

## CURRICULUM VITAE

### **MATWIN, Stan**

#### **Career Highlights:**

Stan Matwin is a Canada Research Chair (Tier 1) and Professor in the Faculty of Computer Science, Dalhousie University, and the Director of the Institute for Big Data Analytics at Dalhousie. He is also a Distinguished University Professor (Emeritus) at the School of Electrical Engineering and Computer Science, University of Ottawa. His research is in machine learning, data mining, text mining, and their applications. Author and co-author of 250 research papers, Stan has worked at universities in Canada, the U.S, Europe, and Latin America. Former president of the Canadian Artificial Intelligence Society (CSCSI) and of the IFIP Working Group 12.2 (Machine Learning). Founding Director of the Graduate Certificate in Electronic Commerce at University of Ottawa, former Chair of the NSERC Grant Selection Committee for Computer Science, and member of the Board of Management of the Centre of Excellence for Communications and Information Technology. Elected member of the Board of Directors of CS-Can, an organization representing externally the Canadian academic Computer Science community. Fellow of the European Coordinating Committee for Artificial Intelligence. Fellow and recipient of the Distinguished Service Award of the Canadian Artificial Intelligence Society. Recipient of the CITO Champion of Innovation Award. Program Committee Chair and Area Chair for a number of international conferences in AI and Machine Learning, General Chair of ACM SIGKDD 2017 (world's premier Data Mining research conference, 2000 participants) in Halifax, Canada. Served as a member of the Editorial Boards of the leading journals in his field. One of the founders of Distil Interactive Inc. and Devera Logic Inc., Stan Matwin has significant experience and interest in innovation and technology transfer.

Full Professor and Canada Research Chair (Tier 1), Dalhousie University  
Distinguished University Professor (Emeritus), University of Ottawa  
Professor, Institute of Computer Science, Polish Academy of Sciences, Warsaw, Poland

#### **DEGREES:** designation, institution, department, year

State Professorship, Republic of Poland, 2012  
Distinguished University Professor, University of Ottawa, 2011  
D.Sc. (Habilitation), Polish Academy of Sciences, Institute of Computer Science, 2010  
Ph.D., Warsaw University, Department of Computer Science, 1977.  
M.Sc., Warsaw University, Department of Computer Science, 1972.

#### **EMPLOYMENT HISTORY:** dates, rank/position, department, institution/firm

July, 2013	Director, Institute for Big Data Analytics, Dalhousie University
January, 2013	Canada Research Chair (Tier 1) in Visual Text Analytics and tenured Full Professor, Dalhousie University
August 1992- June 2011	Tenured Full Professor, University of Ottawa Visiting Professor, Erasmus Mundus Masters in Data Mining and Knowledge Management, Universita Politecnica de Catalunya
Mar. – Apr. 2010	Visiting Professor, Università delli Studi di Bari, Dipartimento di Informatica

Sep. 2008 – Aug. 2009	Visiting Professor, L'Institut d'Investigació en Intel·ligència Artificial (IIIA) Consejo Superior de Investigaciones Científicas (CSIC), Barcelona, Catalunya, Spain
2006 -	Adjunct Research professor, Institute of Cognitive Science, Carleton University
November 2004 –	Foreign Professor, Institute in Computer Science, Polish Academy of Sciences
Aug. 2001-Mar. 2002	Visiting professor, Université de Paris XI, Laboratoire de recherché en informatique (LRI)
April 2002-May2002	Visiting professor, Université de Paris VI, Laboratoire d'informatique de Paris 6 (LIP6)
July 2000-July 2001	Director, Graduate Certificate in Electronic Commerce, University of Ottawa
July 1998-June 2000	Director, Ottawa-Carleton Institute for Computer Science
May 97-	Director, Graduate Studies in Computer Science, School of Information Technology and Engineering
July 1996-	Adjunct Research Professor, Institute for Interdisciplinary Studies: Cognitive Science, Carleton University
July 1996-May 1997	Associate Chair (Graduate Studies), Department of Computer Science, University of Ottawa
February-April 1995	UNESCO Distinguished Lecturer in Science and Sustainable Development, Universidad de Sao Paulo, ICMSC , Brazil
October-November 91	Visiting scientist, AI Branch, NASA Ames Research Center, Mountain View, California.
May 91-	Professor, Department of Computer Science, University of Ottawa, Director of the Ottawa Machine Learning Group.
January 88-June 88	Visiting Professor, Department of Computer Science, George Mason University, Fairfax, Virginia; member of Machine Learning and Inference Group.
May 1984-May 1991	Associate Professor, Department of Computer Science, University of Ottawa.
Sept. 1981-	Assistant Professor, Department of Computer Science, University of Ottawa.
Jan. 1982-May 83	Part time lecturer, Certificat d'Informatique, Université du Québec à Hull.
Sept. 1980-Sept. 1981	Assistant Professor, School of Computer Science, Acadia University, Nova Scotia.
May 1980-Sept.1980	Lecturer, Department of Computer Science, York University, Toronto.
July 1979-Aug. 80	Assistant Professor, Department of Computer Science, University of Guelph, Ontario.
Sept. 1975-July 1979	Assistant Professor, Department of Computer Science, Warsaw University, Warsaw, Poland.

## **SCHOLARLY AND PROFESSIONAL ACTIVITIES**

### **Editorial Boards:**

2013-	Area Editor, IEEE Transactions on Data and Knowledge Engineering
2012 -	Member, Editorial Board, Journal of Intelligent Information Systems (Springer)

- 2010 - Member, Editorial Board, International Journal of Social Network Mining (IJSNM)
- 2005- 2006 Member, Editorial Board, Journal of Artificial Intelligence Research (THE premier Artificial Intelligence journal)
- 2003- Member, Editorial Board, Computational Intelligence Journal
- 2002-2007 Member, Editorial Board, Machine Learning Journal
- 2003- Member, Editorial Board, Intelligent Data Analysis Journal
- 1990-1994 Member and Chair, Editorial Board, IEEE Expert

**Awards:**

- 2012 Best Paper Award, CASCON 2017
- 2012 Distinguished University professor / Professeur éminent de l'université, University of Ottawa
- 2011 CASCON Ten Years Most Influential Paper Award
- 2011 Fellow, European Coordinating Committee for Artificial Intelligence
- 2011 Fellow, Canadian Artificial Intelligence Association
- 2011 George S. Glinski Award for Excellence in Research, University of Ottawa, Faculty of Engineering
- 2010 Distinguished Service Award of the Canadian Artificial Intelligence Association
- 2003 Champion of Innovation, Communications and Information Technology Ontario
- 1995 UNESCO Distinguished Lecturer in Science and Engineering, University of Sao Paulo, Brazil

**Grant selection Panels, Boards of Directors, Service to the Community:**

- 2017 - Member of the Board of the Data Science PhD Program, Univ. of Pisa, Italy
- 2017 - Elected Board Member CS Can / Info Can
- 2014 Member, ERCIM Expert Group on Big Data Analytics
- 2012 Member, Scientific Advisory Council, Southern Ontario Computing Innovation Platform (SOSCIP)
- 2010 Member, Scientific Steering Committee, Polish Association for Artificial Intelligence (PSSI)
- 2010 Member, Evaluation Group 1507 (Computer Science), Natural Sciences and Engineering Research Council
- 2007-2009 Reviewer, Future Information Technologies Program/FET7, Information Society Technologies, European Commission.
- 2004-2005 Chair, Grant Selection Committee for Computer Science B, Natural Sciences and Engineering Research Council
- 2003 - Member, College of Reviewers, NSERC Special Research Opportunities program
- 2003 Member, National Science Foundation Panel on Creating New capabilities in Learning from Data (ITR)
- 2003-2004 Chair, Research Tools and Instruments Committee (Computer Science), Natural Sciences and Engineering Research Council
- 2002- Director, Information Technology Cluster, Ontario Research Network on Electronic Commerce
- 2002-2005 Member, Grant Selection Committee 331 (Computer Science), Natural Sciences and Engineering Research Council

- 2002- Member, Board of Directors, Communications and Information Technology Ontario (Division of the Ontario Centers of Excellence)
- 2001- Member, College of Reviewers, Canada Research Chairs Program
- 1997 Member, NSERC Selection Committee for the Ph.D. Dissertation Prize in Sciences and Engineering
- 1994-96 President, Canadian Society for the Computational Studies of Intelligence (currently renamed as CAIAC)
- 1990-94 Member and Chair, Editorial Board, IEEE EXPERT

**Program Committees (since 1998):**

- 2017 General Co-Chair, ACM SIGKDD Knowledge Discovery and Data Mining, 2017, Halifax, NS
- 2016 General co-Chair, IEEE Data Science and Applications, Montreal
- 2014 Member, Program Committee, IEEE International Conference on Data Mining 2014, Shenzhen, China
- 2014 Area Chair, European Conference on Machine Learning and Principled Knowledge Discovery in Databases 2014, Nancy, France
- 2014 Member, Program, Committee, ICML 2014, Beijing, China
- 2014 Member, Program Committee, Member, Program Committee, Canadian AI Conference, Montreal, Canada, May 2014
- 2014 Member, Program Committee, 2014 International Conference on Active Media Technology, Warsaw, Poland
- 2013 Member, program Committee, ICML, Atlanta, GA, July 2013
- 2013 Member, Program Committee, American Association for Artificial Intelligence (AAAI), Bellevue, WA, July 2013
- 2013 Member, Program Committee, Canadian AI Conference, Regina, Canada, May 2013
- 2012 Member, Program Committee, Workshop on New Methods for Mining Complex Patterns, ECML 2012, Bristol, UK
- 2012 Member, Program Committee, Canadian Artificial Intelligence Conference, Toronto, 2012.
- 2012 Member, Program Committee, International Workshop on Mining Social Network Dynamics, Lyon, France, 2012.
- 2012 Member, Program Committee, Conférence d'apprentissage (Cap), Nancy, France, 2012.
- 2012 Member, Program Committee, AI and Web Track, Toronto, AAAI 2012.
- 2012 Member, Program Committee, International Conference on Machine Learning (ICML), Edinburgh, Scotland, 2012.
- 2012 Member, Program Committee, ECML PKDD, Bristol England, 2012.
- 2012 Member, Program Committee, Workshop on Class Imbalance: Past, Present and Future, ICML 2012, Bristol.
- 2012 Member, Program Committee, Mining Complex and Stream Data in ADBIS, Poznan, 2012.
- 2012 Member, Program Committee, Conférence d'Extraction et Gestion des Connaissances 2012, Bordeaux, France, 2012.
- 2011 Member, Program Committee, International Conference on Man-Machine Interactions 2011, The Beskids, Poland, October 2011
- 2011 Area Chair, ECML/PKDD 2011, Athens, Greece, September 2011
- 2011 Member, Program Committee, 20<sup>th</sup> ACM Conference of Information and Knowledge Management (CIKM 2011), Glasgow, August 2011

- 2011 Member, Program Committee, 23<sup>rd</sup> Int'l Conference on Inductive Logic Programming, UK, August 2011
- 2011 Member, Program Committee, American Association for Artificial Intelligence, San Francisco, August 2011
- 2011 Member, Program Committee, International Conference on Machine Learning, Bellvue, WA. July 2011
- 2011 Member, Program Committee, Conférence d'apprentissage (Cap 2011), Chambéry, France, May 2011
- 2010 Member, Program Committee, International Conference on Data Mining, Sydney, Australia, December 2010
- 2010 Member, Program Committee, Discovery Science 2010, Canberra, Australia, 2010
- 2010 Member, Program Committee, Conférence d'apprentissage (Cap 2010), Clermont-Ferrand, France, May, 2010
- 2010 Member, Program Committee, ECML/PKDD 2010, Barcelona, Spain, Sep. 2010
- 2010 Member, Program Committee, International Conference on Rough Sets and Current Trends in Computing (RSCTC 2010, Warsaw, Poland, June 2010
- 2010 Member, Program Committee, Inductive Logic Programming 2010, Florence, Italy, June 2010
- 2010 Member, Program Committee, European Conference on AI, Lisbon, Portugal, August 2010
- 2010 Member, Program Committee, Brazilian Symposium on Artificial Intelligence SBIA 2010, São Bernardo do Campo – Brazil, Oct. 2010
- 2009 Member, Program Committee, CAEPIA 2009 (Spanish Artificial Intelligence Society Conference), Seville, November 2009
- 2009 Member, Program Committee, Inductive Logic Programming, Paris, July 2009
- 2009 Area Chair, ECML/PKDD 2009, Bled, Slovenia, Sep. 2009
- 2009 Member, Program Committee, Computer Linguistic Applications, Mragowo, Poland, October, 2009
- 2009 Member, Program Committee, SIGKDD 2009, Paris, July 2009.
- 2008 Member, Program Committee, SBIA 2008, 19<sup>th</sup> Brazilian Symposium on Artificial Intelligence, Salvador, October 2008
- 2008 Member, Program Committee, 18<sup>th</sup> International conference on Inductive Logic Programming, Prague, September 2008
- 2008 Member, Program Committee, European Conference on Machine Learning and European Conference on Principles and practice of Knowledge Discovery in Databases, Antwerp, September 2008
- 2008 Member, Program Committee, Feature Selection in Data Mining and Knowledge Discovery (FSDM08), Antwerp, September 2008
- 2008 Member, Program Committee KDD 2008, 14<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Las Vegas, August 2008
- 2008 Member, Program Committee, 2<sup>nd</sup> ACM SIGKDD International Workshop on Privacy, Security, and Trust in KDD, Las Vegas, August 2008
- 2007 Co-Chair, Program Committee, European Conference on Machine Learning and Principles of Discovery in Databases, Warsaw, Poland, 2007
- 2006 Area Chair, European Conference on Machine Learning/Principles of Knowledge Discovery in Databases, Berlin, 2006
- 2006 Program Committee, International Conference on Machine Learning, Pittsburgh, PA, 2006
- 2006 Program Committee, International Conference on Data Mining, Hong Kong, 2006

- 2006 Program Committee, International Workshop on Privacy Aspects of Data Mining, Hong Kong, 2006
- 2006 Program Committee, European Conference on AI, Trentino, Italy, 2006
- 2006 Program Committee, ACM Conference on Information and Knowledge Management,
- 2005 Member, Program Committee, American Association for Artificial Intelligence, Pittsburgh, PA, 2005
- 2005 Member, Program Committee, Artificial Intelligence 2005, Annual Conference of the Canadian Society for the Computational Studies of Intelligence, Victoria 2005
- 2005 Member, Program Committee, 22nd International Conference on Machine Learning, Bonn, Germany
- 2005 Member, Program Committee, International Conference on Inductive Logic Programming, Bonn
- 2005 Member, Program Committee, International Workshop on Feature Selection for Data Mining, Newport Beach, CA.
- 2005 Member, Program Committee, International Symposium on Methodologies for Intelligence Systems, Saratoga Springs, NY.
- 2005 Member, Advisory Board, Tenth International Conference on Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing (RSFDGrC 2005).
- 2004 Co-Chair, Predictive Software Models Workshop, Software Technology and Engineering Practice, Chicago 2004
- 2005 Member, Program Committee, AAI 2005
- 2004 Workshop Chair, International Conference on Data Mining, Bristol, UK
- 2004 Member, Program Committee, 21st International Conference on Machine Learning, Banff, Canada
- 2004 Member, Program Committee, European Conference on Machine Learning, Pisa, Italy
- 2004 Member, Program Committee, Principles of Knowledge Discovery in Databases, Pisa, Italy
- 2004 Member, Program Committee, Artificial Intelligence 2004, Annual Conference of the Canadian Society for the Computational Studies of Intelligence, London 2004
- 2003 Editor, Special Issue of Machine Learning journal on Inductive Logic Programming
- 2003/04 Member of the Board of Directors, Communications and Information Technology Ontario
- 2003 Membre, Comité de programme, Conférence d'apprentissage, plateforme Association française d'intelligence artificielle, Laval
- 2004 Area Chair, 20th International Conference on Machine Learning, Washington, D.C.
- 2003 Member, Program Committee, European Conference on Machine Learning, Dubrovnik, Croatia
- 2003 Member, Program Committee, Principles of Knowledge Discovery in Databases, Dubrovnik, Croatia,
- 2004 Member, Program Committee, International Symposium on Methodologies for Intelligence Systems, Maebashi City, Japan
- 2003 Member, Program Committee, International Conference on Inductive Logic Programming, Szeged, Hungary
- 2002. Program Committee co-Chair, Inductive Logic Programming Workshop, Sydney, 2002
- 2002. Member, Program Committee, IEEE Conference on Knowledge Discovery in Databases
- 2002. Member, Program Committee, International Conference on Principles of Knowledge Discovery in Databases, Helsinki
- 2002. Member, Program Committee, International Symposium on the Methodologies for Intelligent Systems, Lyon, France

- 2002 Member, Program Committee, European Conference on Machine Learning, Helsinki
- 2001 Area Chair, International Conference on Machine Learning 2001
- 2001 Member, Program Committee, Inductive Logic Programming Conference 2001
- 2001 Member, Program Committee, European Conference on Machine Learning, Freiburg, 2001
- 2001 Member, Program Committee, Principles of Knowledge Discovery in Databases, Freiburg, 2001
- 2001 Membre, Comité du programme, Conférence d'apprentissage, Grenoble 2001.
- 2001 Program Committee co-Chair, AI-2001, Ottawa
- 2000 Member, Program Committee, European Conference on Machine Learning 2000, Barcelona, Spain
- 2000 Member, Program Committee, AI2000, Montreal, Canada
- 2000 Member, Program Committee, Inductive Logic Programming Conference, London, UK.
- 1999 Member, Program Committee, PACLING 98, Waterloo, Canada
- 1999 Member, Program Committee, International Conference on Machine Learning, Bled, Slovenia
- 1999 Member, Program Committee, Inductive Logic Programming Workshop, Bled, Slovenia
- 1998 Member, Program Committee, European Conference on Machine Learning, Chemnitz, Germany

**Referee for:**

IEEE PAMI, IEEE SMC, Machine Learning, IEEE TKDE, IEEE Expert, IJCAI, AAAI, ECML, NSERC, NSF, FCAR

Member of the Senate, University of Ottawa, 1999-2000

Member of Promotion and Tenure Committees, departmental and faculty level, 1993-1996, 1997-2001, 2002-2005

**GRADUATE SUPERVISIONS:** career number - M/D; completed/in progress

Career Number:

Completed:	25 M.Sc.,	16 Ph.D.	7 Post-Doc
In progress:	2 M.Sc.,	9 Ph.D	

**GRADUATE STUDENTS - Completed their degrees** (includes Post-doctoral fellows)

1. David Samuel, MSc, On the use of vector representation for improved accuracy and currency of Twitter POS Tagging, Dalhousie University, 2016.
2. Lulu Huang, MSc, Active Learning with Visualization, Dalhousie University, 2016.
3. Mohammed (Parsa) Sarshar, MSc, Analyzing Large Scale Wi-Fi Data Using Supervised and Unsupervised Learning Techniques, Dalhousie University, 2016.
4. Elnaz Bigdeli, Clustering with Mixed Gaussian Models, University of Ottawa. 2016
5. Yasser Jafer, PhD, Using Feature Selection to Improve the Utility of Differentially Private Data Publishing, co-supervised with M. Sokolova , University of Ottawa
6. Amilcar Soares, Postdoctoral Fellow, 2016 –
7. Aaron Gerow, Postdoctoral Fellow (Killam Fellowship), 2016 –

8. Farid Seifi, PhD, co-supervised with N. Japkowicz and C. Drummond, Improving Classification and Attribute Clustering: An Iterative Semi-supervised Approach, University of Ottawa, 2015
9. Erico Neves de Souza, Post-doctoral Fellow, 2014-
10. Mohammed Tuhin, Post-doctoral Fellow, 2014
11. Rob Warren, Post-doctoral Fellow, 2013-
12. Kambiz Ghazinour, Post-doctoral Fellow, 2012 –
13. Vera Sazonova, Post-doctoral Fellow, 2012-
14. Nathan Lapierre, M.Sc., “A Distributed Method for Fast Force-directed Layout of Large Scale-free Network Graphs co-supervised with Anatoliy Gruzd (Ryerson U.), 2015
15. Morvarid Sehatkar, Ph.D., .,” Towards a Privacy Preserving Framework for Publishing Longitudinal Data”, 2014.
16. Houman Abbassian, Ph.D., “Inner Ensembles: Using Ensemble Methods in Learning Step “co-supervised with N. Japkowicz and C. Drummond, 2014.
17. Erico Neves De Souza, Extending AdaBoost: Varying the Base Learners and Modifying the Weight Calculation, 2014.
18. Claudivan Lopes, Secure Data Warehouse Querying in the Cloud Environment, Brazilian “sandwich” year, 2014
19. Amilcar Soares, PhD, Clustering of Trajectories of Moving Objects,, Brazilian “sandwich” year, 2013
20. Bruno Moreno, Modeling User Behavior in Location-based Social Networks, Brazilian “sandwich” year 2013
21. Xuan Liu, M. A. Sc., « An Ensemble Method for Large Scale Machine Learning with Hadoop MapReduce”, 2014
22. Amir Hossein Razavi, Ph.D., 2006-2012, Automatic Text Ontological Representation and Classification via Fundamental to Specific Conceptual Elements
23. William Klement, Ph.D., 2004-2010, Evaluating Machine Learning Methods: scored Receiver Operating Characteristics (sROC) Curves, co-supervised with N. Japkowicz
24. M. Zhilin, PhD., 2004-2010, Annotation Concept Synthesis and Enrichment Analysis: A Logic-based Approach to the Interpretation of High-throughput Biological Experiments, co-supervised with M. Turcotte
25. Marcelo Keese Albertini, “sandwich” PhD student from USP, Brazil, 2010, Mining high-dimensional Temporal Data
26. Francesc Massanes, Feb. – Aug. 2009, M.Sc. student at Universita Polytecnica de Catalunya, co-supervised with Dr. Josep Larriba Pey
27. Luc Beaudoin, MSS, 2005-2009, Autonomous Computer Network Defence Using Reinforcement Learning, graduated Feb. 2009
28. Huang, Jin, Post Doc, 2007-2009, Machine Learning with Insufficient Training Sets
29. Su, Jiang, Post Doc (NSERC PDF), 2007-2009, Active Learning, Instance Selection, Bayesian Learning, semi-supervised learning
30. Kouznetsov, A., Post Doc, Machine Learning from Text Data, medical applications, text mining (2007-2009)
31. Sayyad Shirabad, Jelber, Post-doc, 2004-2004, Semi-supervised learning, Active Learning, Instance selection, Data mining in software engineering.
32. Caropreso, Fernanda, Ph.D., Extending the Bag of Words Representation for Text Classification, 2002-2008, graduated May 2008
33. Nadeau, David, Ph.D., Semi-Supervised Named Entity Recognition: Learning to Recognize 100 Entity Types with Little Supervision, 2004-2007, graduated November 2007 (co-supervised with P. Turney)



34. Ma, Yimin, MCS, Active Learning in Information Extraction, 2004 – 2007, graduated Oct. 2007.
35. Zhan, Justin, Ph.D., Privacy-preserving Collaborative Data Mining, 2003-2006, graduated in Aug, 2006
36. Mucsi-Nagy, Agnes, MCS, Digital Fingerprinting for sharing of Confidential Data, 2003-2006, graduated in Aug. 2006.
37. Dufay, Guillaume, Post Doc. Formal Methods in Application-Centric Privacy, 2004-2005
38. Hernadvolgyi, Istvan, Post Doc, Theorem Proving for Data Privacy Applications, 2004-2005
39. Ziyang Liu, MSS, Data Mining to Identify Gene Regulatory Networks in Time Series Gene Expression Data, 2002-2006, graduated in Feb. 2007.
40. Kiritchenko, Svetlana, Ph.D., Text Classification with Hierarchical Categories, 2001-2006
41. Armour, Quintin, M.C.S. Named Entity in Text classification (co-supervision with dr. Japkowicz), 2003-2005
42. Rong Tang, MCS, Transaction Models in Peer-to-Peer Databases, (co-supervised with Dr. Kiringa), 2003-2005
43. Souza, Jeffreson, Ph. D., A Hybrid Feature Selection Algorithm, first registration 2000, graduated in 2004
44. Alphonse, Erick, Ph.D., Literal Selection in ILP, 2000-2003
45. Zaluski, M., MCS, Case-based Knowledge Acquisition from Text, first registration 1999, graduated in 2004
46. Widlak, Magda, Effect of Word Sense Disambiguation on the Performance of Text Classification, M.Sc, first registration 1999, graduated in 2003
47. Drummond, Chris, Post Doc., Learning with the use of Background Knowledge, 1999 - 2002
48. Letourneau, Sylvain Ph. D., An Interactive Method for The Analysis and Removal of Attribute Dependencies in Data Mining, first registration 1998, graduated in 2003
49. Sayyad Shirabad, Jelber, Ph.D., Data Mining in Support of Software Maintenance Activities, first registration 1997, graduated in 2003
50. Morin, Johanne, Ph.D., Learning Relational Clichés, first registration 1993, graduated 1999.
51. Ouerd, Messaouda, Ph.D., Learning in belief networks and its application to distributed databases. First registration 1993, graduated 2000, joint supervision with Dr. J. Oommen, Carleton University.
52. Fontaine, Martin, M.C.S., Text Classification with Illegible Documents, , May 2000.
53. Rios, Riverson, Ph.D., Learning Recursive Definitions in Prolog, first registration 1994, graduated 1998
54. Charlebois, Daniel, Ph.D., A Planning System Based on Plan Reuse and its Application to GIS and Remote Sensing, first registration 1990, graduated 1997
55. Guiming Chen, M.C.S., Fuzzy FOIL: A Fuzzy Logic Based Inductive Logic Programming System, first registration 1993, graduated 1996
56. Lapointe, Stéphane, M.C.S., Induction of Recursive Logic Programs, first registration 1990, graduated 1992
57. Massey, Louis, M.C.S., A Lazy Text-based Approach to Foundational Knowledge Acquisition, first registration 1993, graduated 1995
58. Ould-brahim, Hamid, M.C.S., SAFIR: Analogy-based System for Database Definition and Query Reuse, first registration 1990, graduated 1993

59. Rouget, Thierry, M.C.S., Learning Explainable Concepts in Presence of a Qualitative Model, first registration 1993, graduated 1995
60. Sun, Tei-Wei, M.C.S., DEPARS: Design Pattern Recognition System, first registration 1993, graduated 1997
61. Scott, Sam, M.C.S., Feature Engineering for a Symbolic Approach to Text Classification, first registration 1995, graduated 1998
62. Pelletier, Bertrand, Ph.D., Unsupervised Learning of Planning Knowledge, first registration 1989, graduated 1994, Carleton University, co-supervised with B. Pagurek
63. Affa, Ahmad, M.C.S., Case-based Approach to Software Reuse, first registration 1990, graduated 1995, Carleton University
64. Salembier-Pelletier, Maude, M.C.S., Learning of Disjunctive Concepts with EBL, 1990.
65. Plante, Boris, MCS, Révision d'une Théorie du Domaine par des Cas Marginaux, 1990.
66. Genest, Jean, MCS, Building Software Specifications Using EBL with Incomplete Theories, 1990.
67. Morin, Johanne, M.C.S., Apprentissage Incrémental de Contraintes Procédurales par une Méthode Mixte, 1990.
68. Quéant, Claude, M.C.S., A QUIZ Apprentice, 1986.
69. Charlebois, Daniel, M.C.S., Scriptes Comme un Mécanisme de Base d'un Système Expert, 1989.
70. Forsythe, Ken, M.C.S., Intelligent Backtracking in Automatic Theorem Proving, 1983.

#### **STUDENTS CURRENTLY SUPERVISED:**

1. Bala Tirunelveli, M.Sc, Dalhousie
2. Sima Sharifi Rad, Ph.D., Dalhousie
3. Habibeh Naderi, Ph.D. Text Analytics, Dalhousie.
4. Ahmed Persanghader, Ph.D., Text Mining, Dalhousie
5. Lubna Eljahu, Ph.D., Dalhousie
6. Ximin Liu, Ph.D., Dalhousie
7. Fateha Bappee, Ph.D., Dalhousie
8. Xiang Jiang, Ph.D., Dalhousie (co-supervised with D. Silver, Acadia)
9. Behrouz Haj Soleimani, Ph.D., Clustering of Moving Objects' Trajectories, started Nov. 2013 (Dalhousie)
10. Gurcan Gercek, Ph.D. Big Data Privacy and Security (co-supervised with N. Zincir-Heywood), started Sep. 201, Dalhousie
11. Bo Liu, M.Sc. Detecting Anomalies in Maritime Traffic, started, Sep. 2014, Dalhousie
12. Lulu Wang, Undergraduate Thesis, Visualization of Socio-Economic Data, Dalhousie
13. Vineeth Varghese, Mining of Complex Marketing POS Data, M.A.Sc. project, Dalhousie
14. Sreejith Gopalakrishnan, Classification of EEC Data, M.A.Sc., Dalhousie
15. Eman Alyami, Influence of Social Media on Women's Political Participation in the Middle East, Interdisciplinary Ph.D., started Sep. 2013
16. Sobhani, Parinaz, PhD, Measuring social Media Impact of Medical Research Announcements, started January 2013, co-supervised with M. Sokolova
17. Benjamin Wang, PhD., Imbalanced Multi-Instance Classification with Applications to the Detection of Mine-like Objects", started September 2010, co-supervised with N. Japkowicz
18. Leanne Seaward, PhD, started January 2008, Use of Kolmogorov-Smirnov Measure in Machine Learning, currently past-proposal stage

## **GRADUATE / UNDERGRADUATE COURSES: by year**

2013	CSCS 6905 Machine Learning for Big Data, 19 students
2012	CSI 5387 Data Mining and Machine Learning (30 students)
2011	CSI 2911 Professional Practicum in Computer Science (50 students)
2010	CSI 5387 Data Mining and Machine Learning (24 students)
2009	CSI 5387 Data Mining and Machine Learning (30 students)
2008	CSI 5387 Data Mining and Machine Learning (25 students)
2007	CSI 7163B Advanced topics in computer systems: Machine Learning and Data Mining Systems, (enrolment 22 students)
2006	CSI 7162B Topics in Concept Learning and Text Mining
2004-2005	CSI7162 Topics in Computer Science
2000-2003	CSI 5389 Electronic Commerce Technologies (30 students)
1988-2005	CSI5387 Concept Learning and Data Mining (25 students)
1999	CSI 7163 Internet Commerce Technologies
1997-	CSI 5387 (Data Mining and Concept Learning)
1995-1996	CSI 5387 (Concept Learning)
1995	CSI 5388 (Topics in Machine Learning)
1990-1994	CSI 5387 (Concept Learning)

## **SEMINARS, INVITED PRESENTATIONS (2008-):**

Federal University of Ceara, Fortaleza, Brazil, May 2012  
Federal University of Pernambuco, Recife, Brazil, May 2012  
Université de Lyon 2 – December 2010  
Department of Artificial Intelligence, Moscow State University, Russia, April 2010  
High School of Economics, Moscow, Russia, April 2010  
Universita degli Studi di Bari, Italy, March 2010 (3 presentations over two weeks)  
Warsaw University, Institute of Computer Science, Warsaw, Poland, Jan. 2010  
Polish Academy of Sciences, Institute in Computer Science, Warsaw, Poland, Jan. 2010  
Dalhousie University, School of Computer Science, Halifax, Canada, Dec. 2009  
ICIAP 2009 – 15<sup>th</sup> Int'l Conference on Image Analysis and Processing, Conference Invited Speaker, Salerno, Italy, Sep. 2009  
Universitat Politecnica de Catalunya, Barcelona, Computer Architecture Department: IIIA-CSIC, Barcelona, Nov. 08  
Cap 2009 – Conférence d'apprentissage, Conference Invited Speaker, Strasbourg, Jan. 2009  
Barcelona Media, Feb. 2009  
Universitat Pompeu Fabra, Information and Communications Technology Department, Feb. 2009  
Universidad Politecnica de Madrid; Computer Science Department, Feb. 2009  
Universitat Politecnica de Catalunya, Computer Systems Department, Apr. 2009  
Universitat Politecnica de Catalunya, the Robotics Institute, Apr. 2009  
Universitat Politecnica de Catalunya, Machine Learning Group, May 2009  
Universidade de Porto, LIAA (Artificial Intelligence Research Group), May 2009  
Universidade de Porto, Faculty of Medicine, May 2009  
Universidade de Porto, Graduate Program in Intelligent Decision Support May 2009  
LAAS, Toulouse, France, June 2009

MontLIRMM, pellier, France , June 2009  
EMLR, Heidelberg, Germany, Dec. 2008  
IIA-CSIC, Barcelona, May 2008  
University of Bolzano, Department of Computer Science, Bolzano, Italy, Mar. 2008

**EXTERNAL RESEARCH FUNDING:** by year, indicating source (granting councils, industry, government, foundations, other); amount; purpose (research, travel, publications, etc.)

2016-2021 NSERC Discovery Grant “Research Challenges in Privacy Aware Mobility Data Analysis and in Text Mining with Enriched Data” \$180,000 (\$36,000/year for five years).

2016-2018 NSERC-DND Collaborative Research and Development Grant “Mission Relevant Information Management for Integrated Response”, with A. Aru-Chaplin and D. Reilly, \$660,000

2016 CFI Cyberinfrastructure Initiative “Marine Environment Research Infrastructure for Data Integration and Application Network (MERIDIAN)” \$1,820,901.

2014-2020 NSERC Collaborative Research and Training Experience (CREATE) “Training in Big Text Data”, P.I., \$1,650,000

2014 LANGA – Big Data for Language Learning, MITACS Elevate, \$15,000

2014 NSERC Engage Grant “Contextual Awareness for Operators of Complex Sensor Systems”, \$25,000

2014 NSERC Engage Grant "Data Mining Research in Support of Big Retail Data Analytics", \$25,000

2013-2014 IBM Canada Southern Ontario Smart Computing Innovation Platform “Health Information Privacy and Security”, \$140,000

2013-2015 NSERC Cooperative Research and Development Grant, “Satellite AIS Data for Intelligent Maritime Solutions”, \$150,000

2013-2015 GSTS Inc., “Satellite AIS Data for Intelligent Maritime Solutions”, \$100,000

2013 Nova Scotia Economic and Rural Development and Tourism, Institute for Big Data Analytics, \$50,000

2013-2019 Canada Research Chairs, Tier 1 Chair in Visual Text Analytics, \$1,400,000

2013 Canada Foundation for Innovation, Leaders Opportunity Fund, \$250,000

2012-2013 NSERC – Engage Grant – “Web Mining to protect Mobile App Users Against Fraud” - \$25,000. – 6 months

- 2011-2014 NSERC – Strategic grant – “Novel Techniques for Data Privacy Protection”, - \$328,515. -3 years (with M. L. Sokolova, Faculty of Medicine)
- 2012 CBIE (Canadian Bureau for International Education) – Canada-Brazil Awards; Joint Research projects, - \$30,900.
- 2011-2012 Public Works Government Services Canada, -“Canada Border Service Agency – Student Internship, - \$25,000.
- 2011-2012 Ontario Centres of Excellence – “Intelligent Monitoring and Analysis of the Global Navigation Satellite System Signal” - \$30,000.
- 2011 MITACS – Student Internship Program, \$15,000. – 8 months
- 2011-2015 NSERC Discovery Grant “Research in Machine Learning and Data Privacy”, \$210,000 (\$42,000/yr)
- 2010-2011 Ontario Ministry of Research and Innovation – “Recommender System for Electronic Parts” - \$35,000. – 6 months
- 2010-2011 NSERC – Engage grant – “Intelligent Monitoring and Analysis of the Global Navigation Satellite System Signal” - \$24,750. – 6 months
- 2010 NSERC – Engage grant –“Recommender System for Electronic Components”, - \$22,900. – 6 months
- 2010 Bell Canada – “Automated Risk Management” - \$32,300.
- 2009-2010 Ministry of Research and Innovation – “Access Management and Control Technology” - \$35,000., with Dr. A. Felty.
- 2009-2011 NSERC - Strategic Grant - "Analysis and Generation of Text with Personality", (D. Inkpen P.I.), \$87,500. – 2 years
- 2008-2009 Precarn/OCE Partnership, “Intelligent Mobile Content Agents”, \$100,000., with Dr. Inkpen
- 2007-2008 Precarn/OCE Partnership, “Embedding Machine Intelligence in the Systematic Review System”, \$150,000.
- 2007-2009 NSERC Cooperative Research and Development Grant “Finding best evidence for evidence-based best practice recommendations in health care”, with N. Cercone (York U., P.I; total \$313,000)
- 2007 Ontario Centres of Excellence, Market Readiness Program – Devera Logic, \$38,000.
- 2006-2008 NSERC Idea to Innovation Grant “Data mining training and assessment through digital games” (with I Squared Learning) NSERC \$247,500.

- I Squared Learning \$105,000. (Total \$352,500.)
- 2006-2010 NSERC Research Grant “Topics in Machine Learning and Data Privacy, \$38,000./year
- 2006-2007 Ontario Centres of Excellence, “Student Internship Program” \$20,000. Industry funding from TrialStat, \$10,000.
- 2006 I Squared Learning (studentship grant) “System of Educational Tools based on Games (DGBL) \$27,000.
- 2006 Ontario Centres of Excellence, “Research Centre in Data Mining at the University of Ottawa”, \$35,000.
- 2005-2006 NSERC funding “Intellectual Property Mobilization Program 2005 Competition”, \$7,500. and CIHR \$2,500.
- 2005-2006 Ontario Centres of Excellence (formerly CITO) i<sup>2</sup> L –“Data Mining Technologies for Digital-based Games Learning”, \$48,000.
- 2005 Ontario Centres of Excellence, “Enterprise Solutions for Verifications of Policy Compliance, Market Readiness program, \$25,500.
- 2005 NSERC Tools and Instruments Grant ““Computational infrastructure for integrative data analysis in bioinformatics”, \$68,000, with X. Xia (P.I.) and V. Trudeau
- 2004 NSERC Idea to Innovation Grant “Application-centered Checkable Enablement of Privacy and Trust: ACCEPT”, \$125,000, with Dr. Amy Felty
- 2004 Communications and Information Technology Ontario, “Privacy-oriented Data Mining”, Tech readiness program, \$25,000
- 2003-2005 CITO Champion of Innovation, “Software Tools for Privacy in Data Mining”, \$200,000
- 2003-2005 CITO RPP Round 6.2 Research Grant Automatic Enforcement of Health Care Privacy Policies in Email (with N. Japkowicz, M. Geist), \$150,000
- ORNEC (Ontario Research Network in Electronic Commerce), ORDCE, \$13,364,567 (one of two principal co-applicants)
- 2003-2006 SSHRC-INE Élaboration d'un didacticiel intelligent pour le développement de compétences en lecture chez les apprenants en langue seconde (with L. Duquette, C. Barrière, A. Desrochers, S. Szpakowicz; collaboration with M. Laurier, P. Balcom, G. Chevalier, J. Binon, T. Selva, S. Verlinde), \$86,667
- 2001-2005 NSERC Research Grant, Machine Learning in the Presence of Domain Knowledge, \$35,000/yr

- 2000-002 CITO RPP Round 6.1, Content Extraction from On-line Documents, \$120,000 with Amika Now
- 1998-2001 NSERC Strategic Grant, Data Analysis: Integrated Methodologies for Knowledge Discovery and Machine Learning, \$147,500/yr, with N. Cercone (P.I., Waterloo), W. Ziarko, H. Hamilton (Regina), R. C. Holte (Ottawa).
- 1998-2000 CITO RPP Round 1, Case-based Planning and Learning for Reuse, with J. Glasgow, R.C. Holte, \$85,000
- 1997 Bell Canada Research Contract, \$38,000, Use of Machine Learning Techniques to Acquire Software Quality Information
- 1996 NSERC Research Grant, \$29,500, Inductive Learning in the Presence of Background Knowledge
- 1996-1999 Text Summarization, NSERC/NRC, R.C. Holte (P.I), \$170,000/yr
- 1995-1997 Software Reuse, ITRC/CITO (J. Glasgow, P.I.) \$80,000/yr
- 1995-1997 Canadian Environmental Hazards Detection System, PRECARN, \$100,000
- 1993-1995 NSERC Research Grant, \$17,000, Selected Problems in multi-strategy learning Inductive Logic Programming.
- 1991-1994 NSERC Strategic Grant, \$73,000, Machine Learning and text Analysis for Semi-automated Knowledge Acquisition, (Principal Investigator).
- 1993 Planning and Learning for Query Reuse (\$73,000), Pacific Forestry Canada
- 1993 Machine Learning in Support of Software Maintenance, Canadian Space Agency, (\$25,000)
- 1992 Case-based System for Analysis of Remote Sensing Data, CCRS, \$50,000
- 1990-1993 NSERC Strategic Grant, \$94,475, Machine Learning applied to software re-use (Principal Investigator)
- 1992 EMR Grant, \$44,000, Machine Learning and Planning Techniques for Expert Use of LDIAS
- 1990-1991 EMR Grant, \$56,000, Machine Learning Techniques for Acquiring Knowledge About Expert Use of LDIAS
- 1989-1991 NSERC Infrastructure Grant, \$90,000 (3 yr.), Support for a Unix Computing Facility, (principal applicant)
- 1989-1991 Cognos-OTF grant, \$198,000, Adaptive Modeller Support, (principal investigator (with F. Oppacher and S. Szpakowicz).

- 1989-1991 NSERC Operating Grant, \$13,943, Machine Learning Methods for Practical Knowledge Acquisition
- 1988-1990 URIF Grant, \$15,000, Knowledge Acquisition with Learning by Watching and with Text Analysis
- 1988-1991 NSERC University Industry Cooperative Grant, \$126,000, Advanced Knowledge Acquisition Methods, principal investigator (with F. Oppacher and S. Szpakowicz) University of Ottawa Grant for a visiting scientist (T. Szapiro), \$3000.
- 1988 NSERC International Cooperation Grant, \$5,000, for a common project with Carnegie Mellon University
- 1987-1989 Cognos Grant, \$81,000, Knowledge Acquisition with Learning by Watching and with Text Analysis, (principal investigator with F. Oppacher and S. Szpakowicz) CCRIT Grant, \$17,200, Système Expert sur les Politiques et Procédures de Voyage
- 1985-1986 NRC/Cognos Grant, \$800,00 (approx.), The QUIZ Advisor System, member of a team, University of Ottawa Grant, \$3,000, User Interface for NEGOPLAN
- 1986-1988 NSERC Infrastructure Grant, \$75,000 (3 yr.), \$75,000, Support for a VMS and Unix Computing Facility, Principal Applicant NSERC Individual Operating Grant, \$41,700 (3 years), Learning in an Advisor System
- 1986 OCRI Individual Grant, \$7,200, Learning in an Advisor System  
Ontario-Quebec Grant, Individual, \$1,500

## **INDUSTRIAL PROFESSIONAL ACTIVITIES**

### PROJECTS WITH:

**JD Irving**, Marketing Data Mining from POS Data, NSERC Engage

**MacDonald Dettwiler Assoc** (Halifax, NS), Contextualization of Sonar Data, NSERC Engage

**Wildcard Inc.**, Montreal, Recommender System of Entertainment Venues, NSERC Engage

**Copernicus**, Inc., Halifax, NS., **Big Data for Language Learning**, MITACS  
Halifax, NS, m

**GSTS, Inc.** “Intelligent Monitoring and Analysis of the Global Navigation Satellite System Signal”, OCE and NSERC Engage

**Canada Border Services Agency**, “Machine Learning for face Recognition in Video Streams”

**Lytica Inc.**: “Recommender System for Electronic Components” (NSERC Engage grant)

**Bell Canada**: “Automated Risk Management” project



**Devera Logic Inc.** :Computer Security, Identity and Access Management (one of the founders).

**Distil Interactive** (formerly I Squared Learning): data mining training and assessment through digital games; one of the founders.

**TrialStat:** developer of data analytics solutions for medical trials and systematic reviews.

**Entrust:** Canada's leading IT Security company

**AmikaMobile** (formerly Amikanow): provider of technologies for information extraction from the WWW

**IBM Canada:** teaching Compiler Technology at TOROLAB, approx. 150 TOROLAB employees trained

**Cognos, Inc.:** leading a Cognos-sponsored research project (budget - approx. \$300,000), managing the research effort of a team of eight computer professionals,

**Lanvista:** in charge of an IRAP research project, a team of four

**RES Inc.** in charge of a team of three, co-managing a client-driven project

**Macdonald Dettwiler Associates:** managing the university component of the project, team of 3-4, budget \$100,000, deliverables-driven

**IITRC:** managing the university component of the project, team of four, budget approx \$100,000, in cooperation with Netron, Inc.

**Canadian Space Agency:** managing a project on software reusability

**Canada Centre for Remote Sensing:** managing several projects in applications of KB technologies to Remote Sensing, over a period of three years, total funding approx. \$300,000,

**Natural Resources Canada:** continuation of the work with CCRS, over two years, total funding \$150,000

**Revenue Canada,** acted as Science Advisor to the Scientific Research and Development Tax Credits program (Montreal and Ottawa) for a period of ten years

Owner and President of Matwin and Associates, Inc., a small consulting company specializing in software engineering and knowledge-based systems

## **PATENTS AND INVENTION DISCLOSURES**

**Patent:** J. Sayyad Shirabad, S. Matwin, K. White, "System for Evaluating Game Play Data Generated by a Digital Games Based Learning Game", US Patent, submitted May 20, 2007.

**Tajmajer, Malwina Splawińska, Piotr Wasilewski, and Stan Matwin**

***Predicting Annual Average Daily Highway Traffic from Large Data and Very Few***

**Measurements Patent:** S. Matwin, A. Felty, B. Stepien, K. Grigg, “A Method to Detect and Report Conflicts in Policy Rules”, submitted to University of Ottawa, Tech Transfer and Business Enterprise office, Sept. 2008.

**Invention Disclosure:** S. Matwin, D. Inkpen, W. Elazmeh, O. Frunza, “Automatic classification of systematic review documents using a per-question classifier”, submitted to University of Ottawa, Tech Transfer and Business Enterprise office, Jan. 2007.

## **PUBLICATIONS**

1) Life-time summary (count) according to the following categories:

Books authored and co-authored - 5

Chapters in books - 8

Papers in refereed journals - 53

Papers in refereed conference proceedings – 215

2) Same categories as above: books, chapters in books, papers in refereed journals,


TECHNICAL REPORTS OR PAPERS READ ARE NOT INCLUDED.

NOTE: names of co-authors who were graduate students or postdocs at the time of publication are **in bold**

### **Books authored:**


1. Aijun An, Stan Matwin, Zbigniew W. Ras, Dominik Slezak: Foundations of Intelligent Systems, 17th International Symposium, ISMIS 2008, Toronto, Canada, May 20-23, 2008, Proceedings Springer 2008.
2. Joost N. Kok, Jacek Koronacki, Ramon López de Mántaras, Stan Matwin, Dunja Mladenic, Andrzej Skowron: Machine Learning: ECML 2007, 18th European Conference on Machine Learning, Warsaw, Poland, September 17-21, 2007, Proceedings Springer 2007.
3. Matwin, **S.** Sammut, C., Inductive Logic Programming, Proceedings of the 12th International Conference, Lecture Notes in Computer Science, Springer Verlag, Sydney, Australia, 2002.
4. Stroulia, E., Matwin, **S.** , Artificial Intelligence 2001, Proceedings of the international conference, Lecture Notes in Computer Science vol. 2056, Ottawa, Canada, June 2001.
5. PASCAL. Scientific and Technical Publishers. Iglewski, J. Madey, Matwin, **S.** Warsaw, four editions, 1977, 1979, 1984 and 1987 (176 pp.).

### **Chapters in Books:**

1.  Stan Matwin: Privacy-Related Aspects and Techniques. Encyclopedia of Machine Learning and Data Mining 2017: 1006-1013

2. Marina Sokolova, Stan Matwin: Personal Privacy Protection in Time of Big Data. Challenges in Computational Statistics and Data Mining 2016: 365-380
3. Matwin, S., Nin, J., **Sehatkar**, M. and Szapiro. T.A review for Attribute Disclosure Control, ARES, 2014.
4. Matwin, S., Privacy-preserving Data Mining Techniques – Survey and Challenges”, in Discrimination and Privacy in the Information Society, Effects of Data Mining and Profiling Large Databases, to appear, Springer V, 2012.
5. Matwin, S. “Privacy-related Aspects and Techniques”, Encyclopedia of Machine Learning, G. Webb, C. Sammut, Editors, Springer, 2010.
6. Matwin, S., Szapiro, T., “Data Privacy: From Technology to Economics”, in “Ryszard Michalski in memoriam”, [Advances in Machine Learning II 2010](#): 43-74 Springer, 2010.
7. **Sayyad Shirabad J.**, Lethbridge, T. and Matwin, S., “Modeling Relevance Relations Using Machine Learning Techniques”, in J.Tsai (ed), Advances in Machine Learning Approaches in Software Engineering, D. Zhang and J. Tsai, Editors, IGI, 2007, pp. 168-207.
8. **Caropreso**, F., Matwin S. and Sebastiani F., "A learner-independent evaluation of the usefulness of statistical phrases for automated text categorization.",in Amita G. Chin (ed.), Text Databases and Document Management:Theory and Practice, Idea Group Publishing, Hershey, PA, 2001, pp. 78-102.
9. Matwin S., **Plante B.**, "Theory Revision by means of Analyzing Explanations and Prototypes”, Machine Learning, Vol. 4, pp. 217-238, R. Michalski, G. Tecuci eds, Morgan-Kaufmann 1994.
10. Szpakowicz S., Matwin S., "Advances in Logic Programming", in T.I. Ören (ed.), in “Advances in Artificial Intelligence in Software Engineering”, (ed), (JAI Press, Greenwich, CT, 1991) (with S. Szpakowicz) pp.192-201

#### **Papers in Refereed Journals:**

1. Nathalie Japkowicz, Stan Matwin: Special issue on discovery science. Machine Learning 106(6): 741-743 (2017)
2.  Elnaz Bigdeli, Mahdi Mohammadi, Bijan Raahemi, Stan Matwin: A fast and noise resilient cluster-based anomaly detection. Pattern Anal. Appl. 20(1): 183-199 (2017)
3. Chiara Renso, Amilcar Soares Junior, Stan Matwin, (2017) “ANALYTic: An Active Learning System for Trajectory Classification” in IEEE Computer Graphics and Applications, to appear.
4. **de Souza EN**, Boerder K, Matwin S, Worm B (2016) Improving Fishing Pattern Detection from Satellite AIS Using Data Mining and Machine Learning. PLoS ONE 11(7): e0158248. doi:10.1371/journal.pone.0158248

5. **Luís Paulo F. Garcia**, Ana Carolina Lorena, Stan Matwin, André Carlos Ponce de Leon Ferreira de Carvalho: Ensembles of label noise filters: a ranking approach. *Data Min. Knowl. Discov.* 30(5): 1192-1216 (2016)
6. **Liu, X., Wang, X.**, Matwin, S., Japkowicz, N., Meta-MapReduce for Scalable Data Mining, *Journal of Big Data* (2015).
7. **Pesaranghader, A.**, Matwin, S., Sokolova, M. Beiko, R., simDEF: Definition-based Semantic Similarity Measure of Gene Ontology Terms for Functional Similarity Analysis of Genes, *Bioinformatics*, Dec 21, 2015
8. **Lopes, C. C.**, Times, V. C., Matwin, S., Towards Cloud Data Warehouses of Multivalued Encrypted Values, *Journal of Information and Data Management*, vol. 5, n. 3.
9. **Soares Jr., A.**, Times, V.C., Matwin, S., Moreno, B., Cabral, L., GRASP-UTS: An Algorithm for Unsupervised Trajectory Segmentation, *International Journal of Geographical Information Science*, Vol. 29 , Iss. 1, 2015
10. **Sazonova, V.**, Matwin, S., Combining Binary Classifiers for a Multiclass Problem with Differentially Privacy, *Transactions On Data Privacy, [Trans. Data Privacy](#) 7(1): 51-70 (2014)*
11. **Elnaz Bigdeli**, Mahdi Mohammadi, Bijan Raahemi, Stan Matwin, A fast and noise resilient cluster-based anomaly detection, *Pattern Analysis and Applications*, pp 1-17, May, 2015
12. Amir Hossein Razavi, Stan Matwin, Joseph De Koninck, Ray Reza Amini: Dream sentiment analysis using second order soft co-occurrences (SOSCO) and time course representations. *J. Intell. Inf. Syst.* 42(3): 393-413 (2014)
13. **Ghazinour, K.**, Matwin, S., Sokolova, M., - “YOURPRIVACYPROTECTOR, A recommender system for privacy settings in social networks”. *International Journal of Security, Privacy and Trust Management, (IJSPTM)*, Volume 2, Number 4, August 2013, pp. 11-25
14. Esmin, A., Coelho, R., Matwin, S., -“A Review on Particle Swarm Optimization Algorithm and its Variants to Clustering High-dimensional Data”, *Artificial Intelligence Review*, DOI 10, 1007/s10462-013-9400-4
15. Esmin, A., Matwin, S., - “A Hybrid Particle Swarm Optimization Algorithm with Genetic Mutation”, *International Journal of Innovative Computing Information and Control (IJICIC)* 9(5): 1919-1934
16. Matwin, S., Sazonova, V., “Direct comparison between Support Vector Machine and Multinomial Naive Bayes for medical abstract classification (letter to Editor)”, *Journal of the American Medical Informatics Appl.*, doi:10.1136/amiajnl-2012-001072

17. Matwin, S., Szapiro, T., “Data Privacy – Need for an Economic Perspective”, Privacy Observatory Magazine. <http://www.privacyobservatory.org/issues/14-issue-1/28-data-privacy-need-for-an-economic-perspective>
18. Huang, J., Sayyad Shirabad, J., Matwin, S., Su, J., “Improving Multi-View Semi-supervised Learning with Agreement-based Sampling”, Intelligent Data Analysis Journal, Volume 16, Number 5 /2012, pp.745-761
19. Zhilin, M., **Matwin, S.**, Turcotte, M. “Annotation Concept Synthesis and Enrichment Analysis: a Logic-Based Approach to the Interpretation of High-Throughput Experiments”, Bioinformatics, Volume 27, No.17, 2011, pp. 2391-2398
20. Matwin, S., Kouznetsov, A., Inkpen, D., Frunza, O., O’Blenis, P., “Performance of SVM and Bayesian Classifiers on the Systematic Review Classification Task (letter to the Editor)”, JAMIA 18(1), 2011, pp. 104-105
21. **Frunza, O.**, Matwin, S., Inkpen, D., **Klement, W.**, O’Blenis, P. “Exploiting the Systematic Review Protocol for Classification of Medical Abstracts”, Journal of Artificial Intelligence in Medicine 51, (2011), pp. 17-25.
22. Herranz, J., Matwin, S., Nin, J., Torra, V., - “Classifying Data from Protected Statistical Datasets”, Computers and Security, pp.875-890.
23. [Farion, K.](#), [Michalowski, W.](#), **Wilk, S.**, **O’Sullivan, D.**, Matwin, S. “A Tree-Based Decision Model to Support Prediction of the Severity of Asthma Exacerbations in Children”. [J. Medical Systems](#) 34(4): 551-562 (2010)
24. Matwin, **Kouznetsov, A., S.**, Inkpen, D., **Frunza, O.**, O’Blenis, P. “Using Factorized Complement Naïve Bays and weight Engineering for Reducing Workload in Evidence-Based Medicine Systematic Reviews”, Journal of the American Medical Informatics Association, (JAMIA), Vol. 17, pp. 446-453, 2010 **Top journal in medical informatics - [Nanyang Technological U. \(NTU\) ranking](#)**
25. Matwin S., Chang L., Wright R., Zhan J., Editorial - “Privacy and Security Aspects of Data Mining” Special issue – International Journal of Information and Computer Security, 2008 Volume 2, No. 1 , pp. 1-3, 2008
26. **Zhan, J.** Matwin, S., Chang, L., “Privacy-preserving Collaborative Association Rule Mining”, [Journal of Network and Computer Applications](#), **30(3)**, 1216-1227. (2007) **34 citations (GS) - leading journal in the systems technology area (NTU ranking)**
27. **Zhan J.**, Matwin. S., “Privacy-Preserving Support Vector Machine Classification”, International Journal of Intelligent Information and Database Systems, 2007 Volume 1, No.3/4, pp.356-385. (2007)
28. **Zhan J.**, Matwin S., “Privacy Preserving Data Mining in Electronic Surveys”, International Journal of Network Security, Vol. 4, No. 3 pp.318-327, March 2007.

29. **Zhan, J.**, Matwin, S., Chang, L, “Privacy-Preserving Collaborative Association Rule Mining”, *Journal of Network and Computer Applications*, Vol. 30, Issue 3, 2007, pp. 1216-1227.
30. **Zhan J.**, Chang L., Matwin S., “Privacy Preserving Multi-Party Decision Tree Induction”, *International Journal on Business Intelligence and Data Mining* 2(2): 197-212 (2007)
31. **de Souza J.**, Matwin S., Japkowicz, N.: “Parallelizing Feature Selection”, pp. 433-456, *Algorithmica* 45(3): 433-456 (2006).
32. Drummond C., Matwin S., Gaffield C., “Inferring and Revising Theories with Confidence: Analyzing the 1901 Canadian Census”, *Applied Artificial Intelligence*, vol.20, No. 1, pp.35-55, (2006)
33. **Zhan, J.**, Chang, L., Matwin, S., “Privacy Preserving K-nearest Neighbour Classification”, *I. J. Network Security* 1 (1): pp. 46-51 (2005)
34. **Matwin S.**, *Inductive Logic Programming: Guest Editor’s Introduction*, *Machine Learning Journal*, vol. 57, No. 3, pp. 203-204, (2004)
35. **Zhan J.**, Chang L., Matwin S., “Privacy-Preserving Electronic Voting”, *Journal of Information Security*, Vol.15, pp165-180, (2004).
36. **Ouerd M.**, Oommen B. and Matwin S., “A formal approach to using data distributions for building causal Polytrees structures”, *Information Sciences Journal*, vol. 168, pp. 111-131, (2004).
37. **Alphonse, E.** Matwin, S., “Filtering Multi-Instance Problems to Reduce Dimensionality in Rational Learning”, *Journal of Intelligent Information Systems*”, Kluwer Academic, vol. 22(1), pp. 23-40, 2003.
38. **Morin, J.**, Matwin, S., “GENEX: A Tool for Testing in ILP”, *Software Practice and Experience*, vol. 31, pp. 1003-1023, 2001.
39. **Létourneau, S.**, Famili, F. Matwin, S., “Data Mining for Prediction of Aircraft Component Failure”, *IEEE Intelligent Systems*, Special issue on DM, pp. 59-66 (1999).
40. Kubat, M., Holte, R., **Matwin, S.** , “Machine Learning for the Detection of Oil Spills in Satellite Radar Images”, *Machine Learning Journal*, 30, 195-215 (1998).
41. Matwin, S., **Rios, R.** “Learning recursive definitions in Horn-clause logic”, *Brazilian Computer Journal*, 1(3), pp. 40-50, 1996.
42. **Clark, P.** Feng, C., Matwin, S., Fung, K. "Improving Image Classification by Combining Statistical, Case-based and Model-based Prediction Methods", *Fundamenta Informaticae*, pp. 227-240, 1996.

43. Matwin, S., Mason, C., "Environmental Applications of Artificial Intelligence", IEEE EXPERT and Intelligent Systems, vol. 10 No. 6, pp. 12-13, 1995.
44. Matwin, S., Charlebois, D., Goodenough, D., "Machine Learning and Planning for Data Management in Forestry", IEEE EXPRT and Intelligent Systems, vol. 10 No.6, pp. 35-41, 1996.
45. Goodenough, D, Charlebois, D., Matwin, S. , Robson, R., 1994, "Automating of Expert System Software for Analysis of RS Data", IEEE Trans. on Geoscience and Remote Sensing, vol. 32 No. 3, pp. 525-533..
46. Koperczak, Z., Matwin, S., Szpakowicz, S., 1993, "Modelling of Negotiation Strategies Using Two Interacting Expert Systems", Control and Cybernetics, vol. 21, no.1, 105-130.
47. Fouque G., Matwin S., 1993, "A Case-based Approach to Software Reuse", International Journal of Information Systems (Kluwer) 1, pp. 165-197.
48. Matwin S. and Szpakowicz S., 1992, "Machine Learning Techniques in Knowledge Acquisition from Text". THINK vol. 1(2), 37-50.
49. Bergadano, F., Matwin, S., Michalski, R.S., Zhang, J., "Learning Two-tiered Descriptions of Flexible Concepts", Machine Learning Journal, 1992, 8, pp. 5-43.
50. Matwin, S. , Szapiro, T., Haigh, K., , 1991, "Genetic Algorithms Approach to a Negotiation Support System", in IEEE Transactions on Systems, Man and Cybernetics, 21:1, pp. 102-114.
51. Constant, P., Matwin, S. , Oppacher, F., 1990, "LEW: Learning by Watching. A Machine Learning System for Knowledge Acquisition", in IEEE Transactions on Pattern Analysis and Machine Intelligence, 12:3, pp. 294-307.
52. Geldrez, C., Matwin, S., Morin, J., Probert, R.L., 1990, "Protocol Conformance Testing by Explanation-based Learning", IEEE Expert, 5:5, pp. 45-60.
53. Matwin, S. , Oppacher, F., Constant, P., 1989, "Knowledge Acquisition by Incremental Learning from Problem solution Pairs", Computational Intelligence, 5:2, pp. 58-66.
54. Matwin, S., Szpakowicz, S., Koperczak, Z., Kersten, G., Michalowski, W., 1989, "NEGOPLAN: An Expert System Shell for Negotiation Support", IEEE Expert, 4:4, pp. 50-62.
55. Kersten, G., Michalowski, W., Matwin, S. , Szpakowicz, S., "Representing the Negotiation Process with a Rule based Formalism", Theory and Decisions, vol. 22, pp. 225-257, 1988.
56. Matwin, S., Pietrzykowski, T., "Intelligent Backtracking in Plan based Deduction", IEEE Transactions on Pattern Analysis and Machine Intelligence, 7:6, pp. 682-692, 1986.

57. Matwin, S., Forsythe, K., “Copying Dynamic Structures in a PASCAL Environment”, *Software Practice and Experience*, 16:4, pp. 335-340, 1986.
58. Matwin, S., Pietrzykowski, T., “The Programming Language PROGRAPH: A Preliminary Report”, *Computer Languages*, 10:2, pp. 91-125, 1985.
59. Skuce, D., Matwin, S., Szpakowicz, S., Tazovitch, B., and Oppacher, F., “A Logic\_Based Knowledge Source System for Natural Language Documents”, *Data and Knowledge Engineering*, pp. 201-231, 1985.
60. Matwin, S.: On the Completeness of a Set of Transformations Optimizing Linear Programs. - *Inf. Process. Lett.* 6(5): 165-167, 1977.
61. Matwin, S.: An Experimental Investigation of Geschke’s Method of Global Program Optimization. – *Inf. Process. Lett.* 6 (6): 177-179, 1977.
62. Matwin, S., Missala, M., - “A Simple machine Independent Tool for Obtaining Rough Measures of Pascal Programs”, *SIGPLAN*, Vol. 11, pp. 42-45, August 1976.

**Papers in Refereed Journals (Submitted):**

1. Nin, J., Matwin, S. “Private Distributed Stream Algorithms using Sketches”, submitted
2. Razavi, A., De Koninck, J. Matwin, S., „Dream Description Analysis Using Text Mining Methods”, submitted

**Papers in Refereed Conference Proceedings (since 1985):**

1. Xiang Jiang, Erico N de Souza, Ahmad Pesaranghader, Baifan Hu, Daniel Silver and Stan Matwin, TrajectoryNet: An Embedded GPS Trajectory Representation for Point-based Classification Using Recurrent Neural Networks, *CASCON 2017*, Toronto, Canada.
2. Sima Sharifirad, Stan Matwin: Deep Multi-cultural Graph Representation Learning. *Canadian Conference on AI 2017*: 407-410
3. Lulu Huang, Stan Matwin, Eder J. de Carvalho, Rosane Minghim (2017) Active Learning with Visualization for Text Data, *ESIDA '17: Proceedings of the 2017 ACM Workshop on Exploratory Search and Interactive Data Analytics*, pp. 69-74
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