

CURRICULUM VITAE

Jeannette C.M. Janssen

Department of Mathematics and Statistics
Dalhousie University
Halifax B3H 3J5
Nova Scotia

Email: janssen@mathstat.dal.ca
Tel: [902] 494-8851
Fax: [902] 494-5130

FIELD OF RESEARCH

Analysis and Modeling of Self-Organizing Networks, Combinatorial Optimization

CURRENT POSITION

Professor, Department of Mathematics and Statistics, Dalhousie University
Adjunct Professor, Faculty of Computer Science, Dalhousie University

EDUCATION

Ph.D. Mathematics	May 1993
Lehigh University, Bethlehem, Pennsylvania	
M.Sc. Mathematics	May 1988
Eindhoven University of Technology, Netherlands	

POSTDOCTORAL POSITIONS

Department of Computer Science, Concordia University, Montréal	1993-1995
Laboratoire de Combinatoire et d'Informatique Mathématique, UQAM	1993-1995

EXPERIENCE

Assistant Professor, Acadia University	1997-1998
Lecturer/Research associate, London School of Economics	1995-1997
Lecturer, Universidad de Guanajuato, Mexico	1988-1990

GRANTS

Title: *Modelling and Mining of Networked Information Spaces*
 Project leaders: *J.C.M. Janssen, E.E. Milios*
 Start date: September 2002
 Current funding period: 2007–2009
 Funding: Industry: \$ 115,000/ann.
 MITACS: \$ 135,000/ann.
 Total: \$250,000/ann.
 Amount directly applicable to my research: \$ 35,000/ann.

Title: *Graph models for self-organizing networks*
 Funding period: 2007–2012
 Type: NSERC Discovery grant (personal)
 Funding: NSERC \$ 22,000/ann.

Title: *Geometric graphs (w. Rory Wilson, MSc student)*
 Funding period: 2008–2009
 Type: MITACS Internship grant
 Funding: \$ 15,000

Title: *Online Ramsey numbers (w. Pawel Pralat, PDF)*
 Funding period: 2007–2009
 Type: AceNET PDF grant
 Funding: \$ 15,000/ann.

STUDENT SUPERVISION

Current students:

Matt Hurshman PhD Exp. August 2011
Graph Similarity
 Rory Wilson MSc Exp. March 2009
Geometric graph properties of spatial network models
 John Healy PhD. CS (with E. Milios and W. Aiello) Exp. August 2009
Structural analysis of dynamic graphs using degree cores

Past students:

	Math.	CS
PhD	1	1
Master's	5	4
Honours/Summer Research	3	2

SELECTED PUBLICATIONS

Refereed journal papers

1. A. Bonato, J. Janssen, C. Wang, "The n -ordered graphs; a new graph class", to appear in *J. Graph Theory*.
2. A. Bonato, J. Janssen, "Infinite limits and adjacency properties of a generalized copying model", to appear in *Internet Mathematics*.
3. W. Aiello, A. Bonato, C. Cooper, J. Janssen, P. Pralat, "A spatial web graph model with local influence regions", to appear *Internet Mathematics*.
4. Wangzhong Lu, J. Janssen, E. Milios, N. Japkowicz and Yongzhen Zhang, "Node similarity in the citation graph", *Knowledge and Information Systems (KAIS)*, vol. 11, no.1, January 2007, pp. 105–129.
5. Hongyu Liu, Jeannette Janssen, Evangelos Milios, "Using HMM to learn user browsing patterns for focused Web crawling", *Journal of Data Knowledge and Engineering*, vol. 59, issue 2, 2006, pp. 270–291 (MITACS, NSERC).
6. S. Fitzpatrick, J. Janssen, R. Nowakowski, "Fractional Isometric Path Number", *Australasian journal of Combinatorics* 34 (2006).
7. G. Appa, D. Magos, I. Mourtos, J.C.M. Janssen, "On the orthogonal Latin squares polytope", *Discrete Math.* 306 (2), 2006, pp. 171–187.
8. J. Janssen, T. Wentzell and S. Fitzpatrick, "Lower Bounds from Tile Covers for the Channel Assignment Problem", *SIAM J. Discr. Math.*, vol. 18, no. 4, 2005, pp.679-696.
9. A. Bonato and J. Janssen, "Infinite limits of copying models for the web graph", *Internet Mathematics*, **1**, No. 2 (2004), pp. 103–213.
10. Y. An, J. Janssen, E. Milios, "Characterizing the citation graph of computer science literature". *Knowledge and Inf. Systems (KAIS)* **6**, No. 4 (November 2004).
11. S. Gravier, J. Janssen, K. Kilakos and S. Klein, "Graph covers using t -colourable vertex sets", *Discrete Math.* **278** 1–3 (2004) pp. 61–80.
12. S. Fitzpatrick, J. Janssen, R. Nowakowski, "Distributive channel assignment algorithms for cellular networks with constraints", *Discrete Applied Math.* **143** (2004), No. 1–3, pp. 84–91.
13. J. Janssen, M. MacIsaac and K. Schmeisser, "Channel Assignment for Digital Broadcasting: Some Bounds and Algorithms." *Congressus Numerantium* **157** (2002), pp. 159–171.

14. J.C.M. Janssen, “A Partial Solution of a Partial List Colouring Problem”, *Congressus Numerantium* 152 (2001), pp. 75–79.
15. J. Janssen and L. Narayanan, “Approximation Algorithms for the Channel Assignment Problem”, *Theoretical Computer Science A* 262/1–2 (2001), pp. 649–667.
16. J. Janssen, D. Krizanc, L. Narayanan and S. Shende, “Distributed Online Frequency Assignment in Cellular Networks”, *J. Algorithms* 36 (2000), pp. 119–151.
17. J. Janssen and K. Kilakos, “Adaptive Multicolouring”, *Combinatorica* 20 (2000), no. 1, pp. 87–102.
18. J. Janssen and K. Kilakos, “Bounded Stable Sets: Polytopes and Colourings”, *SIAM J. Discr. Math.* 12 (1999), no. 2, pp. 262–275.
19. J.C.M. Janssen and K. Kilakos, “An optimal solution to the “Philadelphia” channel assignment problem”, *IEEE Trans. Veh. Techn.* 48 (May 1999), No. 3, pp. 1012–1014.
20. J. Janssen, K. Kilakos and O. Marcotte, “Fixed Preference Frequency Allocation for Cellular Telephone Systems”, *IEEE Trans. Veh. Techn.* 48 (March 1999), no. 2, pp. 533–541.
21. R. Häggkvist and J.C.M. Janssen, “New Bounds on the List-Chromatic Index of the Complete Graph and Other Simple Graphs”, *Combinatorics, Probability and Computing*, Vol. 6, No. 3, September 1997, pp. 273–295.
22. J.C.M. Janssen, “The Dinitz Problem solved for Rectangles”, *Bulletin AMS Research Ann.*, Vol. 29, No. 2, Oct. 1993, pp. 243–249.

Book chapters

23. Jeannette C.M. Janssen, “Channel assignment and graph labeling”, in *Handbook of Wireless Networks and Mobile Computing*, Ivan Stoyanovic, ed., Wiley 2002.
24. J. Janssen and K. Kilakos, “Tile Covers, Closed Tours and the Radio Spectrum”, in *Telecommunications Network Planning*, eds. P. Soriano and B. Sansó, Kluwer 1998.

Books edited

25. J. Janssen, P. Pralat (eds.), “Proceedings of the 4th Workshop on Combinatorial and Algorithmic Aspects of Networking (CAAN’07)”, Springer LNCS, 2007.
26. W. Aiello, A. Broder, J. Janssen, E. Miliotis (eds.), “Proceedings of the 4th Workshop On Algorithms And Models For The Web-Graph (WAW’06)”, Springer LNCS, 2007.

Papers submitted

27. J. Janssen, P. Pralat, “Rank-based attachment leads to power law graphs”, submitted to *SIAM Journal of Discrete Math.*

Recent invited Talks

- "Limits of geometric graph models", invited talk, symposium on Combinatorics, CMS winter meeting, Ottawa, December 5–8, 2008.
- "Modelling self-organizing networks with a hidden metric", invited seminar, Coast-to-Coast seminar, broadcast simultaneously to various universities across Canada, October 2007.
- "Modelling self-organizing networks with a hidden metric", invited talk, Workshop on Random and Dynamic Graphs and Networks, IPAM, UCLA, Los Angeles, California, May 7–11, 2007.
- "Infinite limits of the duplication model and graph folding", invited talk, AARMS workshop on Graphs and Combinatorics, Acadia University, Wolfville, October 22, 2005.
- "Infinite limits of self-organizing networks", invited talk, symposium on Random Graphs and Applications, CMS summer meeting, U. Waterloo, June 4–8, 2005.
- "Intelligent Web mining", student short course, MITACS annual conference, Halifax, June 2004.
- "Finding our way in the Web", Invited plenary lecture, MITACS Quebec Interchange, Montreal, November 2003.

Organization of Conferences and Seminars

- Program Committee Chair of the workshop on Combinatorial and Algorithmic Aspects of Networking (CAAN 2007), Dalhousie University, August 2007.
- Principal organizer of the MITACS winterschool on Modelling and Mining of Networked Information spaces, and the Workshop on Algorithms and Models of the Web graph (WAW 2006), BIRS, Banff, November 25–December 2 2006.
- Co-organizer of the symposium "Graphs, Games and the Web", part of the CMS/CAIMS meeting at Dalhousie, June 13–15, 2004.