CURRICULUM VITAE

Name: **Anthony BONATO**

Present Position: *Professor, Department of Mathematics*
Toronto Metropolitan University
Toronto ON
Canada, M5B 2K3
E-mail: abonato@torontomu.ca
Web: https://math.torontomu.ca/~abonato

DEGREES:

Degree	University	Year	Area
Ph.D.	Waterloo	July 1998	Logic and Graph Theory
M.Math.	Waterloo	December 1994	Algebra
B.Sc. Honours, Summa Cum Laude	McMaster	May 1993	Pure mathematics

EMPLOYMENT HISTORY:

Year	Position	Department	Institution
2012 -	Professor	Math	TMU
2017 - 2018	Massey Ryerson Fellow	Massey College	U Toronto
2013 - 2017	Associate Dean, Students and Programs	YSGS	Ryerson
2010 - 2013	Chair	Math	Ryerson
2008 - 2012	Associate Professor	Math	Ryerson
2006 - 2008	Graduate Program Director	Math	Laurier
2004 - 2008	Associate Professor	Math	Laurier
2005	Visiting Member		Fields Institute
1999 - 2004	Assistant Professor	Math	Laurier
2003 - present	Adjunct Professor	Math & Stats	Dalhousie
2008 - present	Adjunct Professor	Math	Laurier
1999	Postdoctoral Fellow	Math & CS	Mount Allison
1999	Assistant Professor, Limited Term	Math & CS	Mount Allison

RESEARCH FUNDING: Lifetime total of $775,000 of research funding.

Years	Source	Amount
2020-2026	NSERC DG	$288,000
2015-2020	NSERC DG	$100,000
2010-2015	NSERC DG	$100,000
2005-2010	NSERC DG	$60,000
2000-2005	NSERC DG	$50,000
2005-2012	MITACS, Mprime NCE	$100,000
2013-15	MITACS Globalink	$15,000
2008-2023	Ryerson grants	$62,000

AWARDS:

Ryerson Faculty Research Excellence Award: 2022, 2017, 2011, 2009
YSGS Outstanding Contribution to Graduate Education Award, 2019, 2013
2017/2018 Ryerson Fellow at Massey College
Science Borealis 2017 People's Choice Awards nomination for my blog, The Intrepid Mathematician
Wilfrid Laurier Merit Awards: 2007, 2004, and 2001
Nominated for TVO's "Best Lecturer Award, 2010."

RESEARCH

PUBLICATIONS: Over 150 publications with 120 co-authors.

Books published or accepted

1. Bonato, A., *Dots and Lines: The Hidden Networks Around Us*, Johns Hopkins University Press, 2025.

2. Bonato, A., *An Invitation to Pursuit-Evasion Games and Graph Theory*, AMS Student Mathematical Library, 2022.

3. Bonato, A., *Limitless Minds: Interviews with Mathematicians*, AMS Student Mathematical Library, 2018.

4. Bonato, A., P. Prałat, *Graph Searching Games and Probabilistic Methods*, Discrete Mathematics and Its Applications, CRC Press, 2017.

5. Bonato, A., R.J. Nowakowski, *The Game of Cops and Robbers on Graphs*, AMS Student Mathematical Library, 2011.

6. Bonato, A., *A Course on the Web Graph*, AMS Graduate Studies in Mathematics Series and AARMS Monograph Series, 2008.

Books edited

7. Bonato, A., P. Prałat, editors, *Proceedings of The 14th Workshop On Algorithms And Models For The Web-Graph*, 2018.

8. Bonato, A., P. Prałat, editors, *Proceedings of The 13th Workshop On Algorithms And Models For The Web-Graph*, 2017.

9. Bonato, A., F.R.K. Chung, P. Prałat, editors, *Proceedings of The 13th Workshop On Algorithms And Models For The Web-Graph*, 2017.

10. Bonato, A., F.R.K. Chung, P. Prałat, editors, *Proceedings of The 11th Workshop On Algorithms And Models For The Web-Graph*, 2014.

11. Bonato, A., M. Mitzenmacher, P. Prałat, editors, *Proceedings of The 10th Workshop On Algorithms And Models For The Web-Graph*, 2013.

12. Bonato, A., J. Janssen, editors, *Proceedings of The 9th Workshop On Algorithms And Models For The Web-Graph*, 2012.

13. Bonato, A., F.R.K. Chung, editors, *Proceedings of The 5th Workshop On Algorithms And Models For The Web-Graph*, 2007.

Book chapters

14. Bonato, A., J. Janssen, Infinite geometric graphs and properties of metrics invited book chapter in *Recent Trends in Combinatorics*, Editors: A. Beveridge, J.R. Griggs, L. Hogben, G. Musiker, P. Tetali, 2015.

15. Bonato, A., Conjectures on Cops and Robbers, invited book chapter in the book Graph Theory - Favorite Conjectures and Open Problems, edited by Ralucca Gera, Stephen Hedetniemi, and Craig Larson, 2014.

16. Bonato, A., F.R.K. Chung, Complex networks, invited book chapter in Handbook of Graph Theory, 2nd Edition, 2013.

17. Bonato, A., B. Yang, A survey of graph searching, invited book chapter in Handbook of Combinatorial Optimization, editors P. Pardalos, D.Z. Du, R. Graham, 2011.

18. Bonato, A., A survey of on-line social networks, invited book chapter in Social Networks, editor E. Kranakis, Springer, Mathematics in Industry series, 2011.

Published or accepted in refereed publications

19. Behague, N., A. Bonato, M.Huggan, R. Malik, T. Marbach, The iterated local transitivity model for hypergraphs, *Discrete Applied Mathematics* **337** (2023) 106-119.

20. Bonato, A., F. Lehner, T. Marbach, JD Nir, The Localization game on locally finite trees, *Proceedings of EUROCOMB'23.*

21. Bonato, A., K. Chaudhary, The Iterated Local Transitivity model for tournaments, In: *Proceedings of WAW'23.*

22. Bonato, A., C. Laflamme, M. Pawliuk, N. Sauer, Distinguishing number of universal homogeneous Urysohn metric spaces, *The Electronic Journal of Combinatorics* **29**(3), 2022.

23. Bonato, A., M. Huggan, T. Marbach, The localization number and metric dimension of graphs of diameter 2, *Contributions to Discrete Mathematics* **18** (2023) 29-52.

24. Bonato, A., S. Ahirwar, L. Gittins, A. Huang, T. Marbach, T. Zaidman, Pursuit-evasion games on latin square graphs, *Journal of Combinatorics* **14** (2023) 461-483.

25. Bastide, P., M. Bonamy, P. Charbit, S. Kamali, T. Pierron, M. Rabie, Improved pyrotechnics: closer to the burning number conjecture, accepted to *The Electronic Journal of Combinatorics.*

26. Bonato, A., R. Cushman, T. Marbach, B. Pittman, The Localization game on oriented graphs, accepted to *Discrete Applied Mathematics.*

27. Bonato A., K. Georgiou, C. MacRury, P. Pralat, Algorithms for p-faulty search on a half-line, *Algorithmica* **50** 2022.

28. N. Behague, A. Bonato, M. Huggan, T. Marbach, B. Pittman, The localization capture time of a graph, *Theoretical Computer Science* **911** (2022) 80-91.

29. Bonato, A., C. Laflamme, M. Pawliuk, N. Sauer, Distinguishing number of universal homogeneous Urysohn metric spaces, *The Electronic Journal of Combinatorics* **29**(3), 2022.

30. Bonato, A., J. Kapusin, J. Yuan, Winner does not take all: contrasting centrality in adversarial networks, In: *Proceedings of Complex Networks, 2022.*

31. Bonato, A., J. Breen, B. Brimkov, J. Carlson, S. English, J. Geneson, L. Hogben, K.E. Perry, C. Reinhart, Optimizing the trade-off between number of cops and capture time in Cops and Robbers, *Journal of Combinatorics* **13** (2022) 79–203.

32. Bonato A., M. Huggan, R. Nowakowski, The game of flipping coins, *Integers* Volume 21b, 2022.

33. Bonato A., Queer inclusion equals better mathematics, *Nature*, August 2022.

34. Bonato A., R. Cushman, T. Marbach, Z. Zhang, An evolving network model from clique extension, In: *Proceedings of The 28th International Computing and Combinatorics Conference*, 2022.

35. Bonato, Interview with Lisa Jeffrey, *Notices of the American Mathematical Society* **69** (2022) 410-412.

36. Bonato, Interview with Maria Chudnovsky, *Notices of the American Mathematical Society* **69** (2022) 407-410.

37. Bonato, Interview with Jennifer Chayes, *Notices of the American Mathematical Society* **69** (2022) 403-407.

38. Bonato, A., S. English, B. Kay, D. Moghbel, Improved bounds for burning fence graphs, accepted to *Graphs and Combinatorics* **37** (2021) 2761–2773.

39. Abraham, L., A. Bonato, A. Nazareth, Small number of communities in Twitter keyword networks, In: *Proceedings of Complex Networks, 2021.*

40. Bonato, A., J. Janssen, A. Quas, Geometric random graphs and Rado sets of continuous functions, *Discrete Analysis* 2021:**3**, 21 pp.

41. Bonato, A., M. Huggan, T. Marbach, The localization number of designs, *Journal of Combinatorial Designs* **29** (2021) 175-192.

42. Bonato, A., A survey of graph burning, *Contributions to Discrete Mathematics* **16** (2021) 185-197.

43. Bonato, A., J. Bruce, R. Buckmire, Spaces for all: the rise of LGBTQ+ mathematics conferences, *Notices of the American Mathematical Society* **68** (2021) 998-1003.

44. Bonato, A., M. Huggan, T. Marbach, F. Mc Inerney, The game of Cops and Eternal Robber, *Theoretical Computer Science* **874** (2021) 80-93.

45. Bonato, A., H. Chuangpishit, S. English, B. Kay, E. Meger, The iterated local model for social networks, *Discrete Applied Mathematics* **284** (2020) 555–571.

46. Bonato, A., W.B. Kinnersley, Bounds on the localization number, *Journal of Graph Theory* **94** (2020) 579-596.

47. Bonato, A., K. Gunderson, A. Shaw, Burning the plane: Densities of the infinite Cartesian grid, *Graphs and Combinatorics* **36** (2020) 1311-1335.

48. Bonato, A., E. Meger, Iterated global models for complex networks, In: Proceedings of WAW'20.

49. Bonato, A., D.W. Cranston, M. Huggan, T. Marbach, R. Mutharasan, The Iterated Local Directed Transitivity model for social networks, In: Proceedings of WAW'20.

50. Bonato, A., H. Chuangpishit, C. MacRury, S. Park, B. Parsi, P. Pralat, B. Reiniger, Searching the half-line with a probabilistically faulty robot, In: Proceedings of LATIN'20.

51. Bonato, A., B. Mohar, Topological directions in Cops and Robbers, *Journal of Combinatorics* **11** (2020) 47–64.

52. Bonato, A., N.E. Clarke, D. Cox, S. Finbow, F. Mc Inerney, M.E. Messinger, Hyperopic Cops and Robbers, *Theoretical Computer Science* **794** (2019) 59–68.

53. Bonato, A., T. Lidbetter, Bounds on the burning numbers of spiders and path-forests, *Theoretical Computer Science* **794** (2019) 12–19.

54. Bonato, A., S. Kamali, Approximation algorithms for graph burning, In: Proceedings of TAMC'19.

55. Bonato, A., J. Janssen, A. Quas, Geometric random graphs and Rado sets in sequence spaces, with J. Janssen, *European Journal of Combinatorics* **79** (2019) 1-14.

56. Bonato, A, S. Kamali, Approximation algorithms for graph burning, In: *Proceedings of TAMC'19.*

57. Bonato, A., S. Bessy, J. Janssen, D. Rautenbach, E. Roshanbin, Bounds on the burning number, *Discrete Applied Mathematics* **235** (2018) 16–22.

58. Bonato, A., Emmy's Time, *The Mathematical Intelligencer* **41** (2018) 1-7.

59. Bonato, A., R.M. del Rio-Chanona, C. MacRury, J. Nicolaidis,X. Perez-Gimenez, P. Prałat, K. Ternovsky, The robot crawler graph process, *Discrete Applied Mathematics* **247** (2018) 23–36.

60. Bonato, A., N. Eikmeier, D.F. Gleich, R. Malik, Dynamic Competition Networks: detecting alliances and leaders, In: *Proceedings of WAW'18.*

61. Bonato, A., X. Perez Gimenez, P. Prałat, B. Reiniger, The game of Overprescribed Cops and Robbers played on graphs, *Graphs and Combinatorics* **33** (2017) 801-815.

62. E. Infeld, H. Pokhrel, P. Prałat, Common adversaries form alliances: modelling complex networks via anti-transitivity, In: *Proceedings of WAW'17.*

63. Bonato A., G. Hahn, P. Gordinowicz, Cops and Robbers ordinals of cop-win trees, *Discrete Mathematics* **340** (2017) 951-956.

64. Bonato, A., G. MacGillivray, Characterizations and algorithms for generalized Cops and Robbers games, *Contributions to Discrete Mathematics* **2** (2017) 110-122.

65. Bonato, A., D. Ryan D'Angelo, E. R. Elenberg, D. F. Gleich, Y. Hou, Mining and modeling character networks, In: *Proceedings of the 13th Workshop on Algorithms and Models for the Web Graph,* 2017.

66. Bonato, A., J. Janssen, E. Roshanbin, How to burn a graph, *Internet Mathematics*, **1-2** (2016) 85-100.

67. D. Delić, C. Wang, The structure and automorphisms of semi-directed graphs, *Journal of Multiple-Valued Logic and Soft Computing* **27** (2016) 161-173.

68. A. Bonato, The geometry and dimensionality of social networks, *Notes of the Canadian Mathematical Society* **48** (2016) 12-13.

69. Bonato, A., D. Mitsche, X. Perez Gimenez, P. Prałat, A probabilistic version of the game of Zombies and Survivors on graphs, *Theoretical Computer Science* **655** (2016) 2-14.

70. Bonato, A., D. Bal, W.B. Kinnersley, P. Prałat, Lazy Cops and Robbers played on random graphs and graphs on surfaces, *Journal of Combinatorics* **7** (2016) 627-642.

71. Bonato, A., M. Lozier, D. Mitsche, X. Perez Gimenez, P. Prałat, The domination number of online social networks and random geometric graphs, In: *Proceedings of TAMC'15*, 2015.

72. Bonato, A., D. Bal, W.B. Kinnersley, P. Prałat, Lazy Cops and Robbers played on hypercubes, *Combinatorics, Probability, and Computing* **24** (2015) 829-837.

73. Bonato, A., N.E. Clarke, S. Finbow, S. Fitzpatrick, M.E. Messinger, A note on bounds for the cop number using tree decompositions, *Contributions to Discrete Mathematics,* **9** (2014) 50-56.

74. Bonato, A., W.B. Kinnersley, P. Prałat, The toppling number of complete and random graphs, *Discrete Mathematics and Theoretical Computer Science* **16** (2014) 229-252.

75. Bonato, A., J. Janssen, E. Roshanbin, Burning a graph as a model of social contagion, In: *Proceedings of WAW'14*, 2014.

76. Bonato, A., D.F. Gleich, M. Kim, Dieter Mitsche, P. Prałat, A. Tian, S.J. Young, Dimensionality matching of social networks using motifs and eigenvalues, *PLOS ONE*, **9**(9): e106052.

77. W. Baird, A. Bonato, A. Beveridge, P. Codenotti, A. Maurer, J. McCauley, S. Valeva, On the minimum order of k-cop-win graphs*, Contributions to Discrete Mathematics* **9** (2014) 70-84.

78. Bonato, A., J. Brown, D. Mitsche, P. Prałat, Independence densities of hypergraphs, *European Journal of Combinatorics*, **40** (2014) 124-136.

79. Bonato, A., D. Mitsche, P. Prałat, Vertex-pursuit in random directed acyclic graphs, *SIAM Journal on Discrete Mathematics*, **27** (2013) 732-756.

80. Bonato, A., A. Burgess, Cops and Robbers on graphs based on designs, *Journal of Combinatorial Designs* **21** (2013) 359-418.

81. Bonato, A., S. Finbow, P. Gordinowicz, A. Haidar, W.B. Kinnersley, D. Mitsche, P. Prałat, L. Stacho, The robber strikes back, In: *Proceedings of ICC3, 2013.*

82. Bonato, A., W.B. Kinnersley, P. Gordinowicz, P. Prałat, The capture time of the hypercube, *Electronic Journal of Combinatorics*, Volume 20, Issue 2, 2013.

83. Bonato, A., WHAT IS ... Cop Number? *Notices of the American Mathematical Society* **59** (2012) 1100-1101.

84. W. Baird, A. Bonato, Meyniel's conjecture on the cop number: a survey, *Journal of Combinatorics* **3** (2012) 225-238.

85. Bonato, A., D. Delić, Distinguishing homomorphisms of infinite graphs, *Contributions to Discrete Mathematics* **7** (2012) 44-53.

86. Bonato, A., M.E. Messinger, P. Prałat, Fighting intelligent fires in graphs, *Theoretical Computer Science* **434** (2012) 11-22.

87. Bonato, A., A. Costea, Adjacency properties of graphs and a conjecture of Erdős, *The Atlantic Electronic Journal of Mathematics* **5** (2012) 37-46.

88. Bonato, A., D. Mitsche, P. Prałat, Vertex-pursuit in hierarchical social networks, invited paper In: *Proceedings of TAMC'2012.*

89. Bonato, A., J. Janssen, Infinite random geometric graphs from the hexagonal metric, In: *Proceedings of IWOCA'12.*

90. Bonato, A., J. Janssen, P. Prałat, Geometric protean graphs, *Internet Mathematics* **8** (2012) 2-28.

91. Bonato, A., RJ. Nowakowski, Sketchy tweets: Ten minute conjectures in graph theory, *The Mathematical Intelligencer* **34** (2012) 8-15.

92. Bonato, A., G. Kemkes, P. Prałat, Almost all cop-win graphs contain a universal vertex, *Discrete Mathematics* **312** (2012) 1652-1657.

93. Bonato, A., J. Brown, G. Kemkes, P. Prałat, Independence and chromatic densities of graphs, *Journal of Combinatorics* **2** (2011) 397-411.

94. Bonato, A., J. Janssen, Infinite random geometric graphs, *Annals of Combinatorics* **15** (2011) 597-617.

95. T. Milenkovic, V. Memisevic, A. Bonato, N. Przulj, Topological domination captures key biological processes in molecular networks, *PLoS ONE* **6**(8): e23016.

96. Bonato, A., Catch me if you can: Cops and Robbers on graphs, invited paper In: *Proceedings of the 6th International Conference on Mathematical and Computational Models (ICMCM'11).*

97. Bonato, A., H. Bruhn, R. Diestel, P. Sprüssel, Twins of rayless graphs, *Journal of Combinatorial Theory, Series B* **101** (2011) 60-65.

98. Bonato, A., N. Hadi, P. Horn, P. Prałat, C. Wang, Models of on-line social networks, *Internet Mathematics* **6** (2011) 285-313.

99. Bonato, A., F. Chung Graham, Open letter to Internet Mathematics community, *Internet Mathematics* **6** (2010) 1-2.

100. Bonato, A., P. Gordinowicz, P. Prałat, Bounds and constructions for n-e.c. tournaments, *Contributions to Discrete Mathematics* **5** (2010) 52-66.

101. Bonato, A., E. Chiniforooshan, P. Prałat, Cops and Robbers from a distance, *Theoretical Computer Science* **411** (2010) 3834-3844.

102. Bonato, A., G. Hahn, C. Tardif, Large classes of infinite k-cop-win graphs, *Journal of Graph Theory* **65** (2010) 234-242.

103. Bonato, A., D. Delić, I. Dolinka, All countable monoids embed into the monoid of the infinite random graph, *Discrete Mathematics* **310** (2010) 373-375.

104. Bonato, A., J. Janssen, P. Prałat, The geometric protean model for on-line social networks, *Proceedings of WAW'2010.*

105. Bonato, A., J. Janssen, P. Prałat, A geometric model for on-line social networks, *Proceedings of 3rd Workshop on Online Social Networks (WOSN 2010).* Electronic only.

106. Bonato, A., D. Delić, Distinguishing number and adjacency properties, *Journal of Combinatorics* **1** (2010) 141-148.

107. W. Aiello, A. Bonato, C. Cooper, J. Janssen, P. Prałat, A spatial web graph model with local influence regions, *Internet Mathematics* **5** (2009) 175-196.

108. Bonato, A., G. Hahn, P. Golovach, J. Kratochvíl, The capture time of a graph, *Discrete Mathematics* **309** (2009) 5588–5595.

109. Bonato, A., P. Prałat, The good, the bad, and the great: homomorphisms and cores of random graphs, *Discrete Mathematics* **309** (2009) 5535-5539.

110. Bonato, A.**,** A survey of properties and models of on-line social networks, invited paper In: *Proceedings of the 5th International Conference on Mathematical and Computational Models (ICMCM'09).*

111. Bonato, A., N. Hadi, P. Horn, P. Prałat, C. Wang, Dynamic models of on-line social networks, In: *Proceedings of WAW'09, Lecture Notes in Computer Science*, **5427**, Springer 2009, pp. 127-142.

112. Bonato, A., J. Janssen, C. Wang, The n-ordered graphs - a new graph class, *Journal of Graph Theory* **60** (2009) 204-218.

113. Baker, C.A., A. Bonato, N. McKay, P. Prałat, Graphs with the n-e.c. adjacency property constructed from resolvable designs, *Journal of Combinatorial Designs* **17** (2009) 294 - 306.

114. Bonato, A., P. Prałat, C. Wang, Pursuit-evasion in models of complex networks, *Internet Mathematics* **4** (2009) 419-436.

115. Bonato, A., The search for n-e.c. graphs, *Contributions to Discrete Mathematics* **4** (2009) 40-53.

116. Bonato, A., E. Chiniforooshan, Pursuit and evasion from a distance: algorithms and bounds, In: *Proceedings of ANALCO'09.* Published on-line:
`http://www.siam.org/proceedings/analco/2009/analco09.php`

117. Bonato, A., J. Janssen, Infinite limits and adjacency properties of a generalized copying model, *Internet Mathematics* **4** (2009) 199-223.

118. Bonato, A., C. Wang, A note on domination parameters in random graphs, *Discussiones Mathematicae Graph Theory* **28** (2008) 335-343.

119. Bonato, A., D. Delić, C. Wang, Universal random semi-directed graphs, In: *Proceedings of the 1st International Conference on Relations, Orders and Graphs (ROGICS'08)*, pp. 254-265.

120. Baker, C.A., A. Bonato, J.M.N. Brown, T. Szönyi, Graphs with the n-e.c. adjacency property constructed from affine planes, *Discrete Mathematics* **208** (2008) 901-912.

121. Bonato, A., G. Hahn, C. Wang, The cop density of a graph, *Contributions to Discrete Mathematics* **2** (2007) 133-144.

122. Bonato, A., Random graph models for the web graph, invited paper In: *Proceedings of 4th National Conference on Mathematical and Computational Models,* 2007.

123. Bonato, A., A note on uniquely H-colorable graphs, *Discussiones Mathematicae Graph Theory* **27** (2007) 39-44.

124. W. Aiello, A. Bonato, C. Cooper, J. Janssen, P. Prałat, A spatial web graph model with local influence regions, In: *Proceedings of The 5th Workshop On Algorithms And Models For The Web-Graph*, 2007.

125. Bonato, A., P. Prałat, C. Wang, Vertex pursuit games in stochastic network models, In: *Proceedings of Combinatorial and Algorithmic Aspects of Networking*, 2007.

126. Bonato, A., C. Tardif, Mutually embeddable graphs and the Tree Alternative conjecture, *Journal of Combinatorial Theory, Series B* **96** (2006) 874-880.

127. Bonato, A., Spanning subgraphs of graphs partitioned into two isomorphic pieces, *Journal of Graph Theory* **51** (2006) 123-136.

128. Bonato, A., K. Cameron, On an adjacency property of almost all tournaments, *Discrete Mathematics* **306** (2006) 2327-2335.

129. Bonato, A., A. Costea, Matchings defined by local conditions, *Journal of Combinatorial Mathematics and Combinatorial Computing.* **58** (2006) 41-53.

130. Bonato, A., A survey of web graph models, invited paper In: *Proceedings of Combinatorial and Algorithmic Aspects of Networking*, Vol. **3405,** 2005.

131. Bonato, A., J. Janssen, Infinite limits of the duplication model and graph folding, In: *Proceedings of EUROCOMB05, Discrete Mathematics and Theoretical Computer Science.*

132. Bonato, A., J. Janssen, Limits and power laws of models for the web graph and other networked information spaces, *Proceedings of Combinatorial and Algorithmic Aspects of Networking*, Vol. **3405,** 2005.

133. Bonato, A., J. Janssen, Infinite limits of copying models of the web graph, *Internet Mathematics* **1** (2004) 193-213.

134. Bonato, A., D. Delić, A note on orientations of the infinite random graph, *European Journal of Combinatorics* **25** (2004) 921-926.

135. Bonato, A., D. Delić, On a problem of Cameron's on inexhaustible graphs, *Combinatorica* **24** (2004) 35-51.

136. Bonato, A., R. Nowakowski, Partitioning a graph into two isomorphic pieces, *Journal of Graph Theory* **44** (2003) 1-14.

137. Baker, C. A., A. Bonato, J.M.N. Brown, Graphs with the 3-e.c. adjacency property constructed from affine planes, *Journal of Combinatorial Mathematics and Combinatorial Computing* **46** (2003) 65-83.

138. Bonato, A., Homomorphisms and amalgamation, *Discrete Mathematics* **270** (2003) 32-41.

139. Bonato, A., C. Tardif, Large families of mutually embeddable vertex-transitive graphs, *Journal of Graph Theory* **43** (2003) 99-106.

140. Bonato, A., P. Cameron, D. Delić, S. Thomassé, Generalized pigeonhole properties of graphs and oriented graphs, *European Journal of Combinatorics* **23** (2002) 257-274.

141. Bonato, A. A family of universal pseudo-homogeneous G-colourable graphs, *Discrete Mathematics* **247** (2002) 13–23.

142. Baker C.A., A. Bonato, P. Kergin, Skolem arrays and Skolem labellings of ladder graphs, *Ars Combinatoria* **63** (2002) 97-107.

143. Bonato, A., On retracts of the random graph and their natural order, *Monatschefte für Mathematik* **135** (2002) 1-9.

144. Bonato, A., K. Cameron, On 2-e.c. line-critical graphs, *Journal of Combinatorial Mathematics and Combinatorial Computing* **38** (2001) 111–121.

145. Bonato, A., K. Cameron, On an adjacency property of almost all graphs, *Discrete Mathematics* **231** (2001) 103-119.

146. Bonato, A., W. Holzmann, H. Kharaghani, Hadamard matrices and strongly regular graphs with the 3-e.c. adjacency property, *Electronic Journal of Combinatorics*, Vol **8** (1), 2001.

147. Bonato, A., Finitely constrained classes closed under unions and n-e.c. structures, *Ars Combinatoria* **59** (2001) 181-192.

148. Bonato, A., Metrically universal generic structures in free amalgamation classes, *Mathematical Logic Quarterly* **47** (2001) 147-160.

149. Bonato, A., P. Cameron, D. Delić, Tournaments and orders with the pigeonhole property, *Canadian Mathematical Bulletin* **43** (2000) 397-405.

150. Bonato, A., D. Delić, The monoid of the random graph, *Semigroup Forum* **61** (2000) 138-148.

151. Bonato, A., D. Delić, A pigeonhole principle for relational structures, *Mathematical Logic Quarterly* **45** (1999) 409-413.

152. Bonato, A., Continuum many universal Horn classes of graphs of bounded chromatic number, *Algebra Universalis* **40** (1998) 105-108.

153. Bonato, A., D. Delić, The model companion of width-two orders, *Order* **14** (1998) 87-99.

RESEARCH PRESENTATIONS: Lifetime of over 30 invited presentations, and over 20 contributed presentations at international conferences.

Invited Presentations at Conferences

Graph Searching in America, August 2023, keynote lecture; MAA Seaway Section, June 2023; Ottawa Mathematics Conference, 2021; SIAM Discrete Mathematics conference, On-line, June 2021; 16th Workshop on Algorithms and Models for the Web Graph (WAW'19), University of Queensland, Brisbane, Australia, July 2019; keynote speaker 2018 Canadian Mathematical Society Winter Meeting, December 2018, Public lecture; 8th workshop on GRAph Searching, Theory & Applications (GRASTA), Crete, April 2017, keynote lecture; Workshop on Random Geometric Graphs, BIRS, November 2016; 1st Symposium on Spatial Networks, Oxford, September 2016, keynote lecture; East Coast Combinatorics Conference (ECCC'16) Halifax, July 2016, plenary speaker; International Conference on Mathematical Computer Engineering - ICMCE2015, Chennai, India, December 2015; 2nd International Conference on Computational Models, Cyber Security, Computational Intelligence (ICC3) Coimbatore, India, December 2015; 2015 CMS Summer Meeting, Session on Graphs and Hypergraphs; 11th Workshop on Algorithms and Models for the Web Graph, 2014 SIAM Discrete Mathematics Conference, Session on Pursuit Games on Graphs; 2014 CMS Summer Meeting, Session on Graphs and Hypergraphs; 2014 Joint Mathematics Meeting, AMS Special Session on My Favorite Graph Theory Conjectures, 2014; Computational Intelligence, Cyber Security & Computational Models (ICC3) 2013, Coimbatore, India; Science Atlantic 36th Mathematics, Statistics, & Computer Science, 2013, UPEI; 2013 INFORMS Applied Probability Society Meeting, San Jose, Costa Rica; 18th Coast Combinatorics Conference, Kailua-Kona, Hawaii; TAMC 2012: 9th Annual Conference on Theory and Applications of Models of Computation, Chinese Academy of Sciences, Beijing, China, May 2012; SIAM Discrete Mathematics conference, Dalhousie University, June 2012; MITACS International Problem Solving Workshop, UBC, July, 2012; International Conference on Mathematical and Computational Models, Coimbatore, India, December 2011.

SERVICE, TEACHING AND HQP

AARMS Scientific Review Panel, 2023-2025.

NSERC Liaison Commmittee, 2020-2024.

Canadian Mathematical Society Research Committee, 2019-2022.

Canadian Mathematical Society Board of Directors, Director-Ontario, 2021-2024.

External examiner for PhD dissertations: University of Calgary, 2018; Queen's University, 2015.

NSERC Discovery Grant Evaluation Group for Mathematics and Statistics, 2015-2019. *Incoming Pure*

Mathematics Chair, 2016. *Pure Mathematics Chair,* 2017.
Associate Dean, Students and Programs, YSGS, 2013-2017.

Chair, Department of Mathematics, 2010-2013.

Graduate Program Director at Laurier Mathematics, 2006-2008.

Editor-in-Chief of journal *Internet Mathematics*, 2010 - .

Editor of journal *Contributions to Discrete Mathematics*, 2012 - .

Board of Directors of Mprime NCE, 2011-2013.*Board of Directors* of MITACS, 2007-2008.

TMU/Ryerson committees: Chair of Department Hiring Committee; YSGS Council; Graduate Studies Taskforce; SRC Representative Group; CUPE1 Workload Committee; Search Committee for Faculty of Science Associate Dean - Research and Graduate Programs; Physics Chair Search Committee; Chair, Mathematics Assistance Centre Advisory Board; Chair, Workload Redress Committee; Faculty of Science Feasibility and Implementation Committees; Faculty of Science Dean Search Committee; Mathematics DHC and DEC; Mathematics and FEAS DAC; Review panel of Dean's Research Fund; Search Committee for FEAS Associate Dean - Research, Development and Graduate Programs; Faculty of Science Chair's Council; FEAS Chair's Council; Mathematics Graduate Studies and Research Committee; Hiring committees for Mathematics Department Assistant and Department IT Specialists.

Co-Chair and co-organizer: Co-Chair, GRASCan'22, Co-Chair, GRASCan'21, Co-Chair, GRASCan'18, Regina; Co-Chair, WAW'18, Moscow; Co-Chair, WAW'17 Fields Institute; Co-Chair, GRASCan'17, Grenfell College; Co-Chair, GRASCan'16, Dalhousie University; Co-Chair, WAW'16, CRM; Co-Chair, WAW'14: Beijing, December 2014; Co-Chair, WAW'13, Harvard University; GRASCan'13, Ryerson University; Co-chair, WAW'12, Dalhousie University; GRASCan'12, Ryerson University; 19th Ontario Combinatorics Workshop (OCW'19) May 2011, Toronto; 2011 Canadian Mathematical Society Winter Meeting, Toronto; Co-Chair WAW'07, San Diego, 2007.

Program Committee for: WAW'24, 23, 19, 17, 16, 15, 14, 13, 12, 11, 09, 07, 05, TAMC'22, 19, 15, 12, WADS'21, CAAN'07, 04.

EXTERNAL REFEREEING:

AMS Mathematical Reviews, Journal of Combinatorial Theory (Series B), Internet Mathematics, Graphs and Combinatorics, Journal of Graph Theory, Electronic Journal of Combinatorics, Contributions to Discrete Mathematics, Discrete Mathematics, Discrete Applied Mathematics, Theoretical Computer Science, Australasian Journal of Combinatroics, Random Structures and Algorithms, European Journal of Combinatorics, Annals of Combinatorics, International Journal of Game Theory, PLOS ONE, Rocky Mountain Journal of Mathematics, Australasian Journal of Combinatorics, Acta Mathematica Applicatae Sinica, Algorithms, Proceedings of WAW 2006-2017, Proceedings of TAMC'2015, Proceedings of ACM-SIAM Symposium on Discrete Mathematics 2005, Proceedings of Combinatorial and Algorithmic Aspects of Networking, 2004 and 2007, NSERC Discovery Grant applications, Killam Research Fellowship application, NSF Grant

application, MITACS College of Reviewers, The Netherlands Organization for Scientific Research Grant applications, Chile Superior Council of the National Fund for Scientific & Technological Development application.

COURSES TAUGHT

Taught over 40 courses at six universities: Ryerson, AIMS Cameroon, National University of Ireland (NUI), Laurier, Dalhousie, Mount Allison, Waterloo. Courses include both graduate and undergraduate course in graph theory, modelling complex networks, searching networks, discrete mathematics, calculus, and linear algebra.

Courses taught at TMU: AM8002 - Discrete Mathematics, AM8204 - Topics in Discrete Mathematics, AM8208 - Topics in Mathematics, AM8209 - Directed Studies in Mathematics, AM9004 - Directed Studies in Modelling and Methods, MTH 110 - Discrete Mathematics I, MTH 210 - Discrete Mathematics II, MTH 140 - Calculus I, MTH 141 - Linear Algebra, MTH 314 - Discrete Mathematics for Engineers, MTH 40A/B - Thesis, MTH 607 - Graph Theory, MTH 707 - Modelling and Searching Networks

HQP

Over 50 graduate students and post-doctoral fellows supervised.

Post-doctoral: Teddy Mishura (23-24), JD Nir (22-23), Ryan Cushman (21-22), Natalie Behague (20-21), Melissa Huggan (19-21), Trent Marbach (19-20), Bill Kay (18-19), Sean English (18-19), Hoda Chuang (17-19), Ewa Infeld (16-17), Benjamin Reiniger (15-16), Xavier Perez-Gimenez (14-16), Tommaso Traetta (14-15), Deepak Bal (13-14), Wiliam B. Kinnersley (12-14), Marek Lipczak (13-14), Robert Bailey (12-13), Dieter Mitsche (11-12), Graeme Kemkes (10-11), Pawel Prałat (2006 and 2011), Margaret-Ellen Messinger (09-10), Changping Wang (06-09), Jing Wang (03)

Doctoral: Caleb Jones (23-27), Ali Syed (23-27), John Marcoux (22-26), Zhiyuan Zhang (21-25), Brittany Pittman (20-24), Rehan Malik (18-22), Erin Meger (17-21), Daniel Moghbel (17-21), Elham Roshanbin (12-16), Changping Wang (02-06)

Masters: Lazar Mandic (22-24), Holden Pimentel (22-24), Vatsal Patel (21-23), Siavash Rezaei (20-22), Jiajie Yuan (20-22), Alex Nazareth (19-21), Raja Mutharasan (18-20), Sophie Cai (17-19), Lyndsay Roach (16-18), Rehan Malik (16-18), Narges Alipourjeddi (16-18), Alan Zhengnan Shi (15-17), David Ryan D'Angelo (15-17), Hari Pokhrel (15-17), Erin Meger (14-16), Fionn McInerney (13-15), Marc Lozier (13-15), Pardis Noorzad (12-14), Vivija Ping You (11-13), Fatemeh Bavaghar-Zaeimi (11-13), Ali Haidar (10-12), William Baird (09-11), Amanda Tian (09-11), Alexandru Costea (2009), Noor Hadi (2008), Laleh Samarbakhsh (2007)

Undergraduate: Matthew Ritchie (NSERC USRA), Shreya Ahirwar (Fields RA), Leanna Gittins (Fields RA), Alice Huang (Fields RA), Tomer Zaidman (Fields RA), Joey Kapusin (RA), Linda Abraham (Work-Study RA), Reaz Huq (NSERC USRA), Sophia Park (Ryerson URO), Rita del Rio Chanona (MITACS Globalink), Xindi Wang (MITACS Globalink), Bhargav Parsi (MITACS Globalink), Calum MacRury (Summer Research Assistant), Jake Nicolaidis (Summer Research Assistant), Kirill Ternovsky (Summer Research Assistant)