

# Mikko Kivelä

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CONTACT INFORMATION	Haapaniemenkatu 11 B 44 00530 Helsinki Finland	<i>Cell:</i> +358503824555 <i>E-mail:</i> mikko.kivela@iki.fi <i>WWW:</i> www.lce.hut.fi/~mtkivela/
RESEARCH INTERESTS	Complex networks, complex systems, data analysis, statistical methods and models, biological and social systems, algorithm development	
EDUCATION	<b>Aalto University School of Science / Helsinki University of Technology,</b> Ph.D., Computational engineering (expected graduation 2012) <ul style="list-style-type: none"><li>• Thesis Topic: <i>Weighted and Temporal Networks: Towards More Realistic Representations of Complex Systems</i></li><li>• Area of Study: Complex networks</li><li>• Preliminary examination of the thesis complete, expected defence at September 2012</li><li>• Supervisors: Jari Saramäki, Kimmo Kaski</li></ul> M.S. (engineering), Engineering Physics and Mathematics, 2009 <ul style="list-style-type: none"><li>• Major: Mathematics</li><li>• Minor: Computational engineering</li><li>• Thesis Topic: <i>A network perspective on the genetic population structure of sea-grass Posidonia oceanica</i></li><li>• Grade: 4/5 (with distinction)</li></ul> <b>Kannuksen lukio,</b> Finnish Matriculation Examination, 2003	
WORK EXPERIENCE	<b>University of Helsinki,</b> <i>Non-military service as a researcher</i> <b>2012 - now</b> <ul style="list-style-type: none"><li>• Faculty of Medicine, Institute of Biomedicine and Genome-Scale Biology Research Program, Computational Systems Biology Laboratory</li></ul> <b>Aalto University School of Science / Helsinki University of Technology,</b> <i>Researcher</i> <b>2009 - now</b> <ul style="list-style-type: none"><li>• Department of Biomedical Engineering and Computational Science, Complex Networks Research Group</li></ul> <i>M.S. thesis worker</i> <b>2009</b> <ul style="list-style-type: none"><li>• Department of Biomedical Engineering and Computational Science, Complex Networks Research Group</li></ul> <i>Research Assistant</i> <b>2006-2009</b> <ul style="list-style-type: none"><li>• Laboratory of Computational Engineering, Complex Networks Research Group</li></ul>	

## PUBLICATIONS

- Multiscale Analysis of Spreading in a Large Communication Network, M. Kivelä, R. K. Pan, K. Kaski, J. Kertész, J. Saramäki, M. Karsai, *J. Stat. Mech.* P03005 (2012)
- Networks of Emotion Concepts, R. Toivonen, M. Kivelä, J. Saramäki, M. Viinikainen, M. Vanhatalo, M. Sams, *PLoS ONE* 7(1): e28883 (2012)
- Explosive percolation on real-world networks, R. K. Pan, M. Kivelä, J. Saramäki, K. Kaski, J. Kertész, *Phys. Rev. E* 83, 046112 (2011)
- Small But Slow World: How Network Topology and Burstiness Slow Down Spreading, M. Karsai, M. Kivelä, R. K. Pan, K. Kaski, J. Kertész, A.-L. Barabási, J. Saramäki, *Phys. Rev. E* 83, 025102 (2011)
- Characterizing the community structure of complex networks, A. Lancichinetti, M. Kivelä, J. Saramäki, S. Fortunato, arXiv:1005.4376 (submitted for peer review) (2010)
- A comparative study of social network models: Network evolution models and nodal attribute models, R. Toivonen, L. Kovanen, M. Kivelä, J.-P. Onnela, J. Saramäki, and K. Kaski, *Social Networks*, Volume 31, Issue 4, Pages 240-254 (2009).
- A sequential algorithm for fast clique percolation, J.M. Kumpula, M. Kivelä, K. Kaski, and J. Saramäki, *Phys. Rev. E* 79, 026109 (2008).
- Generalizations of the clustering coefficient to weighted complex networks, J. Saramäki, M. Kivelä, J.-P. Onnela, K. Kaski and J. Kertész, *Phys. Rev. E* 75, 027105 (2007).

## CONFERENCE PRESENTATIONS

- “Link activation sequences, waiting times, and spreading in temporal networks”, talk at Complex Dynamics of Human Interactions satellite meeting of European Conference of Complex System, Vienna, 14 September, 2011
- “Link activation sequences, waiting times, and spreading in temporal networks”, poster presentation at Conference on Applications of Network Theory, Stockholm, 7-9 April, 2011
- “Explosive Percolation and Empirical Networks”, poster presentation at Physics Days, Helsinki, 29-31 March, 2011

## TEACHING EXPERIENCE

**Helsinki University of Technology***S-114.4150 Complex Networks***Spring 2009 and 2010, fall 2010**

- Responsible for exercise sessions, producing exercise questions and evaluation of the students.

*S-114.1100 Computational Science***Fall 2008**

- Responsible for exercise sessions and evaluating student solutions to the exercise questions.

*Mat-1.433 Basic Course on Mathematics K3/P3***Fall 2005**

- Responsible for exercise sessions and model solutions to the exercise questions.