

PUBLICATION LIST

October 4, 2018

WoS: 1022 citations, h-index: 15,

Google Scholar: 1765 citations , h-index 17

ISI ARTICLES (* indicates corresponding author)

2018

1. B Molnár, F. Molnar, M Varga, Z Toroczkai, **M Ercsey-Ravasz**, „A high-performance analog max-SAT solver”, *under review in Nature Communications*.
2. Răzvan Gămănuț, Henry Kennedy, Zoltán Toroczkai, **Mária Ercsey-Ravasz**, David C Van Essen, Kenneth Knoblauch, Andreas Burkhalter, The Mouse Cortical Connectome, Characterized by an Ultra-Dense Cortical Graph, Maintains Specificity by Distinct Connectivity Profiles, *Neuron* 97, 698-715. e10 , 2018.
3. Xunzhao Yin, Behnam Sedighi, Melinda Varga, **Mária Ercsey-Ravasz**, Zoltán Toroczkai, Xiaobo Sharon Hu, „Efficient analog circuits for Boolean satisfiability”, *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, vol. 26 (1), pp. 155-167, 2018.

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5. Zs. I. Lazar, I. Papp, L. Varga, F. Jarai-Szabo, D. Deritei, **M. Ercsey-Ravasz***, “Stochastic graph Voronoi tessellation reveals community structure”, *Physical Review E*, vol. 95, 022306, 2017.

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7. R. Sumi, M. Varga, Z. Toroczkai, **M. Ercsey-Ravasz***, “Order-to-chaos transition in the hardness of random Boolean satisfiability”, *Physical Review E*, vol. 93, 052211, 2016
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10. D. Deritei, Zs. Lazar, I. Papp, F. Jarai-Szabo, R. Sumi, L. Varga, ER Regan, **M. Ercsey-Ravasz***, “Community detection by graph Voronoi diagrams”, *New Journal of Physics*, vol. 16, 063007, 2014.
11. R. Sumi, B. Molnar, **M. Ercsey-Ravasz***, “Robust optimization with transiently chaotic dynamical systems”, *European Physics Letters*, vol. 106, 40002, 2014.
12. N.T. Markov, **M. Ercsey-Ravasz**, MA. Gariel, AR. Ribiero Gomes, C.Lamy, J. Vezoli, P. Misery, A. Falchier, R. Quilodran, J. Sallet, R. Gamanut, C. Huissoud, S. Clavagnier, P. Giroud, DS. Marinier, P. Barone, C. Dehay, Z. Toroczkai, K. Knoblauch, D. C. Van Essen, H. Kennedy, “A weighted and directed interareal connectivity matrix for macaque cerebral cortex”, *Cerebral Cortex*, vol. 24, pp. 17-36, 2014

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17. **M. Ercsey-Ravasz**, Z. Toroczkai, „The Chaos Within Sudoku”, *Scientific Reports* 2, pp. 755-762, 2012
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19. **M. Ercsey-Ravasz**, R. Lichtenwalter, N.V. Chawla, Z. Toroczkai, „Range-limited Centrality Measures in Weighted and Non-weighted Complex Networks”, *Physical Review E* vol. 85, 066103, pp. 1-14, 2012

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23. F. Morcos, S. Chatterjee, C. L. McClendon, P.R. Brenner, R. Lopez-Rendon, J. Zintsmaster, **M. Ercsey-Ravasz**, C. R. Sweet, M.P. Jacobson, J.W. Peng, J. A. Izaguirre, “Modelling conformational ensembles of slow functional motions in Pin1-WW”, *PLoS Computational Biology* 6, e1001015, pp. 1-13, 2010.

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24. Z. Néda, R. Sumi, **M. Ercsey-Ravasz**, M. Varga, B. Molnar, Gy. Cseh, „Correlation clustering on networks”, *J. of Physics A: Mathematical and Theoretical*, vol. 42, 345003, pp. 1-15, 2009.
25. **M. Ercsey-Ravasz**, T. Roska, Z. Néda, „Cellular Neural Networks for NP-hard optimization”, *EURASIP Journal on Advances in Signal Processing, Special issue: CNN Technology for Spatio-temporal Signal Processing*, doi: 10.1155/2009/646975, pp. 1-7, 2009.

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32. A. Szolnoki, G. Szabó, **M. Ravasz**, “Three-state Potts model in combination with the rock-scissors-paper game”, *Physical Review E*, vol. 71, 027102, pp. 1-4, 2005.
33. **M. Ravasz**, Gy. Szabó, A. Szolnoki, "Spreading of families in cyclic predator-prey models", *Physical Review E*, vol. 70, 012901, pp.1-4, 2004.
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BOOK CHAPTERS

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- **M. Ercsey-Ravasz**, Z. Toroczkai, ”Döntések fizikája és rejtvények káosza” (“Physics of decision making and chaos of puzzles”) in *A fizika, matematika és művészet találkozása az oktatásban, kutatásban* (Physics, mathematics and arts in education and research), Ed.: A. Juhász, T. Tél, Publisher: Science Department of the Eötvös Lóránd University, Hungary, 2013.
- N.T. Markov, **M. Ercsey-Ravasz**, M.-A. Gariel, C. Dehay, K. Knoblauch, Z. Toroczkai, H. Kennedy. “The tribal networks of the cerebral cortex”, in *Cerebral Plasticity*, eds: L.M. Chalupa, N. Berardi, M. Caleo, L. Galli-Resta, T. Pizzorusso, MIT Press, Cambridge MA, 2011.
- T. Roska, L. Belády, **M. Ercsey-Ravasz**, „Cellular Wave Computing in Nanoscale via Million Processor Chips”, in *Cellular Nanoscale Sensory Wave Computing*, eds: C. Baatar, W. Porod, T. Roska. Springer, New York, 2010.

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- B. Molnar, R.Sumi, **M. Ercsey-Ravasz**, “A CNN SAT-solver robust to noise”, *Proc. of the 14th IEEE Int. Conf. on Cellular Nanoscale Networks and their Applications*, PID3320585, Notre Dame, IN, USA, August 2014.

- B. Molnar, **M. Ercsey-Ravasz**, “Analog dynamics for solving max-SAT problems”, *Proc. of the 14th IEEE Int. Conf. on Cellular Nanoscale Networks and their Applications*, PID3320591, Notre Dame, IN, USA, August 2014.
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- **M. Ravasz**, Z. N eda, „Fragmentation of drying granular materials on surfaces with high anisotropy” (in Hungarian), *Modern studies in experimental and theoretical physics*, Scientia, Cluj-Napoca, 2003
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ORAL PRESENTATIONS (presentator underlined)

- M. Ercsey-Ravasz, “Modeling the inter-areal cortical network based on the exponential distance rule – comparing mouse, rat and macaque”, ESI Systems Neuroscience Conference “Principles of structural and functional connectivity”, Frankfurt July 24-25, 2017.
- M. Ercsey-Ravasz, “A predictive network model of cerebral cortical connectivity based on a distance rule”, 18th International Neuroscience Winter Conference, Solden, Austria, April -26, 2016
- R. Sumi, Z. Toroczkai, M. Ercsey-Ravasz "Chaotic phase transition in an analog approach to constraint satisfaction" *CHAOS 2012 -5th Chaotic Modeling and Simulation International Conference* , Athen, Greece, 12-15 June, 2012
- M. Ercsey-Ravasz "Döntések fizikája és rejtvények káosza" ("Physics of decisions and chaos of puzzles"), *A fizika, matematika és művészet találkozási az oktatásban (Physics, mathematics and arts in high school)* Tg. Mures, Romania, 15 August, 2012
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