

Richard Khoury, Ph.D., Ing., P.Eng.

1. Personal Information

Business address	Department of Computer Science and Software Engineering Office 3945, Building Adrien-Pouliot 1065 Avenue de la Médecine Université Laval Quebec City (QC) G1V 0A6 CANADA
Phone	1 (418) 656-2131 x407811
E-mail	richard.khoury@ift.ulaval.ca
Website	http://www2.ift.ulaval.ca/~rikho/
Languages spoken and written	French (mother tongue) English (fluent)

2. Post-Secondary Degrees

Doctor of Philosophy (Ph.D.)	University of Waterloo Department of Electrical and Computer Engineering Pattern Analysis and Machine Intelligence Laboratory 2007
Master of Science (M.Sc.)	Laval University Department of Electrical and Computer Engineering Computer Vision and Systems Laboratory 2004
Bachelor of Engineering (B.Eng.)	Laval University Department of Electrical and Computer Engineering 2002
CEGEP Diploma (DEC)	Méridi College 1998

3. Employment History

Academic Employment

Associate Professor	July 2016 to present Department of Computer Science and Software Engineering Université Laval
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Associate Professor	July 2013 to June 2016 Department of Software Engineering Lakehead University
Assistant Professor	August 2008 to June 2013 Department of Software Engineering Lakehead University
Post-Doctoral Fellow	January 2008 to July 2008 Pattern Analysis and Machine Intelligence Laboratory Department of Electrical and Computer Engineering University of Waterloo
Seasonal Instructor	May 2007 to August 2008 Department of Electrical and Computer Engineering University of Waterloo
Teaching Assistant	September 2002 to December 2003 Department of Electrical and Computer Engineering Laval University
Teaching Assistant	August 2000 to September 2002 Computer and Telecommunication Service Laval University

Business Employment

Chief Financial Officer (CFO)	October 2010 to October 2012 Bitcold Technology inc.
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4. Publications

Books

1. R. Khoury, D. W. Harder, *Numerical Methods and Modelling for Engineering*, Springer, 2016, ISBN 978-3-319-21175-6.
2. R. Khoury, C. Drummond (eds.), *Advances in Artificial Intelligence*, Springer Lecture Notes in Artificial Intelligence vol. 9673, 2016, ISBN 978-3-319-34110-1.

Peer-Reviewed Journal Articles

1. F. G elinas-Gascon, R. Khoury, "Modeling and Moderation of COVID-19 Social Network Chat", *Information*, vol. 14 no. 2, February 2023.

2. E. Dube, S. E. MacDonald, T. Manca, J.A. Bettinger, S. M. Driedger, J. Graham, D. Greyson, N. E. MacDonald, S. B. Meyer, G. Roch, M. Vivion, L. Aylsworth, H. Witteman, F. G elinas-Gascon, L. Marques Sathler Guimaraes, H. Hakim, D. Gagnon, B. B echard, J. A. Gramaccia, R. Khoury, S. Tremblay “Understanding the Influence of Web-Based Information, Misinformation, Disinformation, and Reinformation on COVID-19 Vaccine Acceptance: Protocol for a Multicomponent Study”, *JMIR Research Protocols* 11, no. 10 (2022): e41012.
3. M. AlMousa, R. Benlamri, R. Khoury, “A Novel Word Sense Disambiguation Approach Using WordNet Knowledge Graph”, *Computer Speech & Language*, vol. 74, January 2022.
<https://www.sciencedirect.com/science/article/pii/S0885230821001303?dgcid=author>
4. C. Sirois, R. Khoury, A. Durand, P.-L. Deziel, O. Bukhtiyarova, Y. Chiu, D. Talbot, A. Bureau, P. Despres, C. Gagne, F. Laviolette, A.-M. Savard, J. Corbeil. T. Badard, S. Jean, M. Simard, “Exploring polypharmacy with artificial intelligence: data analysis protocol”, *BMC Medical Informatics and Decision Making*, vol. 21 no. 219, 20 July 2021.
<https://bmcmmedinformdecismak.biomedcentral.com/articles/10.1186/s12911-021-01583-x>
5. R. Avila, R. Khoury, R. Khoury, F. Petrillo, “Use of Security Logs for Data Leak Detection: A Systematic Literature Review”, *Security and Communication Networks*, vol. 2021, March 2021. <https://doi.org/10.1155/2021/6615899>.
6. M. AlMousa, R. Benlamri, R. Khoury, “Exploiting non-taxonomic relations for measuring semantic similarity and relatedness in WordNet”, *Knowledge-Based Systems*, vol. 212, January 2021. <https://doi.org/10.1016/j.knosys.2020.106565>.
7. B. J. Oommen, R. Khoury, A. Schmidt, “Text Classification Using “Anti”-Bayesian Quantile Statistics-Based Classifiers”, *Transactions on Computational Intelligence XXV*, N. T. Nguyen (ed.), Springer LNCS, September 2016, pp 101-126.
8. J. Li, S. Fong, Y. Zhuang, R. Khoury, “Hierarchical Classification in Text Mining for Sentiment Analysis”, in *Soft Computing: A Fusion of Foundations, Methodologies and Applications*, Springer, September 2016, Volume 20, Issue 9, pp 3411–3420.
9. R. Khoury, F. Sapford, “Latin Word Stemming using Wiktionary”, in *Digital Scholarship in the Humanities*, Volume 31, Issue 2, June 2016, Pages 368–373.
10. R. Khoury, D. Hayes, “Alliteration and character focus in the York Plays”, in *Digital Medievalist*, Vol. 10, ISSN: 1715-0736, October 2015,
<https://journal.digitalmedievalist.org/articles/10.16995/dm.59/>.
11. C. Wei, R. Khoury, S. Fong, “Web 2.0 Recommendation Service by Multi-Collaborative Filtering Trust Network Algorithm”, in the *Information Systems Frontiers*, Volume 15, Issue 4, August 2013, pp. 533-551.

12. M. AlemZadeh, R. Khoury, F. Karray, "Query Classification using Wikipedia's Category Graph", in the *Journal of Emerging Technologies in Web Intelligence*, Volume 4, Number 3, August 2012, pp. 207-220.
13. J. Luo, J. Kivinen, J. Malo, R. Khoury, "Architecture of a Cloud-Based Social Networking News Site", in the *Journal of Emerging Technologies in Web Intelligence*, Volume 4, Number 3, August 2012, pp. 227-233.
14. R. Khoury, "Sentence Clustering Using Parts-of-Speech", in the *International Journal of Information Engineering and Electronic Business*, Volume 4, Number 1, February 2012, pp. 1-9.
15. N. Nematollahi, R. Khoury, "A Case Study in Key Measuring Software", in the *International Journal of Image, Graphics and Signal Processing*, Volume 4, Number 1, February 2012, pp. 1-11.
16. R. Khoury, "Query Classification using Wikipedia", in the *International Journal of Intelligent Information and Database Systems*, Volume 5, Number 2, April 2011, pp.143-163.
17. R. Khoury, F. Karray, M. Kamel, "Domain Representation using Possibility Theory: An Exploratory Study", in *IEEE Transactions on Fuzzy Systems*, Volume 16, Issue 6, December 2008, pp. 1531-1541.
18. R. Khoury, F. Karray, M. Kamel, "Keyword Extraction Rules Based on a Part-Of-Speech Hierarchy", in the *International Journal of Advanced Media and Communication*, Volume 2, Number 2, April 2008, pp. 138-153.
19. R. Khoury, F. Karray, Y. Sun, M. Kamel, O. Basir, "Semantic Understanding of General Linguistic Items by Means of Fuzzy Set Theory", in the *IEEE Transactions on Fuzzy Systems*, Volume 15, Issue 5, October 2007, pp. 757-771.

Peer-Reviewed Conference Proceedings

1. D. Beauchemin, R. Khoury, "RISC: Generating Realistic Synthetic Bilingual Insurance Contract", *36th Canadian Conference on Artificial Intelligence*, Montreal (Canada), 5-9 June 2022, pp. 1-12. . Best student paper award.
2. V. Primpied, D. Beauchemin, R. Khoury, "Quantifying French Document Complexity", *35th Canadian Conference on Artificial Intelligence*, Toronto (Canada), 30 Mai-3 June 2022, pp. 1-12.
3. T. Racicot, R. Khoury, C. Pere, "Estimation of uncertainty bounds on disparate treatment when using proxies for the protected attribute", *34th Canadian Conference on Artificial Intelligence*, Vancouver (Canada), 25-28 May 2021, pp. 1-12. Best student paper award.

4. E. Brassard-Gourdeau, R. Khoury, “Using Sentiment Information for Preemptive Detection of Harmful Comments in Online Conversations”, 34th Canadian Conference on Artificial Intelligence, Vancouver (Canada), 25-28 May 2021, pp. 1-11.
5. M.-A. Larochelle, R. Khoury, “Generalisation of Cyberbullying Detection”, *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, Hague (Pays-Bas), 7-10 December 2020, pp. 296-300.
6. D. T. Vo, R. Khoury, “Language Identification on Massive Datasets of Short Messages using an Attention Mechanism CNN”, *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, Hague (Pays-Bas), 7-10 December 2020, pp. 16-23.
7. N. Garneau, D. Beauchemin, E. Gaumond, P.-L. Déziel, L. Lamontagne, R. Khoury, “Generating Intelligible Plumitifs Summaries: Use Case Application with Ethical Considerations”, in *Proceedings of the 13th International Conference on Natural Language Generation (INLG 2020)*, Dublin (Ireland), 15-18 December 2020.
8. E. Brassard-Gourdeau, R. Khoury, “Subversive Toxicity Detection using Sentiment Information”, in *Proceedings of the Third Workshop on Abusive Language Online (ALW3 ACL2019)*, 1 August 2019, Florence (Italy), pp. 1-10.
9. M. AlMousa, R. Benlamri, R. Khoury, “NLP-Enriched Automatic Video Segmentation”, in *Proceedings of 6th International Conference on Multimedia Computing and Systems (CMCS18)*, 10-12 May 2018, Rabat (Morocco).
10. U. Coté-Allard, G. Dubé, R. Khoury, L. Lamontagne, B. Gosselin, F. Laviolette, “Time Adaptive Dual Particle Swarm Optimization”, in *Proceedings of the 2017 IEEE Congress on Evolutionary Computation (CEC)*, 5-8 June 2017, San Sebastian (Spain).
11. S. Zong, R. Khoury, R. Benlamri, “Local and Global Influence on Twitter”, in *Advances in Artificial Intelligence: Lecture Notes in Artificial Intelligence*, vol. 10233, M. Mouhoub and P. Langlais (eds.), pp.45-50. *Proceedings of the 30th Canadian Conference on Artificial Intelligence*, 16-19 May 2017, Edmonton (Canada).
12. L. Gan, R. Benlamri, R. Khoury, “Improved Sentiment Classification by Multi-modal Fusion”, in *Proceedings of the IEEE Third International Conference on Big Data Computing Service and Applications*, 6-10 April 2017, San Francisco (USA), pp. 11-16.
13. V. Jahjah, R. Khoury, L. Lamontagne, “Word Normalization Using Phonetic Signatures”, in *Advances in Artificial Intelligence: Lecture Notes in Artificial Intelligence*, vol. 9673, R. Khoury and C. Drummond (eds.), pp.180-185. *Proceedings of the 29th Canadian Conference on Artificial Intelligence*, 31 May-3 June 2016, Victoria (Canada).
14. J. Bergeron, A. Schmidt, R. Khoury, L. Lamontagne “Building User Interest Profiles Using DBpedia In A Question Answering System”, in the *Proceedings of the 29th International FLAIRS Conference*, 16-18 May 2016, Key Largo (USA), pp. 14-19.

15. R. Khoury, "Microtext Normalization using Probably-Phonetically-Similar Word Discovery", in *Proceedings of the Eight International Workshop on Selected Topics in Mobile and Wireless Computing* (part of the *11th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications*), 19-21 October 2015, Abu Dhabi (UAE), pp. 392-399.
16. B. J. Oommen, R. Khoury, A. Schmidt, "Text Classification Using Novel "Anti-Bayesian" Techniques", in *Computational Collective Intelligence*, M. Núñez, N.T. Nguyen, D. Camacho, B. Trawiński (eds.), Lecture Notes in Artificial Intelligence, vol. 9329, Springer 2015, pp. 3-17. Keynote speech at the *7th International Conference on Collective Intelligence*, 21-23 September 2015, Madrid (Spain).
17. R. Khoury, "Phonetic Normalization of Microtext", in the *Proceedings of the 2015 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, 25-28 August 2015, Paris (France), pp. 1600-1601.
18. U. Côté Allard, R. Khoury, L. Lamontagne, J. Bergeron, F. Laviolette, A. Bergeron-Guyard, "Optimizing Question-Answering Systems Using Genetic Algorithms", in the *Proceedings of the 28th International FLAIRS Conference*, 18-20 May 2015, Hollywood, (USA), pp. 32-37.
19. H. Chinaei, L. Lamontagne, F. Laviolette, R. Khoury, "A Topic Model Scoring Approach for Personalized QA Systems", in *Text, Speech and Dialogue*, P. Sojka, A. Horák, I. Kopeček, K. Pala (eds.), Lecture Notes in Artificial Intelligence, vol. 8655, Springer 2014, pp. 84-92. *17th International Conference on Text, Speech and Dialogue*, Pilsen, Czech Republic, September 2014.
20. J. Li, S. Fong, Y. Zhuang, R. Khoury, "Hierarchical Classification in Text Mining for Sentiment Analysis", in the *Proceedings of the 2014 International Conference on Soft Computing & Machine Intelligence (ISCMi2014)*, New Delhi, India, 26-27 September 2014.
21. L. Lamontagne, F. Laviolette, R. Khoury, A. Bergeron-Guyard, "A Framework for Building Adaptive Intelligent Virtual Assistants", in the *Proceedings of the 13th IASTED International Conference on Artificial Intelligence and Applications*, Innsbruck, Austria, 17-19 February 2014.
22. S. Fong, Y. Zhuang, J. Li, R. Khoury, "Sentiment Analysis of Online News using MALLET", in the *Proceedings of the 2013 International Symposium on Computational and Business Intelligence (ISCBI 2013)*, New Delhi, India, 24-26 August 2013, pp.301-304.

23. S. Fong, M. G. Da Costa Jr, R. Khoury, “Air Cargo Scheduling Using Genetic Algorithms”, in the *Proceedings of the 2013 International Symposium on Computational and Business Intelligence (ISCBI 2013)*, New Delhi, India, 24-26 August 2013, pp.170-173.
24. M. Idris, A. Mehrabian, A. Hamou-Lhadj, R. Khoury, “Pattern-Based Trace Correlation Technique to Compare Software Versions”, in *Autonomous and Intelligent Systems*, M. Kamel, F. Farray, H. Hagra (eds.), Lecture Notes in Artificial Intelligence, 1st edition, vol. 7326, Springer, 2012, pp. 159-166. *Third International Conference on Autonomous and Intelligent Systems*, Aveiro, Portugal, June 2012.
25. M. AlemZadeh, K. Abida, R. Khoury, F. Karray, “Enhancement of the ROVER’s Voting Scheme Using Pattern Matching”, in *Autonomous and Intelligent Systems*, M. Kamel, F. Farray, H. Hagra (eds.), Lecture Notes in Artificial Intelligence, 1st edition, vol. 7326, Springer, 2012, pp. 167-174. *Third International Conference on Autonomous and Intelligent Systems*, Aveiro, Portugal, June 2012.
26. R. Khoury, “A Learning Algorithm for Question Type Classification”, in the *Proceedings of the 2011 International Conference on Artificial Intelligence (ICAI’11)*, vol. 1, Las Vegas, USA, 18-21 July 2011, pp. 365-371.
27. R. Khoury, “Question Type Classification Using a Part-of-Speech Hierarchy”, in *Autonomous and Intelligent Systems*, M. Kamel, F. Farray, W. Gueaieb, A. Khamis (eds.), Lecture notes in Artificial Intelligence, 1st edition, vol. 6752, Springer, 2011, pp. 212-221. *Second International Conference on Autonomous and Intelligent Systems*, Burnaby, Canada, June 2011
28. M. AlemZadeh, R. Khoury, F. Karray, “Exploring Wikipedia’s Category Graph for Query Classification”, in *Autonomous and Intelligent Systems*, M. Kamel, F. Farray, W. Gueaieb, A. Khamis (eds.), Lecture Notes in Artificial Intelligence, 1st edition, vol. 6752, Springer, 2011, pp. 222-230. *Second International Conference on Autonomous and Intelligent Systems*, Burnaby, Canada, June 2011
29. R. Khoury, “Using Encyclopaedic Knowledge for Query Classification”, in the *Proceedings of the 2010 International Conference on Artificial Intelligence (ICAI’10)*, Volume 2, Las Vegas, USA, 12-15 July 2010, pp. 857-862.
30. R. Khoury, “Exploiting Wikipedia in Query Understanding Systems”, in the *Proceedings of the Fifth International Conference on Digital Information Management (ICDIM 2010)*, Thunder Bay, Canada, 5-8 July 2010, pp. 292-297.
31. R. Khoury, “The Impact Of Wikipedia On Scientific Research”, in the *Proceedings of the Third International Conference on Internet Technologies and Applications (ITA09)*, Wrexham, UK, 8-11 September 2009, pp. 2-11.

32. R. Khoury, F. Karray, M. Kamel, “Keyword Extraction Rules Based on a Part-Of-Speech Hierarchy”, in the *Proceedings of the 4th Annual Scientific Conference of the LORNET Research Network (I2LOR-07)*, Montreal, Canada, 4-7 November 2007. This paper was selected for publication in the International Journal of Advanced Media and Communication.
33. R. Khoury, F. Karray, M. Kamel, “Extracting and Representing Actions in Text Using Possibility Theory”, in the *Proceedings of the 3rd Annual Scientific Conference of the LORNET Research Network (I2LOR-06)*, Montreal, Canada, 9-11 November 2006.
34. R. Khoury, F. Karray, M. Kamel, “A Methodology for Extracting and Representing Actions in Texts”, in the *Proceedings of the 2006 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2006)*, Vancouver, Canada, 16-21 July 2006, p. 574-581.
35. R. Khoury, “An Enhanced Positioning Algorithm for a Self-Referencing Hand-Held 3D Sensor”, in the *Proceedings of the 3rd Canadian Conference on Computer and Robot Vision (CRV 2006)*, Québec City, Canada, 7-9 June 2006, p. 44.
36. R. Khoury, F. Karray, M. Kamel, “A Fuzzy Classifier for Natural Language Text using Automatically-Learned Fuzzy Rules”, in the *Proceedings of the second International Conference on Artificial & Computational Intelligence for Decision, Control and Automation - International Conference on Machine Intelligence (ACIDCA-ICMI'2005)*, Tozeur, Tunisia, 5-7 November 2005.
37. Y. Sun, R. Khoury, F. Karray, O. Basir, “Semantic Context Classification by Means of Fuzzy Set Theory”, in the *Proceedings of the 2005 IEEE International Conference on Natural Language Processing and Knowledge Engineering (IEEE NLP-KE'05)*, Wuhan, China, 30 October – 1 November 2005, pp. 250-255.

Book Chapters

1. M.-A. Larochelle, É. Brassard-Gourdeau, Z. Trabelsi, R. Khoury, S. Mellouli, L. Wood, C. Priebe. “Protecting Online Communities from Harmful Behaviors”, *Médias sociaux : perspectives sur les défis liés à la cybersécurité, la gouvernementalité algorithmique et l'intelligence artificielle*, Schallum Pierre et Jaafar Fehmi (eds.), Presses de l'Université Laval, 2021, ISBN : 978-2-7637-5328-7, pp.149-166.
2. R. Khoury, R. Khoury, W. Hamou-Lhadj, “Microtext Processing”, in the *Encyclopedia of Social Network Analysis and Mining (ESNAM)*, Reda Alhajj and Jon Rokne (ed.), Springer, August 2014, ISBN: 978-1-4614-6169-2, pp. 894-904. Reprinted in the *Encyclopedia of Social Network Analysis and Mining (ESNAM)*, Reda Alhajj and Jon Rokne (ed.), Springer, 2017, ISBN: 978-1-4939-7130-5, pp. 1301-1311.
3. C. Wei, R. Khoury, and S. Fong, “Recommendation Systems for Web 2.0 Marketing”, in *Studies in Big Data Volume 3: Data Mining for Service*, Katsutoshi Yada (ed.), Springer, 2014, ISBN: 978-3-642-45252-9, pp 171-196.

Others

1. J. Mo, L. Lamontagne, R. Khoury, “Word embeddings and Global Preference for Contextual Suggestion”, in *Proceedings of TREC 2016*, Gaithersburg, USA, 15-18 November 2016. (non-peer-reviewed conference)
2. R. Joganah, R. Khoury, L. Lamontagne, “Laval University at TREC Dynamic Domain 2016: Subtopic extraction focused on Named Entities”, in *Proceedings of TREC 2016*, Gaithersburg, USA, 15-18 November 2016. (non-peer-reviewed conference)
3. J. Mo, L. Lamontagne, R. Khoury, “Laval University and Lakehead University Experiments at TREC 2015 Contextual Suggestion Track”, in *Proceedings of TREC 2015*, Gaithersburg, USA, 18-20 November 2015. (non-peer-reviewed conference)
4. R. Joganah, R. Khoury, L. Lamontagne, “Laval University and Lakehead University at TREC Dynamic Domain 2015: Combination of Techniques for subtopics coverage”, in *Proceedings of TREC 2015*, Gaithersburg, USA, 18-20 November 2015. (non-peer-reviewed conference)
5. K. Scott, L. Dockstader, R. Benlamri, R. Khoury, A. Kim, “Northern Lights: Medical Documentation System for Health Care Collaboration”, in the *Fifth International Conference on Digital Information Management*, Thunder Bay, Ontario, 5-8 July 2010. (abstract and workshop)
6. K. Scott, L. Dockstader, R. Benlamri, R. Khoury, A. Kim, “Improved IPC Through Shared Documentation and Development of a Medical Domain Specific Language”, in the *Northern Health Research Conference*, Sudbury, Ontario, 4-5 June 2010. (abstract and presentation)
7. R. Khoury, Y. Sun, F. Karray, and M. Kamel, “Semantic Domain Classification by Means of Possibility Distributions”, in *I²LOR-05 E-Learning for the Future: From Content to Services*, Vancouver, Canada, 16-18 November 2005. (Peer-reviewed poster)

5. Presentations

Keynote speaker

1. R. Khoury, “Éducation en ligne et toxicité”, at the *Colloque REFAD 2018*, 24-25 May 2018.

Technical talks

1. R. Khoury, J.A. Gramaccia, “ Understanding the characteristics of online disinformation about COVID-19 vaccines”, invited at the *Public Health 2023*, 20 June 2023.
2. R. Khoury, “Prévention prédictive de messages toxiques”, at the *Université de Sherbrooke*, 23 November 2022. Organized by the Department of Computer Science.

3. R. Khoury, J. A. Gramaccia, “Sciences² : Unir les expertises au bénéfice des médias”, at the OBVIA, 27 October 2022.
4. R. Khoury, “La régulation des fausses nouvelles et de la désinformation: Le point de vue des ingénieurs en IA”, à l’Université Laval, 24 Mars 2022. Invited lecture in the course *COM-2601 Désinformation, fausses nouvelles et propagande dans l’espace public numérique*.
5. C. Sirois, R. Khoury, “Déterminer la qualité de la polypharmacie chez les aînés”, *TechSantéQC 2021*, 12-13 April 2021. Sponsored by the *Institut Intelligence et Données*.
6. R. Khoury, J. A. Gramaccia, “Sciences² : Unir les expertises dans la détection de la désinformation”, at the *Colloque sur l’Intelligence Artificielle*, 7-8 November 2019. Sponsored by the *École Supérieure de Journalisme de Lille*.
7. R. Khoury, “Prédire la toxicité en-ligne”, at the *Rendez-vous IA Québec*, 9 April 2018. Sponsored by the Institute for Information Technologies and Societies (IITS).
8. R. Khoury, “L’IA pour combattre la toxicité en-ligne”, at *UNIDEF 9 : La Guerre du Futur*, 1 March 2018. Sponsored by the Institut Militaire de Québec.
9. R. Khoury, “Qu’est-ce que vos métadonnées disent sur vous?”, at *MégaData 2017*, Université Laval, 5 October 2017. Sponsored by the Canada Research Chair in *Surveillance et construction sociale du risque*.
10. R. Khoury, “Surveillance de cyber-criminels sur le Dark Web”, at the seminar *Données massive et innovation : un panorama*, Université Laval, 31 October 2016. Sponsored by the Institute for Information Technologies and Societies (IITS).
11. R. Khoury , “Phonetic Rendering of Written Text”, at the University of Ottawa, 11 March 2015. Sponsored by the TAMALE Group.
12. R. Khoury , “Phonetic Rendering of Written Text”, at the University of Waterloo, 4 March 2015. Sponsored by the IEEE Computational Intelligence, and Systems, Man & Cybernetics society Chapters of Kitchener-Waterloo.
13. R. Khoury, “Compréhension Phonétique du Texte Écrit”, at Université du Québec à Chicoutimi (UQAC), 4 February 2015. Sponsored by the DIM.
14. R. Khoury, “Compréhension Phonétique du Texte Écrit”, at Laval University, 16 January 2015. Sponsored by the Department of Computer Science and Software Engineering.
15. R. Khoury, “Microtext Understanding using Wikipedia”, at Concordia University, 6 January 2012. Sponsored by the IEEE Computer Society Chapter of Montreal.
16. R. Khoury, “Query Classification using Wikipedia”, at the University of Waterloo, 21 January 2011. Sponsored by the PAMI Centre.

Invited courses

1. R. Khoury, “Qu’est-ce que l’intelligence artificielle?”, at the University of Ottawa, 31 January 2023. Invited lecture in the course *CMN 4500 Communication et IA*.
2. R. Khoury, “Les données massives et l’intelligence artificielle”, at Université Laval, 7 December 2022. Invited lecture in the course *IFT-2004 Modèles et langages des bases de données*.
3. R. Khoury, “L’IA et la lutte contre la désinformation”, at the University of Ottawa, 10 November 2022. Invited lecture in the course *CMN 5595 IA et désordre de l’information numérique*.
4. R. Khoury, “Avis d’expert”, à l’UQAR, 17 février 2022. Invited lecture in the course *L’intelligence artificielle pour les gestionnaires*.
5. R. Khoury, “Les données massives et l’intelligence artificielle... qu’est-ce que c’est?”, at Université Laval, 5 July 2022. Invited lecture in the course *IFT-2004 Modèles et langages des bases de données*.
6. R. Khoury, “Statistical Natural Language Processing”, at Carleton University, 12 March 2015. Invited lecture in the course *COMP 4106 Artificial Intelligence*.

Non-technical talks

1. R. Khoury, “Les algorithmes de recommandation et leurs biais”, to the *Ateliers sur la découvribilité du livre*, 13 June 2023.
1. R. Khoury, “Artificial Intelligence and its Applications to Industry”, to the Department of Industry, Energy and Technology of Newfoundland and Labrador, 27 July 2021.
2. R. Khoury, “Les algorithmes de recommandation: techniques et défis”, at the seminar series *Les Idées Fructueuses*, Université Laval, 16 October 2019.
3. R. Khoury, “Des algorithmes de recommandations racistes?”, at the seminar series *Café Scientifique*, Le Mot de Tasse, 8 August 2019.
4. R. Khoury, “Introduction aux jeux vidéo avec Scratch”, for the Hour of Code, 4 December 2018. Sponsored by *Partners In Research Canada*.
<https://www.youtube.com/watch?v=ELn1THWcdTg>
5. R. Khoury, “Profilage d’individus en politique (et plus)”, at the company R3D, 15 November 2018.
6. R. Khoury, “Données massives en politique”, at the *Cercle de la Garnison*, 20 September 2018.
7. R. Khoury, “Anonymisation des données et protection de la vie privée”, at the *Commission d’accès à l’information du Québec*, 15 march 2018.

8. R. Khoury, J.-F. Haince, “Santé et toxicité dans les communautés en ligne”, at *Objectif numérique 2017 : vers des sociétés numériques et durables*, Université Laval, 30 October 2017. Sponsored by the Institute for Information Technologies and Societies (IITS).
9. R. Khoury, “Langage dans les données massives”, at *Qu’est-ce que le big data peut faire pour vous*, Université Laval, 25 October 2017. Sponsored by the Public Chair AELIÉS.
10. R. Khoury, “L’intelligence artificielle pour lutter contre la toxicité sur le web”, at the *Pint of Science Festival*, Le Cercle, 15 May 2017.
11. R. Khoury, “Anonymisation des données et protection de la vie privée”, at CÉGEP Limoilou, 3 May 2017. Invited lecture in the course *Technique Informatique*.
12. R. Khoury, “Données personnelles, entre anonymisation et surveillance”, at the seminar series *Les Rencontres du Numérique*, Gabrielle-Roy Library, 23 February 2017. Sponsored by the Institute for Information Technologies and Societies (IITS). This talk was the topic of an interview on CBC’s *Première Heure* program, 20 February 2017.

6. Research

External Funding

1. NSERC Alliance et PROMPT, 782,622\$, 2022-2024 (primary investigator: S. Tremblay, industry partners: Fédération des caisses Desjardins du Québec, Borealys Games).
2. CIHR, Operating Grant, 499,870, 2021-2022 (primary investigator: E. Dubé).
3. OBVIA, 125 000\$, 2021-2022.
4. NSERC Alliance & PROMPT, \$418,884, 2021-2026 (industry partners: CN2i, Le Soleil, Omerlo Technologies).
5. NSERC Discovery Grant, \$175,000, 2021-2026.
6. CIHR-NSERC Collaborative Health Research Projects, \$1,308,414, 2020-2023 (industry partner: INSPQ).
7. NSERC Collaborative Research and Development Grant, \$1,304,350, 2019-2024 (industry partner: La Capitale Assurances et Services Financiers).
8. NSERC Engage Plus Grant, \$25,000, 2018 (industry partner: La Capitale Assurances Générales).
9. NSERC Engage Grant, \$25,000, 2018 (industry partner: B-CITI).
10. NSERC Collaborative Research and Development Grant, \$104,348, 2017-2020 (industry partner: Thales Research & Technology Canada).
11. MITACS Accelerate Cluster, \$1,693,333, 2017-2021 (industry partner: Two Hat Security).
12. NSERC Engage Grant, \$25,000, 2017 (industry partner: La Capitale Assurances Générales).
13. NSERC Engage Grant, \$25,000, 2015 (industry partner: Thales Research & Technology Canada).

14. DND/NSERC Research Partnership Grants (primary investigator: L. Lamontagne, industrial partner: Fujitsu Research), \$65,216, 2013-2015.
15. OCE Connections, \$3,490, 2011.
16. NSERC Discovery Grant, \$75,000, 2013-2018.
17. Northern Ontario Academic Medicine Association (NOAMA) AHSC AFP Innovation Fund (primary investigator: A. Kim): \$97,392, 2011-2013.
18. NWO Innovation Center ADVANCE Early Stage Innovation Assistance (industry partner: Bitcold Technology inc.), \$8,500, 2010.
19. OCE Connections (industry partner: Electrodynamics inc.), \$3,500, 2010.
20. OPIC Proof of Principle (Phase II), \$25,000, 2010.
21. NOSM (primary investigator: R. Benlamri), \$36,000, 2010.
22. OCE Connections (industry partner: Electrodynamics inc.), \$3,500, 2009.

Research Interests

Fundamental Research: Natural Language Processing, Data Mining and Information Retrieval, Big Data Analytics, Knowledge Management, Artificial Intelligence, Machine Learning.

Applications: Microblog analysis, Question-answering, Imbalanced data processing.

Awards and Recognitions

- Best student paper award: “RISC: Generating Realistic Synthetic Bilingual Insurance Contract” at the *36th Canadian Conference on Artificial Intelligence*.
- Best student paper award: “Estimation of uncertainty bounds on disparate treatment when using proxies for the protected attribute” at the *34th Canadian Conference on Artificial Intelligence*.
- The *Word embeddings and Global Preference for Contextual Suggestion* project achieved the top performance in the TREC 2016 Contextual Suggestion track, out of 30 international submissions.
- The *Combination of Techniques for subtopics coverage* project achieved the top performance in the TREC 2015 Dynamic Domain track, out of 32 international submissions.
- The *Kontrol* project was a finalist at the Microsoft Imagine Cup 2013, World Citizenship category.
- The project *Electric Bus Management System* was a finalist at the OCE Discovery 2011 competition, placing it in the top-15 out of 350 projects in Ontario.

- The *Northern Lights* project was a finalist in the ImagiNation Challenge 2011 organized by Canada Health Infoway, placing it in the top-50 in Canada.

7. Graduate Theses and Dissertations Supervision

1. Théophile Berteloot, *Association Rules Mining in Massive Datasets: An application to polypharmacy detection*, M.Sc. in Computer Science, 2023.
2. Alexandre Larouche, *Bandits neuronaux pour la détection de polypharmacies potentiellement inappropriées*, M.Sc. in Computer Science, 2022.
3. Roxane Debruyker, *A General Machine Reading Comprehension Pipeline*, M.Sc. in Computer Science, 2022.
4. Nora Ajakan, *Ingénierie de la représentation des variables pour la classification binaire à partir des données déséquilibrées*, M.Sc. in Computer Science, 2022.
5. Charles Poitras, *Phonetic normalization as a means to improve toxicity detection*, M.Sc. in Computer Science, 2022.
6. Mohannad Al-Mousa, *A Knowledge-based Approach for Semantic Similarity, Relatedness, and Word Sense Disambiguation using WordNet*, Ph.D. in Electrical and Computer Engineering, 2020.
7. Marc-André Larochelle, *Generalization of Cyberbullying Traces*, M.Sc in Computer Science, 2020.
8. Talia Sanchez Viera, *Prédiction de comportements toxiques à partir des messages sur les réseaux sociaux*, M.Sc. in Computer Science, 2020.
9. Éloi Brassard-Gourdeau, *Toxicité et Sentiment : Comment l'étude des sentiments peut aider la détection de toxicité*, M.Sc. in Computer Science, 2019.
10. Robin Joganah, *Recherche d'information dynamique pour domaines complexes*, M.Sc. in Computer Science, 2018.
11. Shan Zong, *Local and Global Influence on Twitter*, M.Sc. in Electrical and Computer Engineering, 2016.
12. Lige Gan, *Improved Sentiment Classification by Multi-model Fusion*, M.Sc. in Electrical and Computer Engineering, 2016.
13. Naeem Nematollahi, *Key Duplicating Software using Digital Image Processing*, M.Sc. in Electrical and Computer Engineering, 2011.

8. Teaching

Undergraduate Courses

Databases models and languages for engineers, Advanced databases, Big Data Analysis and Processing, Degree Project, Signal Processing for Software Engineers, Database Systems, Principles of Operating Systems, Numerical Methods and Modelling, Software Design II, Data Management and Information Systems, Software Design and Testing, Applied Artificial Intelligence, Soft Computing, Digital Signal and Image Processing

Graduate Courses

Advanced databases, Big Data Analysis and Processing, Digital Signal and Image Processing, Statistical Natural Language Processing, Soft Computing

Teaching Awards

- Winner of the *2012 Contribution to Teaching Award* at Lakehead University.

9. Professional Activities

Membership in Research and Professional Groups

- Ingénieur (Ing.), *Ordre des Ingénieurs du Québec*, License number 130319.
- Professional Engineer (P.Eng.), Professional Engineers Ontario, License number 100152469.
- Member of the Institute for Intelligence and Data (IID), Université Laval.
- Member of the International Observatory on the Societal Impacts of AI and Digital Technology (OBVIA).
- Affiliated researcher at the Big Data Research Centre (CRDM), Université Laval.
- Affiliated researcher at the Group for Research in Artificial Intelligence of Laval (GRAIL), Université Laval.
- Member of the ACM.
- Member of the Canadian Artificial Intelligence Association (CAIAC).

Editorial Positions

- Guest Editor for the Special Issue on Web Data Mining of the *Journal of Emerging Technologies in Web Intelligence*, vol. 4 no. 3, August 2012.
- Guest Editor for the Special Issue on advances in artificial intelligence in Canada of the journal *Computational Intelligence*, vol. 34 no. 2, May 2018.
- Associate editor for the journal *Computational Intelligence*, since 2016.

Conference and Workshop Organization

- Program co-chair for the *29th Canadian Conference on Artificial Intelligence*, Victoria, Canada, 31 May-3 June 2016.
- Special Session co-chair in Intelligent Knowledge Management for the *2012 International Conference on Autonomous Intelligent Systems (AIS 2012)*, Aveiro, Portugal, 25-27 June 2012.
- Poster Session Judge for the *2011 Symposium on Advanced Intelligent Systems*, University of Waterloo, Ontario, 1-2 December 2011.
- Track Chair for the *Second International Conference on Autonomous and Intelligent Systems (AIS 2011)*, Burnaby, British Columbia, 21-23 June 2011.
- Local Arrangement Chair, Technical Program Committee member, Organization Committee member, for the *5th International Conference on Digital Information Management (ICDIM'2010)*, Lakehead University, Ontario, 5-8 July 2010.
- Organization Committee member for the *UW Multimedia Mining and Knowledge Discovery Workshop*, University of Waterloo, Ontario, 17-18 October 2007.
- Organization Committee member for the *UW and IEEE Kitchener-Waterloo Section Joint Workshop on Knowledge and Data Mining*, University of Waterloo, Ontario, 30-31 October 2006.

Administrative and Executive Positions

- Canadian Artificial Intelligence Association (CAIAC).
 - Vice-president, 2019-2021.
 - President, 2021-2023.
 - Past president, 2023-2025.
- Rotary Club of Thunder Bay (Fort William).
 - Website director, 2010 to 2016. The website I developed for the club earned District-level awards in 2013 and 2015.
 - Member of Board of Directors, 2011-2013.
 - Club President, 2013-2014.
- Ohm Base Makerspace.
 - Founding member, 2011.
 - Member of Board of Directors, 2015-2016.
- Confederation College
 - Member of the Computer Programmer Program Advisory Committee, 2014 to 2016.
- Fair Play Alliance
 - Advisory Board member, 2020 to present.

Expert advisory role

- External expert for the periodic evaluation of the Master's in Computer Science, Master's in Software Engineering, and Doctorate in Computer Science at the Université de Sherbrooke, 2023.
- Expert in generative IA and cognitive development for the Joint Working Committee of the *Conseil supérieur de l'éducation* (CSE) and the *Commission de l'éthique en science et en technologie* (CEST) on the use of generative AI in higher education, 2023.
- External expert in the targeted engagement on the Sensitive Technology List by Public Safety Canada.