O.R. Zaïane, **Toward Standardization in Privacy-Preserving Data Mining**, ACM SIGKDD 3rd Workshop on Data Mining Standards (DM-SSP), pp. 7-17, Seattle, USA, 22 August 2004 (**83** citations)
268. J. Chen, L. Sun, O.R. Zaïane, and R. Goebel, **Visualizing and Discovering Web Navigational Patterns**, 7th ACM SIGMOD International Workshop on the Web and Databases (WebDB), pp. 13-18, Paris, France, 17-18 June 2004 (**50** citations) (26%=16/61 acceptance rate)
269. M-L. Antonie, O.R. Zaïane, and A. Coman, **Associative Classifiers for Medical Images**, Mining Multimedia and Complex Data, KDD Workshop MDM/KDD, LNCS 2797, pp. 68-83, 2003 (**105** citations)
270. M. El-Hajj and O.R. Zaïane, **COFI-tree Mining: A New Approach to Pattern Growth with Reduced Candidacy Generation**, in Workshop on Frequent Itemset Mining Implementations (FIMI'03) in conjunction with IEEE-ICDM, Melbourne, USA, 19 November 2003 (**73** citations)
271. S.R Oliveira and O.R. Zaïane, **Privacy preserving frequent itemset mining**, Workshop on Privacy, Security, and Data Mining, in conjunction with the IEEE International Conference on Data Mining, pp. 43-54, Maebashi City, Japan, 9 December 2002 (**461** citations)
272. O.R. Zaïane and A. Strilets, **Finding Similar Queries to Satisfy Searches Based on Query Traces**, International Workshop on Efficient Web-Based Information Systems, LNCS 2426, pp. 207-216, Montpellier, France, September 2002. (**79** citations)
273. W. Wang and O.R. Zaïane, **Clustering Web Sessions by Sequence Alignment**, 13th International Workshop on Database and Expert Systems Applications (DEXA), pp. 394-398, Aix en Provence, France, 2-7 September 2002 (**173** citations) (34% = 8/23 acceptance rate)
274. O.R. Zaïane, M-L. Antonie, and A. Coman, **Mammography Classification by an Association Rule-Based Classifier**, 3rd ACM SIGKDD International Workshop on Multimedia Data Mining (MDM/KDD), in conjunction with the 8th ACM SIGKDD, pp. 62-69, Edmonton, Canada, 17-19 July 2002 (**197** citations)
275. M-L. Antonie, O.R. Zaïane, and A. Coman, **Application of Data Mining Techniques for Medical Image Classification**, 2nd International Workshop on Multimedia Data Mining (MDM/KDD) in conjunction with the 7th ACM SIGKDD, pp. 94-101, San Francisco, USA, 26 August 2001 (**511** citations) (50% = 12/24 acceptance rate)
276. A. Foss, W. Wang, and O.R. Zaïane, **A Non-Parametric Approach to Web Log Analysis**, Workshop on Web Mining in First International SIAM Conference on Data Mining (SDM), pp. 41-50, Chicago, USA, 5-7 April 2001 (**73** citations) (50% acceptance rate)
277. O.R. Zaïane and J. Han, **WebML: Querying the World-Wide Web for Resources and Knowledge**, ACM-CIKM Workshop on Web Information and Data Management (WIDM), pp. 9-12, Washington USA, November 1998 (**60** citations)
278. J. Han, Y. Fu, K. Koperski, W. Wang, and O.R. Zaïane, **DMQL: A Data Mining Query Language for Relational Databases**, SIGMOD Workshop on Research Issues on Data Mining and Knowledge Discovery (DMKD), pp. 27-34, Montreal, Canada, June 1996 (**472** citations)

**4.3.2 Other workshop and abstracts or poster publications:**

**2026**

1. Yongbin Kim, Yashar Talebirad, Osmar R. Zaiane, **Why Solve It Twice? Hierarchical Accumulation of Skills for Transfer-Efficient ML Engineering**, Deep Learning for Code (DL4C) Workshop at ICML 2026, Forty-Third International Conference on Machine Learning, Seoul, South Korea, July 6-11, 2026
2. Yashar Talebirad, Osman Jime, Ali Parsaee, Eden Redman, Yongbin Kim, Osmar R. Zaiane, **Toward Personal Intelligence Through Cooperative Observation**, Personal Intelligence in the Agentic AI Era, Workshop in conjunction with ACM SIGKDD, Jeju, Korea, August 9-13, 2026
3. Yashar Talebirad, Ali Parsaee, Csongor Y. Szepesvari, Amirhossein Nadiri, Osmar Zaiane, **Toward a Theory of Hierarchical Memory for Language Agents**, ICLR 2026 MemAgents Workshop, Rio de Janeiro, April 27, 2026.
4. Yoshihiro Mitsuka, Shadan Golestan, Zahin Sufiyan, Shotaro Miwa, Osmar R. Zaiane, **A Task-Level Explanation Framework for Meta-Learning Algorithms**, Deployable AI workshop at AAAI, 26-27 January 2026, Singapore.

**2025**

5. Masoud Jafaripour, Shadan Golestan-Irani, Yoshihiro Mitsuka, Shotaro Miwa, Osmar R. Zaiane, **Adaptive Iterative Feedback Prompting for Obstacle-Aware Path Planning via LLMs**, Workshop on Planning in the Era of LLMs (LM4Plan) in conjunction with AAAI, 3 March 2025, Philadelphia, Pennsylvania, USA.

**2022**

6. Nawshad Farruque, Osmar R. Zaiane, Randy Goebel, Sudhakar Sivapalan, **DeepBlues@LT-EDI-ACL2022: Depression level detection modelling through domain specific BERT and short text Depression classifiers**, The Second Workshop on Language Technology for Equality, Diversity and Inclusion (LT-EDI-2022) in conjunction with ACL 2022 (Association for Computational Linguistics annual conference), Dublin, May 22-27, 2022
7. Abhishek Dhankar, Osmar Zaiane, Francois Bolduc, **UofA-Truth at Factify 2022 : Transformer And Transfer Learning Based Multi-Modal Fact-Checking**, De-Factify - First Workshop on Multimodal Fact-Checking and Hate Speech Detection, in conjunction with Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI-22) on February 22, 2022

**2020**

8. Lanting Li, Peng Cao, Jinzhu Yang, Dazhe Zhao, Osmar R. Zaiane, **A robust fuzzy clustering algorithm using spatial information combined with local membership filtering for brain MR images**, International Workshop on Biomedical and Health Informatics, December 16-19, 2020
9. Anandh Perumal, Chenyang Huang, Amine Trabelsi, Osmar R. Zaiane, **ANA at SemEval-2020 Task 4: mUlti-task learNIng for cOmmonsense reasoNing (UNION)** , International Workshop on Semantic Evaluation (SemEval-2020) collocated with The 28th International Conference on Computational Lingustics, Barcelona, Spain, December 12-13, 2020

**2019**

10. Peng Cao, Zeyu Teng, Min Huang, Jinzhu Yang, Dazhe Zhao, Amine Trabelsi, and Osmar R. Zaïane, **An ensemble framework with l21-norm regularized hypergraph laplacian multi-label learning for clinical data prediction**, 10th International Workshop on Biomedical and Health Informatics, in conjunction with IEEE BIBM, San Diego, USA, 18-21 November 2019

11. Khanh Vu, Graham Erickson, Colin Bellinger, Rebecca A. Clark, Alvaro Osornio-Vargas, Osmar R. Zaïane, and Yan Yuan, **Combined Effect of Industrial Airborne Pollutants on Birth Outcomes in Alberta**, International Conference on Applied Mathematics, Modelling and Computational Science, pp. 366, Waterloo, Canada, 18-23 August 2019
12. Doug Gross, Ivan Steenstra, William Shaw, Parnian Yousefi, Colin Bellinger, and Osmar R. Zaïane, **Validation of the Work Assessment Triage Tool for Selecting Rehabilitation Interventions for Injured Workers**, Work Disability Prevention and Integration Conference, Odense, Denmark, 4 & 7 June 2019

**2018**

13. Doug Gross, Ivan A. Steenstra, W.S. Shaw, Parnian Yousefi, Colin Bellinger, and Osmar R. Zaïane, **Validation of the Work Assessment Triage Tool for Selecting Rehabilitation Interventions for Injured Workers**, The Society for Back Pain Research annual conference (CBPR 2018), Groningen, The Netherlands, 15-16 November 2018
14. Charlene Nielsen, Jesus Serrano-Lomelin, M. Shazan M. Jabbar, Osnat Wine, Osmar R. Zaïane, and Alvaro Osornio-Vargas, **An integrative and collaborative approach to associating adverse birth outcomes and industrial air pollution**, (Abstract), Canadian National Perinatal Research Meeting, Banff, 14-17 February 2018
15. Charlene Nielsen, Carl Amrhein, Jesus Serrano-Lomelin, Osmar R. Zaïane, and Alvaro Osornio-Vargas, **Subnormal birthweight and industrial air pollutants – a comparison of spatial-temporal hot spot patterns**, (Poster), Canadian National Perinatal Research Meeting, Banff, Canada, 14-17 February 2018
16. Colin Bellinger, Shazan M Mohomed Jabbar, Saeed Hojjati, Osmar R. Zaïane, and Alvaro Osornio-Vargas, **VizAR: A Software Tool for Epideiological Hypothesis Generation with Geo-Spatial Data Mining**, (Poster), Canadian National Perinatal Research Meeting, Banff, Canada, 14-17 February 2018

**2017**

17. Colin Bellinger, Shiven Sharma, Osmar R. Zaïane, and Nathalie Japkowicz, **Sampling a Longer Life: Binary versus One-class Classification Revisited**, International Workshop on Learning with Imbalanced Domains: Theory and Applications, in conjunction with ECML, Skopje, Macedonia, 22 September 2017

**2015**

18. R. Rabbany and O.R. Zaïane, **Evaluation of Community Mining Algorithms in the Presence of Attributes**, 4th International Workshop on Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models (QIMIE at PAKDD'15), LNCS 9441. pp. 152-163, Ho Chi Minh City, Vietnam, 19-21 May 2015

**2014**

19. R. Rabbany, O.R. Zaïane, and S. ElAtia, **Mining Large Scale Data from National Educational Achievement Test**, KDD Workshop on Data Mining for Educational Assessment and Feedback, in conjunction with ACM SIGKDD 2014, New York City, USA, 24 August 2014
20. Amine Trabelsi and Osmar R. Zaïane, **Finding Arguing Expressions of Divergent Viewpoints in Online Debates**, 5th Workshop on Language Analysis for Social Media in conjunction with EACL, Gothenburg, Sweden, 27 April 2014

**2013**

21. S. Mohajeri, A. Esteki, O.R. Zaïane, and D. Rafiei, **Innovative Navigation of Health Discussion Forums Based on Relationship Extraction and Medical Ontologies**, International Workshop on Biomedical and Health Informatics, pp. 676-677, Shanghai, China, 19 December 2013

22. P. Cao, D. Zhao, and O.R. Zaïane, **A PSO-based Cost-Sensitive Neural Network for Imbalanced Data Classification**, Biologically Inspired Techniques for Data Mining Workshop (BDM'13), in conjunction with PAKDD 2013, Gold Coast, Australia, 14 April 2013
23. J. Zhang, D. Gross, and O.R. Zaïane, **On the application of multi-class classification in physical therapy recommendation**, Data Analytics for Targeted Healthcare workshop, in conjunction with PAKDD 2013, Gold Coast, Australia, 14 April 2013
24. Stuart Johnson and O.R. Zaïane, (poster), **Deciding on Feedback Polarity and Timing**, International Conference on Educational Data Mining, pp. 220-221, Chania, Greece, 19-21 June 2012

**2011**

25. R. Rabbany K. and O.R. Zaïane, **A Diffusion of Innovation-Based Closeness Measure for Network Associations**, COMMPER Workshop on Mining Communities and People Recommenders, in conjunction with the IEEE International Conference on Data Mining (ICDM), pp. 381-388, Vancouver, Canada, December 2011
26. H. Samuel and O.R. Zaïane, **HCMS: Conceptual Description of a Health Content Management System,** 3rd International Workshop on Software Engineering in Health Care, in conjunction with the International Conference on Software Engineering (ICSE), pp. 17-23, Honolulu, USA, 22 May 2011

**2010**

27. M-Y. Kim, O.R. Zaïane, and R. Goebel, **Natural Language Watermarking Based on Syntactic Displacement and Morphological Division**, The 5th IEEE International Workshop on Security, Trust, and Privacy for Software Applications, in conjunction with 34th IEEE Computer Software and Application Conference, pp. 164-169, Seoul, South Korea, 19-23 July 2010

**2008**

28. V. Jazayeri and O.R. Zaïane, **Plant Protein Localization Using Discriminative and Frequent Partition-Based Subsequences**, 4th Workshop on Mining Complex Data, in conjunction with IEEE International Conference on Data Mining, pp. 228-237, Pisa, Italy, 15 December 2008
29. A. Foss and O.R. Zaïane, **Estimating True and False Positive Rates in Higher Dimensional Problems and its Data Mining Applications**, Foundations of Data Mining Workshop, in conjunction with IEEE International Conference on Data Mining, pp. 673-681, Pisa, Italy, 15 December 2008

**2006**

30. O.R. Zaïane, Y. Wang, R. Goebel, and G. Taylor, **Frequent Subsequence-based Protein Localization**, Workshop on Data Mining for Biomedical Applications (BioDM'06), in Conjunction with PAKDD'06, pp. 35-47, Singapore, April 2006 (40% = 14/35 acceptance rate)

**2005**

31. M. El-Hajj and O.R. Zaïane, **Implementing Leap Traversals of the Itemset Lattice**, in ACM SIGKDD Workshop on Open Source Data Mining: Frequent Pattern Mining Implementations, pp. 16-25, Chicago, USA, 21 August 2005

**2004**

32. Y. Wang, O.R. Zaïane, R. Goebel, J.L. Southron, U. Basu, R.M. Whittal, J.L. Stephens, and G.J. Taylor, **Developing a Database for Proteomic Analysis of Extracytosolic Plant Proteins**, 2nd International Workshop on Biological Data Management (BIDM) in conjunction with the 15th International Conference on Database and Expert Systems Applications (DEXA), pp. 366-370, Zaragoza, Spain, August 2004 (44% acceptance rate)

33. J. Li and O.R. Zaïane, **Using Distinctive Information Channels for a Mission-based Web Recommender System**, 6th ACM SIGKDD workshop on Webmining and Web Analysis (WebKDD), pp. 35-46, Seattle, USA, 22 August 2004 (acceptance rate <33%)
34. M. El-Hajj and O.R. Zaïane, **COFI Approach for Mining Frequent Itemsets Revisited**, 9th ACM SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery (DMKD), pp. 70-75, Paris, France, June 2004 (32% = 11/34 acceptance rate)

**2003**

35. M. El-Hajj and O.R. Zaïane, **Parallel Association Rule Mining with Minimum Inter-Processor Communication**, 5th International Workshop on Parallel and Distributed Databases, in conjunction with the 14th International Conference on Database and Expert Systems Applications (DEXA), pp. 519-523, Prague, Czech Republic, 1-5 September 2003

**2002**

36. S.R Oliveira and O.R. Zaïane, **Foundations for an Access Control Model for Privacy Preservation in Multi-Relational Association Rule Mining**, Workshop on Privacy, Security, and Data Mining, in conjunction with the IEEE International Conference on Data Mining, pp. 19-26, Maebashi City, Japan, 9 December 2002

**2001**

37. H. Cui and O.R. Zaïane, **Hierarchical Structural Approach to Improving the Browsability of Web Search Engine Results**, International Workshop on Digital Libraries, in conjunction with 12th International Conference on Database and Expert Systems Applications (DEXA), pp. 956-960, Munich, Germany, 3-7 September 2001 (50% acceptance rate)
38. O.R. Zaïane and A. Ammoura, **On-Line Analytical Processing While Immersed in a Cave**, 2nd International Workshop on User Interfaces to Data Intensive Systems, pp. 102-115, Zurich, Switzerland, 31 May – 1 June 2001

**2000**

39. B. Matichuk and O.R. Zaïane, **Unsupervised Classification of Sound for Multimedia Indexing**, ACM SIGKDD 1st International Workshop on Multimedia Data Mining MDM/KDD, pp. 31-36, Boston, USA, August 2000

**1999**

40. O.R. Zaïane, E. Hagen, and J. Han, **Word Taxonomy for On-line Visual Asset Management and Mining**, 4th International Workshop on Application of Natural Language to Information Systems (NLDB), pp. 271-276, Klagenfurt, Austria, June 1999

**1998**

41. Z.N. Li, O.R. Zaïane, and B. Yan, **C-BIRD: Content-Based Image Retrieval from Image Repositories Using Chromaticity and Recognition Kernel**, International Workshop on Storage and Retrieval Issues in Image and Multimedia Databases, in 9th International Conference on Database and Expert Systems (DEXA), pp. 361-366, Vienna, Austria, August 1998

**1997**

42. O.R. Zaïane, A. Fall, S. Rochefort, V. Dahl, and P. Tarau, **Concept-Based Retrieval using Controlled Natural Language**, Workshop on Applications of Natural Language to Information Systems (NLDB), pp. 11-26, Vancouver, Canada, June 1997

**1993 and before**

43. R. O. Zaïane and A. Gamache, **Optimisation de l'espace memoire du DMP par compression des transactions médicales**, 61e congrés de l'ACFAS, Rimouski, May 1993

44. R. O. Zaïane and A. Gamache, **Constraints of the integration of smart cards in a distributed medical record system**, 6eme Journées Internationales des Sciences Informatiques, Tunis, Tunisia, 10-22 May 1992
45. A. Gamache O.R. Zaïane, **La technologie de la carte à puce et la sécurité**, Conférence du CRISP, R.A.M.Q., Québec, Canada, 31 Janvier 1992
46. A. Gamache, P. Ardouin, R. O. Zaïane et al., **Design constraints and implementation of a PMR smartcard based software**, ACT-91 Conference, Toronto, Canada, 20-22 November 1991
47. A. Jaoua and R. O. Zaïane, et al., **Forward error recovery; Toward a preventive methodology,** Workshop on Constructive Algorithms: The Role of Relations in Program Development, Hollum-Ameland, Netherlands, September 1990

## 4.4 Book Chapters

B1. Md Rayhan Kabir, Seeratpal Jaura, Osmar R. Zaiane, **Interpretable Ensemble Models for Associative Classification**, Chapter in Social Network Analysis and Mining Applications in Healthcare and Anomaly Detection, edited by Mehmet Kaya , Sleiman Alhajj , Kashfia Sailunaz and Min-Yuh Day, Lecture Notes in Social Networks, Springer, 2024.

B2. Colin Bellinger, Mohomed Shazan Mohomed Jabbar, Osnat Wine, Charlene Nielsen, Jesus Serrano-Lomelin, Alvaro Osornio-Vargas, Osmar R. Zaiane, **AI Applied to Air Pollution and Environmental Health: A Case Study on Hypothesis Generation**, Chapter (pp 195-222) in Humanity Driven AI: Productivity, Well-being, Sustainability and Partnership, edited by Fang ChenJianlong Zhou, Springer 2021

B3. Khanh Vu, Alvaro Osornio-Vargas, Osmar R. Zaiane, Yan Yuan, **Ranking Association Rules from Data Mining for Health Outcomes: A Case Study of Effect of Industrial Airborne Pollutant Mixtures on Birth Outcomes**, Chapter (pp. 633-643) in Recent Developments in Mathematical, Statistical and Computational Sciences. AMMCS 2019. Springer Proceedings in Mathematics & Statistics,, edited by Kilgour D.M., Kunze H., Makarov R., Melnik R., Wang X., Volume 343 in the Series Proceedings in Mathematics and Statistics, Springer 2021.

B4. R. Rabbany, and O.R. Zaïane, **Evaluation of Community Mining Algorithms in the Presence of Attributes**, Chapter in Trends and Applications in Knowledge Discovery and Data Mining, LNCS 9441, pp. 152-163, edited by Xiao-Li Li, Tru Cao, Ee-Peng Lim, Zhi-Hua Zhou, Tu-Bao Ho, and David Cheung, Springer 2015, ISBN 978-3-319-25659-7

B5. L. Antonie, J. Li, and O.R. Zaïane, **Negative Association Rules**, Chapter in: Frequent Pattern Mining, pp. 135-145, edited by Charu Aggarwal, and Jiawei Han, Springer 2014, ISBN 978-3-319-07820-5

B6. P. Cao, O.R. Zaïane, and D. Zhao, **A measure optimized cost-sensitive learning framework for imbalanced data classification**, Chapter in: Biologically-Inspired Techniques for Knowledge Discovery and Data Mining, Advances in Data Mining and Database Management Book Series, pp. 48-75, edited by Shafiq Alam, Yun Sing Koh, and Gillian Dobbie, IGI Global, 2014, ISBN 9781466660786

B7. R. Rabbany, S. ElAtia, M. Takaffoli, and O.R. Zaïane, **Collaborative Learning of Students in Online Discussion Forums: A Social Network Analysis Perspective**, Chapter in Educational Data Mining: Applications and Trends, Computational Intelligence 524, pp. 1-25, edited by Alejandro Peña-Ayala, Springer, 2014, ISBN 978-3-319-02737-1

B8. R. Rabbany, M. Takaffoli, J. Fagnan, O.R. Zaïane, and R. Campello, **Relative Validity Criteria for Community Mining Algorithms**, Chapter in: Encyclopedia of Social Network Analysis and Mining, Section: Machine Learning and Mining Techniques for Social Networks, edited by Reda Alhajj and Jon Rokne, Springer 2014, ISBN 978-1-4614-6169-2

B9. J. Chen, O.R. Zaïane, and R. Goebel, **Detecting Communities in Social Networks using Local Information**, Chapter in: Social Network Analysis and Mining: Foundations and Applications, edited by N. Menon and R. Alhajj, Springer Verlag 2014, ISBN 9781461461692

B10. S.R. Oliveira and O.R. Zaïane, **Privacy-Preserving Clustering to Uphold Business Collaboration: A Dimensionality Reduction-based Transformation Approach**, Chapter in: Techniques and Applications for Advanced Information Privacy and Security: Emerging Organizational, Ethical, and Human Issues, pp. 79-102, edited by Nemati, IGI Global 2009

B11. M-L. Antonie, D. Chodos, and O.R. Zaïane, **Variations on Associative Classifiers and Classification Results Analyses**, Chapter in: Post-Mining of Association Rules: Techniques for Effective Knowledge Extraction, pp. 150-172, edited by Yanchang Zhao, Chengqi Zhang and Longbing Cao, IGI Global 2009, ISBN 9781605664057

B12. O.R. Zaïane, J. Chen, and R. Goebel, **Mining Research Communities in Bibliographical Data**, Chapter in: Advances in Web Mining and Web Usage Analysis, edited by Myra Spilopoulou, Haizheng Zhang, Springer Verlag 2008

B13. S.R. Oliveira and O.R. Zaïane, **Privacy-Preserving Data Mining on the Web: Foundations and Techniques**, Chapter in Data Warehousing and Mining: Concepts, Methodologies, Tools and Applications, edited by John Wang, IGI Global 2008, ISBN 978-1-59904-951-9

B14. S.R. Oliveira and O.R. Zaïane, **Business Collaboration by Privacy-Preserving Clustering**, Chapter in: Social Implications of Data Mining and Information Privacy: Interdisciplinary frameworks and solutions, edited by Ephrem Eyob, IGI Global 2008

B15. M. El-Hajj and O.R. Zaïane, **Bi-Directional Constraint Pushing in Frequent Pattern Mining**, Chapter 2 in: Data Mining Patterns: New Methods and Applications, pp. 32-56, edited by Pascal Poncelet, Maguelonne Teisseire and Florent Masseglia, Information Science Reference 2007, ISBN 978-159904162-9

B16. O.R. Zaïane, J. Li, and R. Hayward. **Mission-based Navigational Behaviour Modeling for Web Recommender Systems** Chapter in: Mining and Web Usage Analysis, LNAI 3932, pp. 37-55, edited by B. Mobasher, O. Nasraoui, B. Liu, and B. Massand, Springer Verlag 2006, ISBN 978-3-540-47127-1

B17. O.R. Zaïane, **Recommender Systems for e-Learning: Towards non-Intrusive Web Mining**, Chapter 5 in: Data Mining in E-learning, Advances in Management Information 4, pp. 79-96, edited by Cristóbal Romero and Sebastián Ventura, WitPress 2006, ISBN 1-84564-152-3

B18. S.R. Oliveira and O.R. Zaïane, **Foundations and Techniques for Privacy Preserving Data Mining on the Web**, Chapter 14 in: Web and Information Security, pp. 282-301, edited by Elena Ferrari and Bhavani Thuraisingham, Idea Group Publisher 2006, ISBN 1-59140-589-0

B19. M.L. Antonie, O.R. Zaïane, and A. Coman, **Associative Classifiers for Medical Images**, Chapter 5 in: Mining Multimedia and Complex Data, LNAI 2797, pp. 68-83, edited by Osmar R. Zaïane, Simeon Simoff, and Chabane Djeraba, Springer Verlag 2003, ISBN 3-540-20305-2

B20. O.R. Zaïane, **Discovering Patterns With and Within Images**, Chapter 2 in: Multimedia Mining—A Highway to Intelligent Multimedia Documents, pp. 27-42, edited by Chabane Djeraba, Kluwer Academic Publishers, 2002, ISBN 1-4020-7247-3

B21. O.R. Zaïane, **The Infant Days of Multimedia Data Mining**, Chapter 5 in: Dealing with the Data Flood: Mining Data, Text and Multimedia, pp. 428-439, edited by Jeroen Meij, SST Publications 2002, ISBN 90-804496-6-0

B22. J. Han, O.R. Zaïane, S. Chee and J. Y. Chiang, **Towards On-Line Analytical Mining on the Internet for Electronic Commerce**, Chapter 11 in Electronic Commerce Technology Trends: Challenges and Opportunities, pp. 169-183, edited by Weidong Kou and Yelena Yesha, IBM Press, 2000, ISBN 1-58347-009-3

## 4.5 Edited Books

E1. Rim Jallouli, Osmar R. Zaïane, Mohamed Anis Bach Tobji, Rym Srarfi Tabbane, and Anton Nijholt, **Digital Economy. Emerging Technologies and Business Innovation**, Lecture Notes in Business Information Processing 290, Springer Verlag 2017, ISBN 978-3-319-62737-3

E2. Samira ElAtia, Donald Ipperciel, and Osmar R. Zaïane, **Data Mining and Learning Analytics**, Wiley 2016, ISBN 978-1-118-99823-6

E3. H. Motoda, Z. Wu, L. Cao, and O.R. Zaïane, M. Yao, W. Wang, **Advanced Data Mining and Applications**, LNAI 8346 & 8347, Springer Verlag 2013, ISBN 978-3-642-53913-8

E4. Osmar R. Zaïane and Sandra Zilles, **Canadian Conference on Artificial Intelligence**, LNAI 7884, Springer Verlag 2013, ISBN 978-3-642-38457-8

E5. R. Alhajj, H. Gao, X. Li, J. Li, and O.R. Zaïane, **Advanced Data Mining and Applications**, LNAI 4632, Springer Verlag 2007, ISBN 978-3-540-73870-1

E6. O. Nasraoui, O.R. Zaïane, M. Spiliopoulou, B. Mobasher, B. Masand, and P.S. Yu, **Advances in Web Mining and Web Usage Analysis**, LNAI 4198, Springer Verlag 2006, ISBN 3-540-46346-1

E7. X. Li, O.R. Zaïane, and Z. Li, **Advanced Data Mining and Applications**, LNAI 4093, Springer Verlag 2006, ISBN 3-540-37025-0

E8. O.R. Zaïane, S.J. Simoff, and C. Djeraba, **Mining Multimedia and Complex Data**, LNAI 2792, Springer Verlag 2003, ISBN 3-540-20305-2

E9. O.R. Zaïane, J. Srivastava, M. Spiliopoulou, B. Masand, **WEBKDD 2002: Mining Web Data for Discovering Usage Patterns and Profiles**, LMAI 2703, Springer Verlag 2003, ISBN 3-540-20304-4

## 4.6 Invited Publications (non-refereed)

I1. O.R. Zaïane, **Rich Data: Risks, Issues, Controversies and Hype**, International Symposium on Information Management and Big Data, pp. 21-24, Cusco, Peru, 2017

I2. G. Melli, O.R. Zaïane, and B. Kitts, **Introduction to the Special Issue on Successful Real-World Data Mining Applications**, SIGKDD Explorations, 8(1), pp. 1-2, June 2006

I3. O. Nasraoui, O.R. Zaïane, M. Spiliopoulou, B. Mobasher, B. Masand, P.S. Yu, WebKDD, **Web Mining and Web Usage Analysis Post-Workshop report**, in SIGKDD Explorations, 7(2), pp. 139-142, December 2005

I4. O.R. Zaïane, **Relevance of Counting in Data Mining Tasks**, (Keynote Speech) International Conference on Advanced Data Mining and Applications (ADMA), pp. 14-18, Wuhan, China, 2005

I5. B.M. Masand, M. Spiliopoulou, J. Srivastava, and O.R. Zaïane, **WEBKDD 2002 - Web Mining for Usage Patterns & Profiles**, SIGKDD Explorations, 4(2), pp. 125-127, January 2003

I6. S.J. Simoff, C. Djeraba, and O.R. Zaïane, **MDM/KDD2002: Multimedia Data Mining between Promises and Problems,** SIGKDD Explorations, 4(2), pp. 118-121, January 2003

I7. O.R. Zaïane, guest editor, **Special Issue on Multimedia Data Mining**, Journal of Intelligent Information Systems, 19(1), Kluwer Academic Publishers, 2002

I8. O.R. Zaïane, A. Foss, C-H. Lee, and W. Wang, **On Data Clustering Analysis: Scalability, Constraints and Validation**, 6th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp. 28-39, Taipei, Taiwan, May 2002

I9. O.R. Zaïane and S.J. Simoff, MDM/KDD: **Multimedia Data Mining for the Second Time**, SIGKDD Explorations, 3(2), pp. 65-67, January 2002

I10. S.J. Simoff and O.R. Zaïane, **Report on MDM/KDD2000: The First International Workshop on Multimedia Data Mining**, SIGKDD Explorations, 2(2), pp. 103-105, December 2000

## 4.7 Edited Conference Proceedings

- Proceedings of the **9th Conference on Advanced Data Mining and Applications**, Hangzhou, China, 13-16 December 2013
- Proceedings of the **26th Canadian Conference on Artificial Intelligence**, Regina, Canada, 28-31 May 2013
- Proceedings of the **5th International Conference on Educational Data Mining**, Chania, Greece, 19-21 June 2012
- Proceedings of the **11th IEEE International Conference on Data Mining**, Vancouver, Canada ,11-14 December 2011
- Proceedings of the **10th WEBKDD International Workshop: Web Mining and Web Usage Analysis**, Las Vegas, USA, 24 August 2008
- Proceedings of the **7th IEEE International Conference on Data Mining**, Omaha, USA, 28-31 October 2007
- Proceedings of the **3rd International Conference on Advanced Data Mining and Applications (ADMA)**, Harbin, China, 6-8 August 2007
- Proceedings of the **2nd International Conference on Advanced Data Mining and Applications (ADMA)**, Xi'an, China, 14-16 August 2006
- Proceedings of the **7th WEBKDD International Workshop: Taming Evolving, Expanding and Multi-Faceted Web Clickstreams**, in conjunction with KDD-2005: 11th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Chicago, USA, 21 August 2005
- Proceedings of the **5th WEBKDD International Workshop: Web Mining as a Premise to Effective and Intelligent Web Applications**, in conjunction with KDD-2003: 9th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Washington, USA, 24 August 2003
- Proceedings of the **8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining**, Edmonton, Canada, 23-26 July 2002
- Proceedings of the **6th International Database Engineering and Applications Symposium (IDEAS'02)**, Edmonton, Canada, 17-19 July 2002

- Proceedings of the **3rd International Workshop on Multimedia Data Mining (MDM/KDD2002)** in conjunction with KDD-2002: 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 22 July 2002
- Proceedings of the **4th WEBKDD International Workshop: Web Mining for Usage Patterns and User Profiles** in conjunction with KDD-2002: 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 22 July 2002
- Proceedings of the **International Database Engineering and Applications Symposium (IDEAS 2002)**, Edmonton, Canada, 17-19 July 2002
- Proceedings of the **International Workshop on Knowledge Discovery in Multimedia and Complex Data (KDMCD'02)** in conjunction with PAKDD-2002: 6th Pasific-Asia Conference on Knowledge Discovery and Data Mining, Taipei, Taiwan, 6 May 2002
- Proceedings of the **2nd International Workshop on Multimedia Data Mining (MDM/KDD2001)** in conjunction with KDD-2001: 7th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, San Francisco, USA, 26-29 August 2001
- Proceedings of the **1st Workshop on Multimedia Data Mining (MDM/KDD2000)** in conjunction with KDD-2000: 6th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Boston, USA, 20-23 August 2000

## 4.8 Technical Reports and Arxiv publications

T1. Zahin Sufiyan, Shadan Golestan, Shotaro Miwa, Yoshihiro Mitsuka, Osmar Zaiane, **A Study of the Efficacy of Generative Flow Networks for Robotics and Machine Fault-Adaptation**, arXiv preprint arXiv:2501.03405, January 2025

T2. Zhiqiang Shen, Peng Cao, Junming Su, Jinzhu Yang, Osmar R. Zaiane, **Adaptive Mix for Semi-Supervised Medical Image Segmentation**, arXiv preprint arXiv:2407.21586, July 2024

T3. Sheila Schoepp, Mehran Taghian, Shotaro Miwa, Yoshihiro Mitsuka, Shadan Golestan, Osmar R. Zaïane, **Enhancing Hardware Fault Tolerance in Machines with Reinforcement Learning Policy Gradient Algorithms**, arXiv preprint arXiv:2407.15283, July 2024

T4. Amir Salimi, Sunil Vasu Kalmady, Abram Hindle, Osmar Zaiane, Padma Kaul, **Exploring Best Practices for ECG Signal Processing in Machine Learning**, arXiv preprint arXiv:311.04229, November 2023

T5. Qingshan Hou, Peng Cao, Jiaqi Wang, Xiaoli Liu, Jinzhu Yang, Osmar R. Zaiane, **Self-supervised Domain Adaptation for Breaking the Limits of Low-quality Fundus Image Quality Enhancemen**, arXiv preprint arXiv:2301.06943v1, January 2023

T6. Nouha Dziri, Ehsan Kamalloo, Sivan Milton, Osmar Zaiane, Mo Yu, Edoardo M. Ponti, Siva Reddy, **FaithDial: A Faithful Benchmark for Information-Seeking Dialogue**, arXiv preprint arXiv:2204.10757, April 2022

T7. Michael Strobl, Amine Trabelsi, Osmar Zaiane, **FREDA: Flexible Relation Extraction Data Annotation**, arXiv preprint arXiv:2204.07150, April 2022

T8. N. Farruque, R. Goebel, O.R. Zaiane, **A comprehensive empirical analysis on cross-domain semantic enrichment for detection of depressive language**, arXiv preprint arXiv:2106.12797, Jun 2021

T9. N. Farruque, R. Goebel, O.R. Zaiane, S. Sivapalan, **STEP-EZ: Syntax Tree guided semantic ExPlanation for Explainable Zero-shot modeling of clinical depression symptoms from text**, arXiv preprint arXiv:2106.10928, Jun 2021

T10. N. Farruque, C. Huang, O.R. Zaiane, R. Goebel, **Basic and depression specific emotion identification in tweets: multi-label classification experiments**, arXiv preprint arXiv:2105.12364, Jun 2021

T11. N. Dziri, A. Madotto, O.R. Zaïane, A. Joey Bose, **Neural Path Hunter: Reducing Hallucination in Dialogue Systems via Path Grounding**, arXiv preprint arXiv:2104.08455, April 2021

T12. S. Atakishiyev, H. Babiker, N. Farruque, R. Goebel, M-Y. Kim, M.H. Motallebi, J. Rabelo, T. Syed, O.R. Zaïane, **A multi-component framework for the analysis and design of explainable artificial intelligence**, arXiv preprint arXiv:2005.01908, May 2020

T13. A. Nan, A. Perumal, O.R. Zaiane, **Sentiment and knowledge based algorithmic trading with deep reinforcement learning**, arXiv preprint arXiv:2105.12364, January 2020

T14. J. Chen, O.R. Zaïane, R. Goebel, and P.S. Yu, **TupleRank: Ranking Relational Databases using Random Walks on Extended K-partite Graphs**, Technical Report TR09-02, Department of Computing Science, University of Alberta, Edmonton, Canada, February 2009

T15. D. Cheng, J. Sheldon, M. Marcet-Palacios, and O.R. Zaïane, **PROM-OOGLE – Data mining and Integration of On-line Databases to Discover Gene Promoters**, Technical Report TR08-13, Department of Computing Science, University of Alberta, Edmonton, Canada, September 2008

T16. J. Enright, B. Chu, and O.R. Zaïane, **Intelligent Functional Dependency Tutoring Tool**, Technical Report TR08-12, Department of Computing Science, University of Alberta, Edmonton, Canada, August 2008

T17. O.R. Zaïane, K. Yacef, and J. Kay, **Finding Top-n Emerging Sequences to Contrast Sequence Sets**, Technical Report TR07-03, Department of Computing Science, University of Alberta, Edmonton, Canada, February 2007

T18. A. Foss and O.R. Zaïane, **Effective Subspace Clustering with Dimension Pairing**, Technical Report TR06-23, Department of Computing Science, University of Alberta, Edmonton, Canada, October 2006

T19. C-H. Lee and O.R. Zaïane, **A Spatial Entity Representation to Prune Search Spaces**, Technical Report TR06-16, Department of Computing Science, University of Alberta, Edmonton, Canada, June 2006

T20. Y. Pei and Osmar R. Zaïane, **A Synthetic Data Generator for Clustering and Outlier Analysis**, Technical Report TR06-15, Department of Computing Science, University of Alberta, Edmonton, Canada, June 2006

T21. S.R. Oliveira and O.R. Zaïane, **Data Perturbation by Rotation for Privacy-Preserving Clustering**, Technical Report TR04-17, Department of Computing Science, University of Alberta, Edmonton, Canada, August 2004

T22. M-L. Antonie and O.R. Zaïane, **Mining Positive and Negative Association Rules: An Approach for Confined Rules**, Technical Report TR04-07, Department of Computing Science, University of Alberta, Edmonton, Canada, April 2004

T23. S.R. Oliveira and O.R. Zaïane, **Improving the balance between privacy and knowledge discovery: An efficient one-scan sanitization that upholds KDD**, Technical Report TR03-15, Department of Computing Science, University of Alberta, Edmonton, Canada, June 2003

T24. S.R. Oliveira and O.R. Zaïane, **Geometric Data Transformation For Privacy Preserving Clustering**, Technical Report TR03-12, Department of Computing Science, University of Alberta, Edmonton, Canada, May 2003

T25. M. El-Hajj and O.R. Zaïane, **Inverted Matrix: Efficient Discovery of Frequent Items in Large Datasets in the Context of Interactive Mining**, Technical Report TR03-08, Department of Computing Science, University of Alberta, Edmonton, Canada, March 2003

T26. S.R. Oliveira and O.R. Zaïane, **A Framework for Enforcing Privacy in Mining Frequent Patterns**, Technical Report TR02-13, Department of Computing Science, University of Alberta, Edmonton, Canada, June 2002

T27. W. Wang and O.R. Zaïane, **Clustering Web Sessions by Sequence Alignment**, Technical Report TR02-07, Department of Computing Science, University of Alberta, Edmonton, Canada, May 2002

T28. O.R. Zaïane, A. Foss, C-H. Lee, and W. Wang, **Data Clustering Analysis - From Simple Groupings to Scalable Clustering With Constraints**, Technical Report TR02-03, Department of Computing Science, University of Alberta, Edmonton, Canada, March 2002

T29. S.R. Oliveira, Mario A. Nascimento, and O.R. Zaïane, **Digital Watermarking: Status, Limitations and Prospects**, Technical Report TR02-01, Department of Computing Science, University of Alberta, Edmonton, Canada, January 2002

T30. O.R. Zaïane, M. El-Hajj, and Paul Lu, **Fast Parallel Association Rule Mining Without Candidacy Generation**, Technical Report TR01-12, Department of Computing Science, University of Alberta, Edmonton, Canada, August 2001

T31. O.R. Zaïane, **Web Usage Mining for a Better Web-Based Learning Environment**, Technical Report TR01-05, Department of Computing Science, University of Alberta, Edmonton, Canada, April 2001

T32. O.R. Zaïane and M-L. Antonie, **Associating Terms with Text Categories**, Technical Report TR01-04, Department of Computing Science, University of Alberta, Edmonton, Canada, April 2001

T33. O.R. Zaïane and A. Ammoura, **An Immersed Virtual Environment for Data WarehouseVisualization: Challenges and Implementation**, Technical Report TR00-17, Department of Computing Science, University of Alberta, Edmonton, Canada, September 2000

T34. O.R. Zaïane, **From Resource Discovery to Knowledge Discovery on the Internet**, Technical Report TR 1998-13, Simon Fraser University, Vancouver, Canada, August 1998

T35. Ze-Nian Li and O.R. Zaïane, and Bing Yan, **C-BIRD: Content-Based Image Retrieval from Image Repositories Using Chromaticity and Recognition Kernel**, Technical Report CMPT98-03, Simon Fraser University, Vancouver, Canada, February 1998

T36. O.R. Zaïane, P. Triantafillou, and J. Han, **Consistency in Card-Based Mobile Databases**, Technical Report CMPT96-03, Simon Fraser University, Vancouver, Canada, August 1996

T37. J. Han, O.R. Zaïane, and Y. Fu, **Resource and Knowledge Discovery in Global Information Systems: A Multiple Layered Database Approach**, Technical Report CMPT94-10, Simon Fraser University, Vancouver, Canada, November 1994

T38. R. O. Zaïane and A. Gamache, **Correspondance entre les zones logiques et physiques du dossier de l'aide-mémoire médical**, Technical Report DIUL-RT-9201, Département d'informatique, Université Laval, Québec City, Canada, 27p. 1992

T39. Gamache A., Ardouin P., Durant P., and Zaïane R., **Design Constraints and Implementation of a PMR Smart Card Based Software**, Technical Report DIUL-RR-9116, Département d'informatique, Université Laval, Québec City, Canada, November 1991

T40. Gamache A., Ardouin P., Durant P., Iratni R., and Zaïane R., **Étude de la technologie des cartes à microprocesseur pour l'implantation du dossier médical portable**, Technical Report DIUL-RR-9112, Département d'informatique, Université Laval, Québec City, Canada, May 1991

# 5. Invited Talks and Tutorials

## 5.1 Invited Talks

1. **Building Trustworthy Conversational AI: From Safety to Long-Term Memory**, Invited Talk, Trust Advanced Technology Forum, Montreal, Canada, July 8, 2026
2. **Adaptive Machines in Dynamic Worlds: Robustness, Flexibility, and Human Alignment**, Invited talk at the Canada-Korean Conference on Science and Technology, Whistler, BC, Canada, June 23, 2026
3. **A Friend in a Machine Can AI Help Ease Loneliness?** Invited Talk at Rocky Mountain Seniors, Edmonton, June 2, 2026
4. **Adaptive Machines in Dynamic Worlds: Robustness, Flexibility, and Human Alignment**, Invited talk at the 5th Innovation Forum on Intelligent Computing, Zhejiang Lab, Hongzhou, China, November 19-21, 2025
5. **Why Did the AI Decide That? Explaining Machine Learning with Rules and Counterfactuals**, Invited keynote speech, The 11th Annual DAMA Edmonton Conference, Edmonton, Canada, November 13th, 2025
6. **From Data Mining to Explainable AI: Association Rules as Post-hoc Explainers**, Invited keynote speech, The 21st International Conference on Advanced Data Mining and Applications, Kyopto, Japan, October 23rd, 2025
7. **Navigating the Digital Age: Building a Safe and Supportive Mental Health Chatbot**, Invited keynote speech, The 10th International Conference on Digital Economy, Tunis, Tunisia, May 15th, 2025
8. **AI, the Promises and Perils**, Rotary Club of Edmonton, Canada, March 17, 2025
9. **AI in Journalism: A Double-Edged Sword of Innovation and Ethics**, Department of Communication, MacEwan University, Edmonton, Canada, February 27, 2025
10. **The Fun in AI Research: What Excites my Passion**, Honors Seminar, University of Alberta, Edmonton, Canada, November 4th, 2024
11. **From an interpretable predictive model to a model agnostic explanation**, Charles L. and Ann Lee Brown Distinguished Colloquium Series,Charles L. Brown Electrical and Computer Engineering Department, University of Virginia, Charlottesville, VA, USA, November 2, 2024
12. **The Fun in AI Research**, Invited talk, Department of Computer Science, MacEwan University, Edmonton, September 27, 2024.
13. **Automatic Low-quality Fundus Image Enhancement and Diabetic Retinopathy Grading with Explanations**, Upperbound, Edmonton, Canada, May 23, 2024
14. **Automatic Low-quality Fundus Image Enhancement and Diabetic Retinopathy Grading with Explanations**, Machine Learning in Medicine Joint Seminar, University of Pittsburgh - University of Toronto - Boston University, Online, March 22, 2024.
15. **From an interpretable predictive model to a model agnostic explanation**, 25th International Conference on Big Data Analytics and Knowledge Discovery, Penang, Malaysia, 29 August 2023,

16. **Artificial Intelligence in Eye Care - What we can expect?** 38th Congress of the Canadian Association of Optometists, Quebec city, Canada, July 5, 2023
17. **Multi-instance Learning for Diabetic Retinopathy Grading**, AI and the Future of Precision Health, Upperbound, Edmonton, Canada, May 24, 2023
18. **This is what the future will look like, How Do Optometrists Get There?**, Optometric Leaders' Forum, Canadian Association of Optometrists, Ottawa, Canada, January 27, 2023
19. **Building a Chatbot to assist with Mood Disorders for Healthcare Workers and Canadians**, Level Up: ML Expert Round table, Edmonton, October 25, 2022
20. **Using ML/AI to construct Chatbots for Mood Disorders in healthcare workers and Canadians**, 6th Annual Data Analytics, Machine Learning and Data Management Conference, Edmonton, October 20th, 2022
21. **The Algorithms that run (or ruin) our lives**, Telus Spark Science Centre, Calgary, Canada (Virtual), November 18, 2021
22. **Distinguishing a Human from a Machine**, Campus TeamUP Science Computer Science Workshop, Edmonton, Canada, November 6, 2021
23. **Data Driven approach to using ML/AI to reduce costly downtime in machines & production**, Data Management Association Edmonton Chapter meeting, Edmonton, Canada, September 23, 2021
24. **Fault Detection in Machines, can we do it?**, Anomaly and Novelty Detection, Explanation and Accommodation Workshop at ACM SIGKDD, (virtual), August 16th, 2021
25. **Is Artificial Intelligence the Answer to Loneliness?** UofA Alumni Donor Event, University of Alberta President's Office, Edmonton, Canada (virtual) June 14, 2021
26. **What can we do with Artificial Intelligence? Should I worry or should I rejoice?** Iverson Exam, University of Alberta, Edmonton, Canada, (virtual) June 8, 2021
27. **From an interpretable predictive model to a model agnostic explanation**, 34th Canadian Conference on Artificial Intelligence, CAIAC (virtual) May 26, 2021
28. **Using AI for Diabetic Retinopathy Grading with Explanations**, AI in Healthcare Symposium, AI in Medicine Student Society (virtual) March 13, 2021
29. **AICan Panel Discussion: Machines and Language**, AICan (virtual) December 22, 2020
30. **A robust fuzzy clustering algorithm using spatial information combined with local membership filtering for brain MR images**, International Workshop on Biomedical and Health Informatics, IEEE BIBM (virtual), December 16, 2020
31. **A Domain Adaptation Multi-instance Learning for Diabetic Retinopathy Grading on Retinal Images**, International Workshop on Biomedical and Health Informatics, IEEE BIBM (virtual), December 16, 2020
32. **Associative Classifiers from Competitive Predictions to Explainable AI,** African Conference on Research in Computer Science and Applied Mathematics, Dakar, Senegal (virtual) October 15, 2020
33. **The ANA Project: Automated Nursing Agent**, Metrolab Network 2020 Summit, Metrolab network (video recording) September 22, 2020
34. **Associative Classifiers from Competitive Predictions to Explainable AI**, The Competence Center Machine Learning Rhine-Ruhr, Dortmund, Germany, (virtual) September 21, 2020
35. **Introduction to AI Healthcare: Machine learning in precision Medicine,** Artificial Intelligence in Healthcare Symposium, AI in Medicine Student Society, March 12, 2020

36. **Is Artificial Intelligence the Answer to Loneliness?** UofA Alumni Association Event, Phoenix, Arizona, USA, February 26, 2020
37. **Challenges with Probabilistic Networks**, 15th International Conference on Advanced Data Mining and Applications, Dalian, China, November 21, 2019.
38. **AI and Its Impact on Society and Education**, Education Analytics Symposium: Transforming Data into Actionable Knowledge, Calgary, Canada, 6 November 2019
39. **How Machine Learning will Transform Business**, 5th Annual Data Management and Intelligence Conference, Edmonton, Canada, 24 October 2019
40. **Is Artificial Intelligence the Answer to Loneliness?**, University of Alberta President Reception, Calgary, Canada, 22 October 2019
41. **Artificial Intelligence and Machine Learning in Precision Medicine**, Medical physics seminar series at the Cross Cancer Institute, Edmonton, Canada, 4 October 2019
42. **The pulse of a city—a glimpse at a locality using microblogs and machine learning**, PKDD Workshop on Data Science for Social Good, Wurzburg, Germany, 20 September 2019
43. **How Machine Learning will drastically change businesses**, Data Management and Intelligence Conference, Calgary, Canada, 22-24 May 2019
44. **Intelligence Artificielle, Science de Données et Big Data**, 6ème Conference Informatique EGOV, Tunis, Tunisia, 22-24 April 2019
45. **Artificial Intelligence and Machine Learning in Precision Medicine**, Precision Oncology Experimental Therapeutics Symposium, Calgary, Canada, 4-5 April 2019
46. **How Machine Learning will transform businesses**, Data Management Association (DAMA) Edmonton Chapter meeting, Edmonton, Canada, 22 November 2018
47. **Machine Learning as a Catalyst for Precision Health**, IEEE 13th International Conference on Innovations in Information Technology, Al Ain, United Arab Emirates, 18 November 2018
48. **Artificial Intelligence & Data Mining: Machine Learning as a Catalyst for Precision Health**, International Population Data Linkage Conference, Banff, Canada, 12-14 September 2018
49. **Complex Network Analysis with Edge Uncertainty**, 5th Multidisciplinary International Social Networks Conference, Saint-Etienne, France, 16-18 July 2018
50. **Artificial Intelligence and Medicine: Machine Learning as a Catalyst for Precision Health**, Herrenhausen Symposium: "Individualized Infection Medicine - The future is now", Hannover, Germany, 21-23 June 2018
51. **Adopting New Technologies in Government: AI and Machine Learning**, GovConnect Alberta, The Canadian Institute, Edmonton, Canada, 2 November 2017
52. **Precision Medicine: Tailoring Medical Intervention Using Machine Learning**, INSIGHTS: Focus on Public Health, School of Public Health, Edmonton, Canada, 2 November 2017
53. **Promises of Artificial Intelligence and the Role of Research**, UofA Faculty of Science Alumni, Toronto, Canada, 28 October 2017
54. **Artificial Intelligence and what we can do for you**, Canadian Manufacturers and Exporters, Edmonton, Canada, 19 October 2017
55. **Artificial Intelligence and Precision Medicine**, Helmholtz Delegation Visit, University of Alberta, Edmonton, Canada, 27 September 2017
56. **Lexical and Learning-based Emotion Mining from Text**, Text Analysis and Machine Learning Seminar, University of Ottawa, Ottawa, Canada, 23 June 2016

57. **Towards Clinical Decision Support Systems: Translating Clinical Practice Guidelines to Computer Interpretable Guidelines**, International Conference on Digital Economy, La Marsa, Tunisia, 28 April 2016
58. **Can we do (anything) without Computing Science?**, TeamUP Science, Edmonton, Canada, 14 February 2016
59. **Insights of big data analyses in the 21st century of biomedical research**, The Banff Foundation for Allograft Pathology and the Canadian Society of Transplantation, Vancouver, Canada, 5 October 2015
60. **Rich Data: Risks, Issues, Controversies and Hype**, Keynote at the International Symposium on Information Management and Big Data, Cusco, Peru, 2-4 September 2015
61. **On the Practice of Evaluation for Community Mining in the Presence of Attributes**, Keynote at the Workshop on Multiplex & Attributed Network Mining in conjunction with IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, Paris, France, 25 August 2015
62. **From Big Data Analytics in Healthcare to New Generic Data Mining Approaches**, Keynote at the Workshop on Data Analytics for Evidence Based Healthcare in conjunction with the 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Ho Chi Minh City, Vietnam, 19 May 2015
63. **Rich Data: Risks, Issues, Controversies, and Hype**, Keynote at the 10th International Conference on Advanced Data Mining and Applications, Guilin, China, 19-21 December 2014
64. **The Potential & Pitfalls of Big Data,** Big Data: A Multi-disciplinary Workshop for Academia and Industry, University of Manitoba, Winnipeg, Canada, 4 December 2014
65. **Why do the worlds of MOOCs and Big Data not collide?**, Trends & Controversies: Data Science and Advanced Applications, Shanghai, China, 30 November 2014
66. **Have you thought about it? Business and Machine Learning**, CSGSA, CS Academic Mixer, University of Alberta, 7 October 2014
67. **Data Mining Process and Required Data**, DoMiNO: Data Mining and Neonatal Outcomes Project Workshop, Faculty of Medicine and Dentistry, University of Alberta, 2 October 2014
68. **Highlighting Social Networks and Data Mining**, World University Network Data Science Exploratory Workshop, Rochester, USA, 22 August 2014
69. **On Associative Classifiers and on Multiclass Imbalanced Data**, Basser Seminar Series, School of Information Technologies, University of Sydney, Sydney, Australia, 21 May 2014
70. **Canadian Network for Visual Analytics**, GRAND Workshop, Canada's Digital Media Network of Centres of Excellence, Edmonton, Canada, 7 April 2014
71. **On Associative Classifiers and on Multiclass Imbalanced Data**, Laboratoire Hubert Curien, Université Jean Monnet, Saint Etienne, France, 21 February 2014
72. **Incremental Local Community Identification in Dynamic Complex Networks**, Laboratoire Hubert Curien, Université Jean Monnet, Saint Etienne, France, 13 February 2014
73. **Data Mining and Privacy - How does data mining fit with privacy of information?**, ICE Conference, Canadian Information Processing Society of Alberta (CIPS), Edmonton, Canada, 18 November 2013
74. **Application of Text Mining for Healthcare**, Seminaire LIRMM, University of Montpellier 2, Montpellier, France, 8 October 2013
75. **Big Text Mining for Healthcare Applications**, Machine Learning Summer School, Hammamet, Tunisia, 16 September 2013

76. **From Big Data to Community Mining Validation: What's the link?**, Laboratory of Artificial Intelligence and Decision Support, University of Porto, Portugal, 21 June 2013
77. **Can we still expect privacy?**, Ethics, Privacy and Quality Assurance, Analytics, Big Data and the Cloud II, Edmonton, Canada, 13-15 May 2013
78. **The Role of Analytics in Personalizing Medicine**, Healthcare - Data Policy and Economics, Analytics, Big Data and the Cloud II, Edmonton, Canada, 13-15 May 2013
79. **From Big Data to Community Mining Validation: What's the Link?**, Basser Seminar Series, School of Information Technologies, University of Sydney, Sydney, Australia, 19 April 2013
80. **Communities Validity: Methodical Evaluation of Community Mining Algorithms**, Invited Talk at Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models workshop, in conjunction with PAKDD, Gold Cost, Australia, 14 April 2013
81. **Big Data Analytics Reality and Challenges**, Keynote Speech at The 3rd International Conference on the Extraction and Management of Knowledge–Maghreb, Hammamet, Tunisia ,12-15 November 2012
82. **Raw Data Refineries**, CyberSummit 2012: Leading the Way in the Age of Big Data, Banff Canada, October 2012
83. **The Relevance of Analytics in Personalized Medicine**, Analytics, Big Data, and the Cloud Conference, Edmonton, Canada, 24 April 2012
84. **Towards discovering spatial relationships between cancer cases and combined chemicals with or without known carcinogenicity**, 2nd UofA/LMU Workshop on Wireless Sensor Networks for Environmental Monitoring, Munich, Germany, 8 March 2012
85. **Decision Support and Artificial Intelligence**, Managing IT Resources, Information Technology Management Certificate, Faculty of Extension, University of Alberta, Edmonton, Canada, 13 February 2012
86. **Information Network Analysis: Applications and Challenges**, Keynote Speech, 11th International Conference on Intelligent Systems Design and Applications, Cordoba, Spain, 23 November 2011
87. **Information Network Analysis: Applications and Challenges**, Research Colloquium, Department of Computer Science, University of Regina, Regina, Canada, 14 November 2011
88. **Information Network Analysis: Applications and Challenges**, Research Colloquium, School of Library and Information Studies, University of Alberta, Edmonton, Canada, 9 March 2011
89. **Machine Learning and Applications for Society**, Honours Seminars - CMPUT 495, Department of Computing Science, University of Alberta, Edmonton, Canada, 28 February 2011
90. **Tips from a Selection Committee Member**, NSERC Strategic Projects Grant Program, NSERC Visit, Edmonton, Canada, 17 February 2011
91. **Why We Need to Access Health Data**, Health Data Access Advisory Committee, Alberta Health and Wellness, Edmonton, Canada, 27 January 2011
92. **On the Usefulness of Mining Information Networks**, School of Computing, National University of Singapore, Singapore, 20 December 2010
93. **Mining Information Networks the Meerkat Way**, Computer Science Colloquium, Brigham Young University, Provo, USA, 18 November 2010
94. **Meerkat - Extracting Meaningful Value from Social Networks**, ABCtech Machine Learning Conference "Off-loading Intelligence - When Machines Decide!", Edmonton, Canada, 3 November 2010

95. **Fraud Detection in Securities Markets - Can Data Mining Help?**, Canadian Securities Administrators (CSA) Enforcement Committee, Montreal, Canada, 1 October 2010
96. **A blessing of high dimensionality for outlier detection and class separation**, Chalmers University of Technology, Gothenburg, Sweden, 6 August 2010
97. **Social Network Analysis for the Assessment of Learning**, Chalmers University of Technology, Gothenburg, Sweden, 4 August 2010
98. **Social Network Analysis for the Assessment of Learning**, Keynote Speech, 3rd International Conference on Educational Data Mining (EDM2010), Pittsburg, USA, 11 & 13 June 2010
99. **Computer Aided Breast Cancer Detection**, BioMedical Workshop "BioMedical research and Our Health: Potential and Challenges", Edmonton, Canada, 30 September 2009
100. **On Associative Classifiers: Achievements and Potential**, Mathematics and Computer Science Colloquium, University of Lethbridge, Lethbridge, Canada, 7 April 2009
101. **The Challenge of Mining Billions of Transactions**, Keynote Speech, International Workshop on Algorithms for Large-Scale Information Processing in Knowledge Discovery, in conjunction with PAKDD 2008, the 12th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Osaka, Japan, 20 May 2008
102. **Medicine and Informatics: A Challenging Marriage,** Health Informatics Forum, University of Alberta – Capital Health, Edmonton, 13 March 2008
103. **Le forage des réseaux sociaux**, Keynote Speech, 8èmes journées francophones Extraction et Gestion des Connaissances (EGC '08), Sophia-Antipolis, France, 1 February 2008
104. **Where are we heading with the associative classifiers?**, Virginia Tech, Roanoke, USA, 31 August 2007
105. **Classement par association : une alternative prometteuse**, Université de Caen, Caen, France, 13 November 2006
106. **Where are we heading with the associative classifiers?**, Seoul National University, Seoul, Korea, 19 June 2006
107. **Where are we heading with the associative classifiers?**, University of Hokkaido, Sapporo, Japan, 22 May 2006
108. **The potential of associative classifiers**, School of Computing Science, Simon Fraser University, Vancouver, Canada, 25 January 2006
109. **The potential of associative classifiers**, School of Information Technology & Electrical Engineering University of Queensland, Brisbane, Australia, 1 December 2005
110. **Data Transformation for Privacy-Preserving Data Mining**, Basser Seminar Series, School of Information Technology, University of Sydney, Sydney, Australia, 23 November 2005
111. **The potential of associative classifiers**, Department of Computer Science and Software Engineering, University of Canterbury, Christchurch, New Zealand, 11 November 2005
112. **An Intelligent Tutoring System for Functional Dependencies and its Analysis Tools**, Intelligent Learning Environment Research Group, School of Information Technology, University of Sydney, Sydney, Australia, 26 October 2005
113. **The potential of associative classifiers**, Department of Computer Science, University of Auckland, Auckland, New Zealand, 9 September 2005
114. **The potential of associative classifiers**, Faculty of Information Technology, University of Technology Sydney, Sydney, Australia, 31 August 2005

115. **Associative Classifiers: On Rule Generation, Pruning and Selection**, School of Computing Science and Engineering, University of New South Wales, Sydney, Australia, 26 August 2005
116. **Coupling typical data mining with classical Machine Learning**, Machine Learning Group, School of Information Technology, University of Sydney, Sydney, Australia, 2 August 2005
117. **Considering three information channels for a better non-intrusive recommender system**, Knowledge Management Group, School of Information Technology, University of Sydney, Sydney, Australia, 29 July 2005
118. **Considering three information channels for a better non-intrusive recommender system**, International School of Software, Wuhan University, Wuhan, China, 23 July 2005
119. **Relevance of Counting in Data Mining Tasks,** International Conference on Advanced Data Mining and Applications (ADMA 2005), Wuhan, China, 22-24 July 2005
120. **Investigations in Data Mining: China-Canada Research Cooperation**, Harbin Institute of Technology, Harbin, China, 8 March 2005
121. **Building Blocks for Data Mining Research**, Beijing University, Beijing, China, 11 March 2005
122. **On the Usefulness of Frequent Itemsets for Building Classifier Models**, School of Computing and Information Technology, Griffith University, Brisbane, Australia, 1 June 2004
123. **Associative Classification of Multimedia Documents**, Interactive Digital Multimedia Seminar Series, University of California, Santa Barbara, USA, 20 February 2004
124. **Supporting On-Line Learning Systems with Data Mining**, Département d'Informatique et Recherche opérationnelle, Colloques du DIRO, Faculté des Arts et des Sciences, University de Montréal, Montréal, Canada, 13 November 2003
125. **Concepts and Applications of Web Mining**, Department of Computer Systems, Faculty of Information Technology, University of Technology Sydney, Sydney, Australia, 4 November 2003
126. **More on Frequent Pattern Mining: An Asset for Novel Categorization and Recommender Systems Design**, Faculty of Engineering, Institute for Information and Communication Technologies, University of Technology Sydney, Sydney, Australia, 30 October 2003
127. **Pushing the Boundary for Mining Frequent Itemsets**, School of Information Technologies, Basser Seminar Series, University of Sydney, Sydney, Australia, 29 October 2003
128. **Do We Need New Algorithms in Data Mining?**, Faculty of Information Technology, University of Technology Sydney, Sydney, Australia, 22 October 2003
129. **Data Mining of Large Volumes of Data**, ICT Forum - Storage and Management of Large Multimedia Databases, Edmonton, Canada, 27 May 2003
130. **Virtual Exploration of Scientific and Financial Data**, ICT Forum - Man and Machine: New Technologies for Visual Human-Computer Interaction, Edmonton, Canada, 30 May 2002
131. **On Data Clustering Analysis: Scalability, Constraints and Validation**, 6th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'02), Taipei, Taiwan, 6-8 May 2002
132. **Data Mining Assisting e-Learning**, in Panel "The Impact of New Technologies on TeleLearning", at the TeleLearning Conference 2001, Vancouver, Canada, 10-13 November 2001
133. **State of the Art in Multimedia Data Mining**, at the Workshop MultiMediaMining, DaimlerChrysler Research Center, Ulm, Germany, 21-22 December 2000

134. **Data Mining from the Web**, at the Departamento de Informática, Universidade Federal de Pernambuco and Radix.com, Recife, Brazil, 6 October 2000
135. **Mining Multimedia Data**, in SBBD'2000: XIV Brazilian Symposium on Databases, Promoted by the Brazilian Computer Society in cooperation with ACM SIGMOD, João Pessoa, Brazil, 3 October 2000
136. **From Resource Discovery to Knowledge Discovery on the Internet**, for CelCorp, Edmonton, Canada, 4 April 2000
137. **Content-Based Image and Video Retrieval from Multimedia Repositories**, Invited Lecture at the Technical University of British Columbia (TechBC), Surrey, Canada, October 1998
138. **Student and Teacher Tools for the Virtual University**, Connections'96-Linking Teaching, Learning and Technology, Vancouver, Canada, 10 May 1996

## 5.2 Tutorials at International Conferences and Invited Courses

1. **Natural Language Processing: What Radiologists Need to Know**, Canadian Association of Radiologists, Ottawa, online tutorial for radiologists' professional development, RAD Academy, 2020.
2. **Foundations in Data Science and Application**, Atlantic Association for Research in the Mathematical Sciences Summer School, Charlottetown, Canada, 4-15 June 2018
3. **Learning with Big Data: From Independent to Complex Data**, Machine Learning Summer School, Hammamet, Tunisia, 16-17 September 2013
4. **Network analysis of big data and its applications in bioinformatics**, Dipartimento di electronica e informazione, Politecnico di Milano, Milan, Italy, 25-26 July 2013
5. **Le forage des Réseaux Sociaux et la découverte de communautés virtuelles**, École d'été Web Intelligence 2009, Véranne, Loire, France, 7 July 2009
6. **Advances in Mining the Web**, 15th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Paris, France, 28 June 2009
7. **Advances and Issues in Frequent Pattern Mining**, Tutorial at the 8th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'04), Sydney, Australia, 26 May 2004
8. **Concepts and Applications of Web Mining**, Tutorial for PhD students, Wuhan University, Wuhan, China, 24 July 2005
9. **Concepts and Applications of Web Mining**, Tutorial for PhD students, Department of Computer Science, Faculty of Information Technology, University of Technology Sydney, Sydney, Australia, 3 November 2003
10. **Data Clustering Analysis, from Simple Groupings to Scalable Clustering with Constraints**, Tutorial at the 6th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp. 137-201, Taipei, Taiwan, 6-8 May 2002
11. **Knowledge Discovery in Data,** a 20-hour training course given at the Alberta Research Council, Calgary, Canada, January 2002
12. **Web Mining: From Concepts to Practical Systems**, Tutorial at the 7th International Conference on Database Systems for Advanced Applications (DASFAA), Hong Kong, China, 18-20 April 2001
13. **Web Mining: Concepts, Practices and Research**, Tutorial at the SBBD: XIV Brazilian Symposium on Databases, Promoted by the Brazilian Computer Society, pp. 410-474, João Pessoa, Brazil, 2-4 October 2000

14. **Interactive Websites for E-Commerce**, Tutorial for the graduate program "Technologies d'Information en Commerce Electronique" (TICE), at the Institut des hautes Etudes Commerciales de Carthage, Carthage, Tunisia, May 2000 (language of instruction: French)
15. **Where Web Applications Meet Databases**, Tutorial at the TeleLearning-NCE Web Technology Workshop, Montreal, Canada, May 1997

# 6. Teaching, Supervision and Administration Services

## 6.1 Teaching Undergraduate and Graduate Courses

### 6.1.1 Undergraduate Courses Taught

**Simon Fraser University**
- CMPUT 354: Database Systems and Structures, Spring 1998

**University of Alberta**
- CMPUT 499-CMPUT 410: Web-Based Information Systems, Winter 2001, 2002, 2004, 2009, 2010, 2011, 2012, 2013, Fall 2004, 2006, 2007
- CMPUT 496: Intelligent Tutoring System Development, Fall 2008
- CMPUT 391: Database Management Systems, Fall 2001, Winter 2002, 2003, 2004
- CMPUT 175: Introduction to Foundations of Computing, Winter 2013, 2015, 2016, 2017, 2018, 2019, 2020, 2022, 2023, 2024
- CMPUT 102: Structural Programming and Data Structures, Winter 2000, Fall 2000, 2006, Winter 2008

### 6.1.2 Graduate Courses Taught

**University of Alberta**
- CMPUT 690: Data Science and Data Mining, Winter 2017, 2019, 2022
- CMPUT 605: Knowledge graphs to reduce hallucination in LLMs. Winter 2025
- CMPUT 605: Spatial Reasoning in LLM & VLM for Robotic Planning. Winter 2025
- CMPUT 605: Large language Models and Medical Applications. Winter 2024
- CMPUT 605: Analysing Probabilistic Graphs. Fall 2021
- CMPUT 605: Educational Data Mining, Winter 2016, 2020
- CMPUT 690: Electronic Health Records and Data Analysis, Winter 2010, 2012
- LABMP 590: Technology and the Future of Medicine, Fall 2012, Winter & Fall 2013 to 2022, 2023, 2024
- PAED 543: Children's Health and the Environment, Winter 2013, 2017, 2019, 2022, 2023
- INTD 560: Survey on Health Informatics, Fall 2009
- CMPUT 695: Principles of Knowledge Discovery in Data, Fall 1999, Fall 2000, Fall 2002, Fall 2004, Winter 2007
- CMPUT 695: Data Mining and Knowledge Discovery, Fall 2007
- CMPUT 605: Rule Based Machine Learning, Fall 2018

- CMPUT 605: Response Generation for Dialogue Systems, Fall 2018
- CMPUT 605: Sentiment Analysis From Text, Winter 2018
- CMPUT 605: Outlier Analysis, Fall 2016
- CMPUT 605: Educational Data Mining, Winter 2016
- CMPUT 605: Mining and Analyzing Big Data, Winter 2015
- CMPUT 605: Custom Feedback Selection in Intelligent Tutoring Systems, Winter 2015
- CMPUT 605: Emotion Detection from Text, Fall 2014
- CMPUT 605: Opinion Mining: Research and Application Challenges, Winter 2012
- CMPUT 605: Mining and Analysing Spatial Data, Winter 2011
- CMPUT 605: Evaluation of Clusters and Communities, Fall 2010
- CMPUT 605: Ethics in Software Development Life Cycle: A Case Study of Health Informatics Systems, Winter 2010
- CMPUT 605: Mining Health and Medical Data, Winter 2008
- CMPUT 605: Mining Web Links, Fall 2006
- CMPUT 605: Web-based Delivery of Scalable 3D Worlds, Fall 2006
- CMPUT 605: Cross Industry Standard Process for Data Mining, Winter 2004
- CMPUT 605: Dimensionality Reduction for Text Categorization and Grouping, Fall 2002
- CMPUT 605: Web Mining: Research and Application Issues, Winter 2002
- CMPUT 605: Database Security: Issues and Directions, Fall 2001
- CMPUT 605: Advances in Frequent Pattern Mining, Fall 2000
- CMPUT 605: Relational Data Visualisation in 3D, Winter 2000

**University of Sydney**
- COMP 5318: Machine Learning and Data Mining, 2nd semester 2005

**Chung-Ang University**
- Principles of Knowledge Discovery in Data, 1st semester 2006

## 6.2 Student Supervision

### 6.2.1 Post Doctoral Fellows:
- Shadan Golestan (PDF 2024) **Adaptive Machines with Reinforcement Learning**
- Matthew Reeson (PDF 2023) **Chatbot for Resource Recommendation**
- Tyler Marshall (PDF 2022-2023) **Chatbot for Resource Recommendation**
- Johannes Gunther (PDF 2018-2023) **RL and Machine Adaptation**
- Jasmine Noble (PDF 2021-2022) **Conversational Agent for Mood Disorder**
- Juliano Rabelo (PDF 2018-2021) **Natural Language Processing**
- Amine Trabelsi (PDF – 2018-2020) **Natural Language Processing**
- Colin Bellinger (PDF – 2016-2018) **Machine Malfunction Detection**
- Mi-Young Kim (PDF – 2012-2015) **Text Mining in Patient Records**
- Nathaniel Rossol (PDF – 2015) **Multimedia Generation of Mathematical Figures**
- Sajib Barua (PDF – 2014) **Spatial Data Mining**

### 6.2.2 Graduate Degrees Conferred:

**PhD Students (14)**

- Nawshad Farruque (PhD - February 2023): **Towards Natural language Modelling of Clinical Depression**
- Nouha Dziri (PhD - December 2022): **Towards Building Coherent and Faithful Conversational Models**
- Michael Strobl (PhD - December 2022): **Knowledge Graph Population from Conversations**
- Hamman Samuel (PhD – December 2020): **On Trust, Privacy, and Misinformation in Health Social Media**
- Amine Trabelsi (PhD – July 2018) Title: **Unsupervised Mining and Summarization of Polarized Contentious Issues from Online Text**
- S. K. Golmohammadi (PhD – September 2016) Title: **Time Series Contextual Anomaly Detection for Detecting Stock Market Manipulation**
- R. Rabbany (PhD – August 2016) Title: **Modular Structure of Complex Networks**, Current Job: Assistant Professor, McGill University
- Wessam Gad El-Rab (PhD – January 2016) Title: **Clinical Practice Guideline Formalization: Translating Clinical Practice Guidelines to Computer Interpretable Guidelines**, Current Job: Founder and CEO, TensorGraph.io
- M. Takaffoli (PhD – September 2015) Title: **Community Identification, Evolution and Prediction in Dynamic Social Networks**, Current Job: Amazon
- Jiyang Chen (PhD – March 2010) Title: **Community Mining – Discovering Communities in Social Networks**, Current Job: Google
- A. Foss (PhD – February 2010) Title: **High-Dimensional Data Mining: Subspace Clustering, Outlier Detection and Applications to Classification**, Current Job: Unknown
- Maria-Louisa Antonie (PhD – September 2008) Title: **Associative Classifiers: Improvements and Potential (**co-supervised with Dr. Holte), Current Job: Assistant Professor, University of Guelph
- Mohammad El-Hajj (PhD – September 2006) Title: **Frequent Sets by Leap-Traversal for Sequential and Parallel Paradigms**, (Co-author of 17 publications), Current Job: Associate Professor, MacEwan University
- Stanley Oliveira (PhD – December 2004) Title: **Data Transformation For Privacy-Preserving Data Mining** (Co-author of 10 publications,) Current Job: Embrapa Information Technology

**MSc Students (101)**

- Mahvash Siavashpour (MSC. 2026), **An Evaluation of Language Models for Real-World Spine Surgery Triage**
- Alex Lamb Foster (MSc. 2026), **Developing a Safety-Focused LLM Chatbot for Mental Health Support with Grounded Retrieval of Reliable Resources**
- Iain Smith (MSc. 2026), **Counterfactual Example Generation Driven by Rule-Based Explanations**
- Moriom Chowdhury Kumu (MSc. 2026), **Explaining Black-Box AI Models with BARBiE: An Associative Rule-Based Interactive Framework**
- Kiana Aghakasiri (MSc 2026), **Not What the Doctor Ordered: Surveying LLM-based De-identification and Quantifying Clinical Information Loss**

- Hadi Sheikhi Mohammaabadi (MSc 2025), **Large language Models and Their Ability to Utilize Knowledge Graphs for Dialogue Generation**
- Tahsin Mostafa (MSc 2025), **Non-vector-based Kingfisher for statistical significant associations**
- Varshini Prakash (MSc 2024) **Integrating Conversational Pathways with a Chatbot Builder Platform**
- Ashima Anand (MSc 2024) **Enhancing Kingfisher algorithm for high-dimensional associative classification in retail data**
- Yashar Talebirad (MSc 2024) **Towards Community Search in Uncertain Graphs**
- Zahin Sufyan (MSc 2024) **A Study of the Efficacy of Generative Flow Networks for Robotics and Machine Fault-Adaptation**
- Mohamad Ali Gharaat (MSc 2023) **Finding reliable resources and Chatting with Mira while considering emotions when the scenario is unscripted**
- Md Tanvir Alam Anik (MSc. 2023) **Using Associative Classifiers as a Surrogate for Explainablility in text Categorization**
- Maliha Sultana (MSc 2023) **An Exploration of Dialog Act Classification in Open-domain Conversational Agents and the Applicability of Text Data Augmentation**
- Seeratpal Jaura (MSc 2023) **Study on the Performance of Associative Classifiers**
- Shraddha Mukesh Makwana (MSc 2023) **Community Topic: Uncovering Flat and Hierarchical Topics Across Languages with Word Co-occurrence Network**
- Chirag Daryani (MSc 2023) **Data Acquisition Model for Women in Leadership Study**
- Md Rayhan Kabir (MSc 2023) **On Ensemble Models for Associative Classification**
- Rohan Verma (MSc 2022) **Emotionally Intelligent Chatbot in Punjabi**
- Abhishek Dhankar (MSc 2022) **Towards Checking Veracity of medical Claims**
- Mehran Taghian (MSc 2022) **Representation Analysis of Deep Reinforcement Learning algorithms in Robotic Environments**
- Paritosh Goyal (MSc 2022) **Exploring Preferential Label Smoothing for Neural Network based Classifiers**
- Abhishek Dhankar (MSc 2022) **Towards Checking Veracity of Medical Claims**
- Ali Zamani (MSc 2022) **Developing a Mental Health Virtual Assistance (Chatbot) for Healthcare Workers and their Families**
- Mehran Taghian (MSc 2022) **Representation Analysis of Deep Reinforcement Learning algorithms in Robotic Environments**
- Eric Austin (MSc 2022) **Topic Modelling via Community Mining of Term Co-occurrence Networks**
- Tanvir Sajed (MSc 2021) **Building an Expert-System based Conversational Agent to Provide Personalised Resources about Neurological Disorders**
- Sheila Schoepp (MSc 2021) **Reinforcement Learning for Adaptive Machines**
- Andy Wong (MSc 2020) **Intelligent Machine Reliability with General Value Functions**
- Mohammad Motallebi (MSc 2020) **Explaining Decisions of Black-box Models using Association Rules**
- Mohammadmahdi Zafarmand (MSc 2020) **Community Detection and Discovery in Deterministic and Uncertain Networks**
- Anandh Perumal Konar (MSc 2020) **Conversational agent with common-sense: Responding to nonsensical statements**

- Nitakshi Sood (MSc 2020) **Building a Competitive Associative Classification Model**
- Esha (MSc 2019) **Harnessing Tweets to get the Pulse of a City**
- Chenyang Huang (MSc 2019) **Towards Emotion Intelligence in Neural Dialogue Systems**
- Mansour Saffar Mehrjardi (MSc 2019) **Self-Attentional Models Application in Task-Oriented Dialogue Generation Systems**
- Vinaykumar Kulkarni (MSc Course 2019) **Analysis of Camera Trap Images Using Deep Learning for Ecological Study**
- Samuel Bushi (MSc 2019) **Using Sentiment Analysis for Better Placement of Contextual Advertisements**
- Mohammad Riazi (MSc 2019) **Detecting the Onset of Machine Failure Using Anomaly Detection Methods**
- Chang Liu (MSc 2019) **Community Detection in Node Attributed Networks: A Late-fusion Approach**
- Nouha Dziri (MSc 2018) **Response Generation For An Open-Ended Conversational Agent**
- Shiva Zamani Gharaghooshi (MSc 2018) **Community Structure in Complex Networks**
- Hayden Barker (MSc 2018) **Data Mining for Cyber Security Education**
- Chi Zhang (MSc 2018) **Complex Network Analysis with Edge Uncertainty**
- Reza Sobhannejad (MSc 2018) **Evaluating Image Training Systems for Medical Students**
- Ren Wang (MSc 2017) **Sequence Based Approaches to Course Recommender Systems**
- Amir Hossein Faghih Dinevari (MSc 2017) **Towards the Implementation of an Intelligent Software Agent for the Elderly**
- Sankalp Prabhakar (MSc 2016) **Reciprocal Recommendation System and Formation of Learning Groups in Massive Open Online Courses (MOOCs)**
- Behdad Bakhshinategh (MSc 2016) **Design of a Course Recommender System as an Application of Collecting Graduating Attributes**
- Mohomed Shazan Mohomed Jabbar (MSc 2016) **Discovering Spatial Patterns Using Statistically Significant Dependencies**
- Farrukh Ahmed (MSc 2016) A**dvantage of Integration in Big Data: Feature Generation in Multi-Relational Databases for Imbalanced Learning**
- Stuart Johnson (MSc 2016) **Custom Feedback Selection for Intelligent Tutoring Systems in Ill-Defined Domains**
- Ameneh Gholipour Shahraki (MSc 2015) **Emotion Mining From Text**
- Ali Yadollahi (MSc 2015) **Polarity Classification of Reviews by Expanding a Preliminary Lexicon**
- Baoliang Wang (MSc 2014) **Automatic Animal Species Identification Based on Camera Trapping Data**
- Jundong Li (MSc 2014) **Statistically Significant Dependencies for Spatial Co-location Pattern Mining and Classification Association Rule Discovery**
- Afra Abnar (MSc 2014) **Structural Social Role Mining**
- Kevin Quinn (MSc 2014) **Automated Nursing Agent**
- Saeed Mohajeri (MSc 2013) **Bubblenet: An Interactive Interface for Retrieving Documents**

- Jing Zhang (MSc 2012) **On the Application of Multi-Class Classification in Physical Therapy Recommendation**
- Xiaoxiao Li (MSc 2012) **Text Document Topical Recursive Clustering and Automatic Labeling of a Hierarchy of Document Clusters**
- Chaman Thapa (MSc 2012) **Classifying Websites into Non-Topical Categories**
- Aibek Adilmagambetov (MSc 2012) **Discovering Co-Location Patterns and Rules in Uncertain Spatial Datasets**
- Justin Fagnan (MSc 2012) **Community Mining: From Discovery to Evaluation and Visualization**
- Metanat HooshSadat (MSc 2011) **Classification and Sequential Pattern Mining from Uncertain Datasets**
- Hamman Samuel (MSc 2011) **Content Management for Online Health Advice Sharing**
- Farzad Sangi (MSc 2011) **Ranking Entities in Heterogeneous Multiple Relation Social Network Using Random Walks**
- Xiaoyu Shi (MSc 2011) **A Fast Circuit Similarity-Based Placement Engine for Field Programmable Gate Arrays**
- Amit Satsangi (MSc 2011) **Contrasting the Contrast Sets**
- Reihaneh Rabbany Khorasgani (MSc 2010) **Community Mining and its Applications in Educational Environment**
- Deng Kang (MSc 2009) **Contrasting Sequence Groups by Emerging Sequences**
- Mojdeh Jalali-Heravi (MSc 2009) **A Study on Interestingness Measures for Associative Classifiers**
- Sayed Vahid Jazayeri (MSc 2008) **Plant Protein Localization Based on Frequent Discriminative Subsequences and Partition-Based Subsequences**
- Yaling Pei (MSc 2006) **Discovering and Ranking Outliers in Very Large Datasets**
- Yan Jin (MSc 2006) **Analysis of the State-of-the-Art in Content-Based Video Retrieval**
- Yi Li (MSc 2005) **Investigating Data Mining Tools for Versatile Mining**
- Jiyang Chen (MSc 2004) **An Algebra for Visual Web Mining**, (Co-superviser Dr. Goebel)
- Yang Wang (MSc 2004) **EPPdb: a Database for Proteomic Analysis of Extracytosolic Plant Proteins**, (Co-superviser Dr. Goebel)
- Lisheng Sun (MSc 2004) **FootPath: Web Topology and Navigation Visualization,** (Co-superviser Dr. Goebel)
- Jia Li (MSc 2004) **Using Distinct Information Channels for a Hybrid Web Recommender System**
- Alex Strilets (MSc 2003) **From User Modeling to Reference Feedback: A Survey of Information Retrieval Techniques for Query Similarities**
- William Cheung (MSc 2002) **Frequent Pattern Mining Without Candidate Generation or Support Constraint**
- M-L. Antonie (MSc 2002) **Categorizing Digital Documents by Associating Content Features**
- Andrew Foss (MSc 2002) **Automatic Categorical Data Clustering and Spatial Data Clustering by Consecutive Resolution Refinement**
- ChiHoon Lee (MSc 2002) **Density Based Clustering of Spatial Data in the Presence of Physical Constraints**

- Yue Zhang (MSc 2002) **On the Use of CBIR in Image Mosaic Generation**. (Co-superviser Dr. Nascimento)
- Weinan Wang (MSc 2001) **Experiments with Data Clustering**
- Ayman Ammoura (MSc 2001) **Data mining in an Immersed Virtual Environment over a Network**
- Hang Cui (MSc 2001) **Search Engine Result Re-Organization With Ontology**
- Jun Luo (MSc 2001) **Towards a Flexible Interactive Web Usage Mining System**
- Yuan Ji (MSc 2001) **Virtual Data Warehouse Design and Implementation**

**6.2.3 Current Graduate Students Under My Supervision:**

**PostDoctoral Students**

1. Mohamadali Tofigh (PDF 2026) **Adaptive Machines with Reinforcement Learning**

**PhD Students**

2. Bruce Matichuk: Neurosymbolic Response Generation – Estimated defence December 2026
3. Fahim Hassan: **Public Health** – Estimated defence December 2026
4. Chenyang Huang: **Automatic Response Generation** – Estimated defence July 2026
5. Amir Salimi: **Few-shot Learning of Drums** – Estimated defence August 2026
6. Sheila Schoepp: **Multi-agent communication** – Estimated defence August 2027
7. Iain Smith: **Explainable AI** – Estimated defence 2029

**MSc Students**

8. Parnian Yousefi, **Explainable Machine Learning for Health Application** – Estimated defence December 2023
9. Ali Rafiei, **Grading Fundus with Explanations**, Estimated defence August 2026
10. Afraz Khan, **Reward Shaping with LLM**, Estimated defence August 2028
11. Shahriar Hossain, **Explainable Generation for Conversational Agents**, Estimated defence August 2028
12. David Guo, **Machine Learning for Medicine**, Estimated defence August 2028
13. Abdelrahman ElSayyad, **Bed Ulcer Wound Treatment Prediction**, Estimated defence August 2028
14. Shivaansh Bhatia, **Medical Image Enhancement**, Estimated defence August 2028
15. Rana Al-Madhoun, Estimated defence August 2028
16. Ariana Ranjkesh, Estimated defence August 2028
17. Melika Halvaee, Estimated defence August 2028

**Served on the Advisory/Supervisory/Examining Committee for PhD Students:**

- Bastien Giles (Examiner), Université Jean Monnet, France, **PhD** Thesis Defence November 25, 2024, title : Détection de fraude à l'assurance maladie à l'aide de modèles d'apprentissage automatique et de fouille de données explicables et interprétables.
- Sabeur Aridhi (Examiner), **Habilitation**, Université de Loraine, France, Defence: December 2023, Title: Découverte de connaissances à partir de grands graphes biologiques

- Roberto Interdonato (Examiner), **Habilitation**, Université de Montpellier, France, Defence : May 2023. Title : Data Science and Network Analysis for Food Security and Agricultural Monitoring
- Wissem Inoubli (Examiner), Université de Tunie El Manar, Tunisia, **PhD** Thesis Defence: January 2021. Title: Analysis and Mining of Large Dynamic Graphs: case of graph clustering
- Waleed Ragheb (Examiner), Université de Montpellier, France, **PhD** Thesis Defence: November 2020. Title: Affective Behavior Modeling on Social Networks
- Antonio Cavalcante (Examining Committee), **PhD** Thesis Defence: October 2020, Title: A Framework for Hierarchical Density-Based Clustering.
- Nour El Mawass (Examiner), Université de Rouen Normandie, France, **PhD** Thesis Defence: October 2020. Title : Protection Anti-Abus de Réseaux Sociaux Numériques par Apprentissage Statistique
- Sara Soltaninejad (Examiner and Advisory Committee), **PhD** Thesis Defence: January 2020 Title: Intelligent Parkinson's Disease Classification and Progress Monitoring using Non-invasive Techniques
- Fan Jiang (Examiner) University of Manitoba, **PhD** Thesis Defence: 1 February 2017, Title: Efficient Frequent Pattern Mining from Big Data and its Applications
- Yifeng Liu, (Examiner and Advisory Committee), **PhD** Thesis Defence: 16 September 2016, Title: Question Answering for Biomedicine
- Nader Jelassi (Examiner) University Blaise Pascal Clermont Ferrand, France, **PhD** Thesis Defence: 11 May 2016, Title: Un Système Personnalisé de recommandation Basé sur les Concepts Quadratiques dans les Folksonomies
- Mohammad Salameh (Examiner and Advisory Committee) **PhD** Thesis Defence: 10 March 2016, Title: Morphological Desegmentation for English-Arabic Statistical Machine Translation
- Hoda Sepehri Rad (Examiner and Advisory Committee) **PhD** Thesis Defence: 15 September 2015, Title: Analyzing Controversy in Wikipedia
- Emily Chan (Examiner and Advisory Committee) **PhD** Thesis Defence: 14 September 2015, Title: Industrial Emissions and Children's Environmental Injustice in Canada: Exploring Geographical Patterns and an Example of its Relation to Children's Cancer in Manitoba
- Sheehan Khan (Examiner), **PhD** Thesis Defence: 27 April 2015, Title: Budgeted Biomarker Discovery Problem
- David Thue (Examiner) **PhD** Thesis Defence: January 2015
- Rouzbeh Maani (Examiner) **PhD** Thesis Defence: January 2015
- Davoud Moulavi (Examiner and Advisory Committee) **PhD** Thesis Defence: 5 September 2014, Title: Finding, Evaluating and Exploring Clustering Alternatives Unsupervised and Semi-supervised
- Sajib Barua (Examiner and Advisory Committee) **PhD** Thesis Defence: 17 January 2014, Title: Statistically Sound Interaction Pattern Discovery from Spatial Data
- Hai Phan Nhat (Examiner) University of Montpellier II, France, **PhD** Thesis Defence: October 7, 2013, Title: Mining Object Movement Patterns from Trajectory Data

- Hugo Alatrista-Salas (Examiner) **PhD** University of Montpellier II, France, Thesis Defence: 7 October 2013, Title: Extraction de relations spatio-temporelles à partir des données environnementales et de la santé
- Alireza Farahaninia (Examiner) **PhD** Thesis Defence: 6 August 2013, Title: Design, Simulation and Evaluation of Effective Industrial Information Systems: Case of Machine Condition Monitoring and Management Information Systems
- Imen Brahmi (Examiner) University of Tunis, Tunisia, **PhD** Thesis Defence: 15 November 2012, Title: Fouille de Données et Système Multi-Agents Appliqués à La Détection d'Intrusions dans les Réseaux Informatiques
- Gregory Lee (Examiner and Advisory Committee) **PhD** Thesis Defence: 30 July 2012, Title: Automated Story-Based Commentary for Sports
- David Chodos (Examiner and Advisory Committee) **PhD** Thesis Defence: 20 July 2012, Title: Using Virtual Worlds for Scenario-based Training
- Hossein Azari (Examiner) **PhD** Thesis Defence: 20 March 2012, Title: Optimal Stereo Reconstruction and 3D Visualization
- Gregory Leighton (Examiner and Advisory Committee) **PhD** Thesis Defence: 10 August 2011, Title: Security Issues in Heterogeneous Data Federations
- Hadi Sabaa (Examiner and Advisory Committee) **PhD** Thesis Defence: 7 April 2011 Title: Towards Haplotype Sharing Based Association Studies
- Chonghai Wang (Examiner and Advisory Committee) **PhD** Thesis Defence: 2 March 2011 Title: Top-K Ranking with Uncertain Data
- Dino Ienco (Examiner) Università degli Studi di Torino, Italy, **PhD** Thesis Defence: January 2010, Title: Unsupervised Approaches for the Generation of Structures on Large Data
- Florent Masseglia (examiner) **Habilitation**, Université de Nice-Sophia Antipolis, France, Defence: November 2009, Title: Extraction de connaissances : l'évolution dans les données et dans les résultats de la fouille
- Elsa Loekito (Examiner) University of Melbourne, Australia, **PhD** Thesis Defence: May 2009, Title: Mining Simple and Complex Patterns Efficiently Using Binary Decision Diagrams
- Chi-Hoon Lee (Examiner and Advisory Committee) **PhD** Thesis Defence: January 2009, Title: Modeling Spatial Correlations for Effective Discriminative Classifiers
- Gabriella Moise (Examiner and Advisory Committee) **PhD** Thesis Defence: 18 September 2008 Title: Subspace Clustering Methods for High Dimensional Data
- Chedy Raïssi (External) University of Montpellier II, France, **PhD** Thesis Defence: July 2008, Title: Extraction des séquences fréquents: des bases de données statiques aux flots de données
- Marc Plantevit (External) University of Montpellier II, France, **PhD** Thesis Defence: July 2008, Title: Extraction de motifs séquentiels dans des données multidimensionnelles
- Ahmed El Sayed (External) University of Lyon II, France, **PhD** Thesis Defence: April 2008, Title: Contributions in Knowledge Discovery in Textual Data
- Hongqin Fan (Examiner and Advisory Committee) **PhD** Civil Engineering, Thesis Defence: 5 September 2007, Title: Leveraging Operational Data for Intelligent Decision Support in Construction Equipment Management

- Pei Sun (External) University of Sydney, Australia, **PhD** Thesis Defence: January 2007, Title: Outlier Detection in High Dimensional Spatial and Sequential Data Sets
- Hellassege Amithalal Caldera (External) University of Western Sydney, Australia, **PhD** Thesis Defence: January 2007, Title: Effectively Capturing User Sessions on the Web Using Web Server Logs
- Arnaud Soulet (External) University of Caen, France, **PhD** Thesis Defence: November 2006, Title: Un cadre générique de découverte de motifs sous contraintes fondées sur des primitives
- Doru Tanasa (External) University of Nice-Sophia Antipolis, France, **PhD** Thesis Defence: June 2005, Title: Web Usage Mining – Contributions to Intersites Logs Preprocessing and Sequential Pattern Extraction with Low Support
- Xingzhi Sun (External) Queensland University, Australia, **PhD** Thesis Defence: May 2005, Title: Knowledge Discovery in Long Temporal Event Sequences
- Tong Zheng (Examiner and Advisory Committee) **PhD** Thesis Defence: 16 December 2003 Title: WebFrame: In Pursuit of Computationally and Cognitively Efficient Web Mining
- Pablo Figuera (Examiner and Advisory Committee) **PhD** Thesis Defence: 24 November 2003 Title: Retargeting of Virtual Reality Applications
- Mohamed Mamoud Fawzi El-Ramly (Examiner & Advisory Committee) **PhD** Thesis Defence: 20 May 2003, Title: Reverse Engineering Legacy User Interfaces Using Interaction Traces
- Paul A. Ferry (Examiner) **PhD** Thesis Defence: 15 February 2001, Title: Graphics/Data Analysis: Eikon: A Tool for Geometric Coding of Large Multivariate Datasets

### 6.2.5 Training of Undergraduate Students:

- Summer 2024 – Afraz Khan; Title: Large Language Models and Reinforcement Learning
- Summer-Winter 2020 – Ruohan Chen; Title: Autonomous Adaptive Soundscapes
- Summer 2020 – Yuluan Wang; Title: Music for inducing sleep
- Summer 2019 – Jiabin Fan; Title: Response generation for a chatbot
- Summer 2013 – Cody Surgin; Title: Assessment tool for MOOCs
- Summer 2013 – Mikus Lorence; Title: Assessment tool for MOOCs
- Summer 2012 – Stuart Johnson; Title: Gamification of an ITS for mammography
- Summer 2011 – Blaine Lewis; Title: Social Network Analysis (High School student)
- Summer 2011 – Aaron Young; Title: Biobank interface
- Summer 2010 – Stuart Johnson; Title: Tutoring System for Medical Students in Radiology
- Summer 2010 – Paul Bodnar; Title: Motivating crowdsourcing with games
- Summer 2010 – Abhishek Iyer; Title: Motivating crowdsourcing with games
- Summer 2010 – Raiford Lawson; Title: Motivating crowdsourcing with games
- Summer 2010 – Kevin Quinn; Title: Grant management system
- Summer 2010 – Blaine Lewis; Title: Social Network Analysis. (High School student)
- Summer 2008 – Julien Baptiste; Title: Intelligent Functional Dependency Tutoring System
- Summer 2004 – Stella Luk; Title: Scrutinizing Frequent Pattern Discovery Performance
- Summer 2003 – Yi Li; Title: Implementation of a Test-bed Framework for Association Rule Mining
- Summer 2002 – Kevin Andrusky (NSERC Undergraduate Summer Scholarship Awardee); Title: eSMART: Didactic On-Line Software and Games for Micromachines

- Summer 2002 – Dana Mowat; Title: Implementation of an on-line Faculty Bibliographical Database
- Summer 2002 – Yaling Pei (NSERC Undergraduate Summer Scholarship Awardee); Title: On-line Portal for Data Clustering: Code, Benchmarks, and Datasets
- Summer 2001 – Kevin Andrusky (NSERC Undergraduate Summer Scholarship Awardee); Title: Educational Software for Micromachines And Related Technologies (eSMART)

## 6.3 Departmental and University Responsibilities

- Faculty Recruiting Committee, Department of Computing Science (2024-)
- Member of the AI for Health task Force, Faculty of Medicine and Dentistry (2019–2020)
- Scientific Director, Alberta machine Intelligence Institute (2009–2020)
- Member of the Digital Learning Pilots – Research & Development Committee (2013–2014)
- Member of the Campus Saint Jean Council, Faculty of Science rep. (2008–2009)
- Member of University Health Informatics Steering Committee (2008–2009)
- Chair of University Health Informatics Graduate Program sub-Committee (2008–2010)
- Undergraduate/Curriculum Committee member (2007–2010)
- Computing Science Chair Search Committee (2008)
- Recruiting Committee member (2007–2009)
- External Affairs Committee member responsible for publications and web presence (2000–2010)
- Graduate Program Committee member, 1999–2003
- Member of the University E-Learning Plan Committee, Faculty of Science rep. (2005)
- Participated in the Faculty of Science IT council (2005)

# 7. Professional Activities

## 7.1 Editorial Work

1. Editorial Board, Data, MDPI (2017–Present)
2. Associate Editor, Computational Intelligence, Wiley (2016–Present)
3. Editorial Committee Member, Journal of Data Science and Analytics, Springer (2016–2020)
4. Editorial Board, Journal of Educational Data Mining (2014–2019)
5. Associate Editor, Health Information Science and Systems, Springer (2014–Present)
6. Editorial Board, International Journal of Internet Technology and Secured Transactions, Inderscience Publishers (2014–2020)
7. Editorial Board, Journal of Data Mining and Knowledge Discovery, Springer (2014–2020)
8. Editor-in-Chief, ACM SIGKDD Explorations, ACM Special Interest Group on Knowledge Discovery and Data Mining ACM Press (2008–2010)
9. Associate Editor, ACM SIGKDD Explorations, ACM Special Interest Group on Knowledge Discovery and Data Mining, ACM Press (2004–2007)
10. Associate Editor, Knowledge and Information Systems, An International Journal, Springer (2006–2018)
11. Associate Editor, International Journal of Internet Technology and Secured Transactions (IJITST), Inderscience Publishers, (2005–2010)

12. On the editorial board of Journal of Educational Data Mining – on-line journal http://www.educationaldatamining.org (2008–2016)
13. Guest Editor, Special Issue on Successful Real-World Data Mining Applications ACM SIGKDD Explorations, June 2006, 8(1), ACM Press
14. Guest Editor, Special Issue on Multimedia Data Mining, Journal of Intelligent Information Systems, 19(1), Kluwer Academic Publishers, 2002

## 7.2 Steering Committees

1. CIFAR AICan 2020–2021
2. TechnologyAlberta FIRST Job Program, 2020–Present
3. IEEE International Conference on Data Mining (ICDM), 2009–2014
4. International Conference on Advanced Data Mining and Applications (ADMA), since 2006
5. IEEE DSAA International Conference on Data Science and Advanced Analytics, since 2013
6. International Conference on Digital Economy, since 2016
7. Secretary-Treasurer ACM SIGKDD and steering committee, from 2009–2013
8. Treasurer ACM SIGHIT and steering committee, from 2010–2011
9. International Conference on Behaviour, Economic, and Socio-Cultural Computing, since 2013

## 7.3 Organization of International Conferences and Workshops

1. [2020–2021] Workshop Co-Chair, Workshop on Data Integration and Applications, PKDD, 14 September 2020
2. [2020–2021] General Co-Chair, International Conference on Advanced Data Mining and Applications
3. [2019] Workshop co-Chair, Workshop on Data Integration and Applications, ECML/PKDD, Würzburg, Germany, 20 September 2019
4. [2018] Technical Program co-Chair, 13th IEEE International Conference on Innovations in Information Technology, Al Ain, United Arab Emirates, 18-19 November 2018
5. [2018] Area Chair, IEEE International Conference on Data Mining, Sentosa Island, Singapore, 17-20 November 2018
6. [2018] Workshop co-Chair, Workshop on Data Integration and Applications, ICDM, Sentosa Island, Singapore, 17 November 2018
7. [2018] Workshop co-Chair, IEEE International Conference on Data Mining, Sentosa Island, Singapore, 17-20 November 2018
8. [2017] Workshop co-Chair, 4th International Workshop on Educational Recommender Systems, Bratislava, Slovakia, 9-12 July 2017
9. [2016] General co-Chair, IEEE DSAA International Conference on Data Science and Advanced Analytics, Montreal, Canada, 17-19 October 2016
10. [2015] Area Chair, IEEE International Conference on Data Mining, Atlantic City, USA, 14-17 November 2015
11. [2015] Program co-Chair, International Conference on Data Science and Advanced Analytics, Paris, France, 19-21 October 2015
12. [2015] Research Track Senior Program Committee, ACM SIGKDD, Sydney, Australia, 10-13 August 2015

13. [2015] Awards Committee (Innovation Award & Service Award), ACM SIGKDD, Sydney, Australia, 10-13 August 2015
14. [2014] General co-Chair Workshop on Data Integration and Applications, Shenzhen, China, 14 December 2014
15. [2014] General co-Chair International Conference on Behaviour, Economic, and Socio-Cultural Computing, Shanghai, China, 30 October – 2 November 2014
16. [2014] Awards Committee (Innovation Award & Service Award), ACM SIGKDD, New York, USA, 24-27 August 2014
17. General co-Chair Workshop of Data Analytics for Targeted Healthcare, Tainan, Taiwan, 13 May 2014
18. [2013] Program co-Chair 9th International Conference on Advanced Data Mining and Applications (ADMA), Hangzhou, China, 13-16 December 2013
19. [2013] Program co-Chair Canadian Artificial Intelligence Conference, Regina, Canada, May 2013
20. [2012] Program co-Chair Educational Data Mining Conference, Chania, Greece, June 2012
21. [2011] General co-Chair IEEE International Conference on Data Mining, Vancouver, Canada, December 2011
22. [2010] Track co-Chair, Special Track on Data Mining ACM Symposium on Applied Computing (ACM SAC), Sierre, Switzerland, 22-26 March 2010
23. [2009] Vice Chair, IEEE International Conference on Data Mining, Miami, Florida, USA, 6-9 December 2009
24. [2009] Exhibits and Demos Chair, ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Paris, France, June 2009
25. [2009] International co-Chair, International Conference on Computational Aspects of Social Networks (CASoN), Fontainebleau, France, June 2009
26. [2009] Track co-Chair, Data Mining Track at the ACM Symposium on Applied Computing (ACM SAC'09), Honolulu, USA, 8-12 March 2009
27. [2008] Honorary General Chair, EGC: Extraction et Gestion des Connaissances, Sophia Antipolis, France, 29 January – 1 February 2008
28. [2008] Registration Chair, ACM SIGMOD/PODS International Conference on Management of Data and Symposium on Principles of Database Systems, Vancouver, Canada, 9-12 June 2008
29. [2008] Area Chair, ECML/PKDD Conference – The 19th European Conference on Machine Learning, and The 12th European Conference on Principles and Practice of Knowledge Discovery in Databases, Antwerp, Belgium, 15-19 September 2008
30. [2008] Track co-Chair, Data Mining Track at the ACM Symposium on Applied Computing (ACM SAC'08), Fortaleza, Brazil, 16-20 March 2008
31. [2008] Co-Chair, 10th WEBKDD International Workshop: Web Mining and Web Usage Analysis, in conjunction with KDD-2008: 14th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Las Vegas, USA, 24 August 2008
32. [2007] Program co-Chair, IEEE International Conference on Data Mining (ICDM), Omaha, USA, 28-31 October 2007
33. [2007] General co-Chair, 3rd International Conference on Advanced Data Mining and Applications (ADMA), Harbin, China, 13-15 August 2007
34. [2006] Tutorials co-Chair, 10th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2006), Singapore, 9-12 April 2006

35. [2006] Program co-Chair, Second International Conference on Advanced Data Mining and Applications (ADMA), Xi'an, China, 14-16 August 2006
36. [2005] Co-Chair, 7th WEBKDD International Workshop: Taming Evolving, Expanding and Multi-Faceted Web Clickstreams, in conjunction with KDD-2005: 11th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Chicago, USA, 21 August 2005
37. [2005] Sponsorship Chair SIAM International Conference on Data Mining, Newport Beach, USA, 21-23 April 2005
38. [2005] General Chair - North America, 3rd International Human.Society@Internet Conference, Tokyo, Japan, 27-29 July 2005
39. [2003] Co-Chair, 5th WEBKDD International Workshop: Web Mining as a Premise to Effective and Intelligent Web Applications, in conjunction with KDD-2003: 9th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Washington, USA, 24 August 2003
40. [2003] General Chair - North America, 2nd International Human.Society@Internet Conference, Seoul, Korea, 18-20 June 2003
41. [2003] Publicity Chair, 9th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Washington, USA, 24-27 August 2003
42. [2003] Webmaster, 9th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Washington, USA, 24-27 August 2003
43. [2002] Publicity Chair, 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 23-26 July 2002
44. [2002] Proceedings Chair, 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 23-26 July 2002
45. [2002] Webmaster, 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 23-26 July 2002
46. [2002] Local Arrangement Chair, 6th International Database Engineering and Applications Symposium (IDEAS'02), Edmonton, Canada, 17-19 July 2002
47. [2002] Co-Chair, 3rd International Workshop on Multimedia Data Mining (MDM/KDD2002) in conjunction with KDD-2002: 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 22 July 2002
48. [2002] Co-Chair, 4th WEBKDD International Workshop: Web Mining for Usage Patterns and User Profiles in conjunction with KDD-2002: 8th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Edmonton, Canada, 22 July 2002
49. [2002] Co-Chair, International Workshop on Knowledge Discovery in Multimedia and Complex Data (KDMCD'02) in conjunction with PAKDD-2002: 6th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Taipei, Taiwan, 6 May 2002
50. [2001] Co-Chair, 2nd International Workshop on Multimedia Data Mining (MDM/KDD2001) in conjunction with KDD-2001: 7th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, San Francisco, USA, 26-29 August 2001
51. [2000] Co-Chair, Workshop on Multimedia Data Mining (MDM/KDD2000) in conjunction with KDD-2000: 6th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining, Boston, USA, 20-23 August 2000

## 7.4 Serving on Program Committees

Served on the program committee of a multitude of international conferences and workshops, including:

AAAI Association for the Advancement of Artificial Intelligence
ACM CIKM Conference on Information and Knowledge Management
ACM SIGKDD International Conference on Knowledge Discovery and Data Mining
ADMA International Conference on Advanced Data Mining and Applications
CAIAC Canadian Conference on Artificial Intelligence
CIIA International Conference on Computational Intelligence and Its Applications
DAWAK International Conference on Data Warehousing and Knowledge Discovery
DEXA International Database and Expert Systems Applications
ECML/PKDD European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases
EDM International Conference on Educational Data Mining
EMNLP Empirical Methods in Natural Language Processing
ICCCT International Conference on Computer and Communication Technology
ICML International Conference on Machine Learning
IEA /AIE International Conference on Industrial, Engineering, and Other Applications of Applied Intelligent Systems
IEEE Big Data
IEEE DSAA International Conference on Data Science and Advanced Analytics
IEEE ICDM International Conference in Data Mining
IEEE ICDE International Conference on Data Engineering
IJCAI International Joint Conference on Artificial Intelligence
KDD International Conference on Knowledge Discovery Data Analysis
MCETECH International Multidisciplinary Conference on e-Technologies
PAKDD Pacific-Asia Conference on Knowledge Discovery and Data Mining
SIAM International Data Mining Conference
SIMBig International Conference on Information Management and Big Data
WISE International Conference on Web Information System Engineering
WWW International World Wide Web Conference

## 7.5 Reviewing Journal Paper

- ACM Computing Surveys, published by ACM
- ACM Transactions on Knowledge Discovery from Data (TKDD), published by ACM
- IEEE Transaction on Knowledge and Data Engineering (TKDE), published by IEEE Press
- Communications of the ACM, published by ACM
- Computational Intelligence: An International Journal, published by Blackwell Publishers
- Distributed and Parallel Databases: An International Journal, published by Kluwer Academic Publishers
- Data Mining and Knowledge Discovery Journal, published by Kluwer Academic Publishers

- Distributed and Parallel Databases: An International Journal, Special Issue on Parallel and Distributed Data Mining, published by Kluwer Academic Publishers
- Health Informatics Journal, published by SAGE Publications
- INFORMS Journal on Computing, Special Issue on Mining Web-based Data for e-Business Applications, published by Institute for Operations Research and the Management Sciences
- Journal of AI and Data Mining, published by Shohrood University of Technology
- Journal of Social Network Analysis and Mining, published by Springer
- Journal on Data and Knowledge Engineering, Special Issue on Web Mining and Warehousing, published by Elsevier
- Knowledge and Information Systems, an International Journal, published by Springer Verlag
- The International Journal on Very Large Data Bases, published by Springer Verlag

## 7.6 Reviewing Research Grant Applications for Funding Agencies

- CIHR AI Strategic Committee
- NSERC, Natural Sciences and Engineering Research Council of Canada, Strategic Grant Program, 2012
- NSF, National Science Foundation, USA, international research fellowship program
- NSERC, Natural Sciences and Engineering Research Council of Canada, reviewed proposals from the Supplemental Strategic Grant Program, 2007 (Selection Committee member for the Advanced Communications and Management of Information program)
- FQRNT, Fonds Québécois de la Recherche sur la Nature et les Technologies, Program Projet de recherche en équipe, 2007 (Selection Committee member)
- NSERC, Natural Sciences and Engineering Research Council of Canada, Reviewed proposals from the Discovery Grant Program, 2003, 2004, and 2005
- The Research Council of Norway, reviewed a proposal from the Division of Science and Technology, 2003
- NSERC, Natural Sciences and Engineering Research Council of Canada, reviewed proposal from the Collaborative Health Research Projects Program, 2003
- NSERC, Natural Sciences and Engineering Research Council of Canada, reviewed proposals from the Research Partnerships Program, 2002, 2003
- Research proposal from the National University of Singapore, 2001
- NSF, US National Science Foundation, reviewed research proposals submitted to the Data Mining Panel, 1998
- Invited by US-National Science Foundation to evaluate proposals submitted to the Information and Intelligent Systems Division, 2000, 2001
- Presented before the NSERC External Panel evaluating Phase II of the TeleLearning NCE, Vancouver, February 2001

## 7.7 Reviewing Books for Publishers

- Review of "Java Data Mining: Strategy, Standard and Practice", 2nd edition, by Mark Hornick, Sunil Venkayala, and Erik Marcade for Morgan Kaufmann Publishers, 2007

- Review of "Data Mining, Concepts and Techniques", 2nd edition, by J. Han and M. Kamber for Morgan Kaufmann Publishers, 2005
- Review of "Fundamentals of Multimedia", by Ze-Nian Li and Mark Drew for Prentice Hall Publishers, 2003
- Evaluation of one book proposal for Morgan Kaufmann Publishers, 2002
- Review of "Data Mining, Concepts and Techniques", by J. Han and M. Kamber for Morgan Kaufmann Publishers, 2000

## 7.8 Member of Professional Societies

1. Association for Computing Machinery (ACM), since 1986 (Senior member)
2. IEEE and IEEE Computer Society (IEEE/CS), since 1987 (Senior member)
3. ACM Special Interest Group on Management of Data (SIGMOD)
4. ACM Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD)
5. Association for the Advancement of Artificial Intelligence (AAAI)