LISTA DE LUCRĂRI

Dr. Ercsey-Ravasz Maria-Magdolna

a) Articole în jurnale internaționale cotate ISI

* reprezintă autor principal

Număr total al citărilor pe Publon (ResearcherID: E-2098-2017) (11.05.2023): 2236, h-index: 20; GoogleScholarȘ 3750 citări, h-index 24; Scopus: 2466 citări, h-index 20.

1. G.E. Grosu, A.V. Hopp, V.V. Moca, H. Barzan, A. Ciuparu, M. Ercsey-Ravasz, M. Winkel, H. Linde, R.C. Muresan, "The fractal brain: scale-invariance in structure and dynamics", ***Cerebral Cortex***, 1-32, 2022
2. B. Sandor, B. Schneider, Zs.I. Lazar, M. Ercsey-Ravasz*, "A novel measure inspired by Lyapunov exponents for the characterization of dynamics in state-transition networks", ***Entropy***, 23, 103, 2021.
3. L. Ravasz, K.A. Kekesi, D. Mittli, M.I. Todorov, Zs. Borhegyi, M. Ercsey-Ravasz, B. Tyukodi, J. Wang, T. Bartfai, J. Eberwine, G. Juhasz, "Cell surface protein mRNAs show differential transcription in pyramidal and fast-spiking cells as revealed by single-cell sequencing", ***Cerebral Cortex***, 31, 731-745, 2021.
4. I. Toth, Zs.I. Lazar, L. Varga, F. Jarai-Szabo, I. Papp, R.V. Florian, M. Ercsey-Ravasz*, "Mitigating ageing bias in article level metrics using citation network analysis", ***Journal of Informetrics***, 15, 101105, 2021.
5. M. Wandres, S. Pfarr, B. Molnar, U. Schollkopf, M. Ercsey-Ravasz, W.H. Sommer, C. Korber, "Alcohol and sweet reward are encoded by distinct meta-ensembles", ***Neuropharmacology*** 195, 108496, 2021.
6. B Molnár, F. Molnar, M Varga, Z Toroczkai, M Ercsey-Ravasz*, „A high-performance analog max-SAT solver”, ***Nature Communications,*** vol. 9, 4864, pp. 1-12, 2018.
7. 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.
8. 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.

9. H. Noori, J. Schottlet, M. Ercsey-Ravasz, A. Cosa-Linan, M. Varga, Z. Toroczkai, R. Spanagel, ***PLoS Biology***, 15 (7), e2002612 2017.
10. Zs. I. Lazar, I. Papp, L. Varga, F. Jarai-Szabo, D. Deritei, M. Ercsey-Ravasz*, "Stochastic graph Voronoi tessellation reveals community structure", ***Physical Rveiew E***, vol. 95, 022306, 2017.
11. Sz. Horvát[&], Răzvan Gămănuț[&], Mária Ercsey-Ravasz[&], Loïc Magrou, Bianca Gămănuț, David C. Van Essen, Andreas Burkhalter, Kenneth Knoblauch, Zoltán Toroczkai, Henry Kennedy,"Spatial embedding and wiring cost constrain the functional layout of cortical networks in rodents and primates", ***PLoS Biology***, vol. 14, e1002512, 2016. ([&] indicates equal contribution).
12. 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. I
13. D. Deritei, W.B.Aird, M. Ercsey-Ravasz, E. Ravasz Regan, "Principles of dynamical modularity in biological regulatory networks", ***Scientific Reports***, vol. 6, 21957, 2016.
14. Y. Ren, M. Ercsey-Ravasz, P. Wang, M.C. Gonzalez, Z. Toroczkai, "Predicting commuter flows in spatial networks using a radiation model based on temporal ranges", ***Nature Communications***, vol. 5, 5347, 2014.
15. 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.
16. R. Sumi, B. Molnar, M. Ercsey-Ravasz*, "Robust optimization with transiently chaotic dynamical systems", ***Europhyics Letters,*** vol. 106, 40002, 2014.
17. 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.
18. M. Ercsey-Ravasz*, N.T. Markov, C. Lamy, D.C. Van Essen, K. Knoblauch, Z. Toroczkai, H. Kennedy, "A predictive network model of cerebral cortical connectivity based on a distance rule.", ***Neuron*** vol. 80, pp. 184-197, 2013.
19. N.T. Markov, M. Ercsey-Ravasz, D.C. Van Essen, K. Knoblauch, Z. Toroczkai, H. Kennedy, "Cortical High-density Counterstream Architectures", ***Science,*** vol. 342, pp. 1238406:1-15, 2013.

20. N.T. Markov, M. Ercsey-Ravasz, C. Lamy, AR. Gomes, L. Magrou, P. Misery, P. Giroud, P. Barone, C. Dehay, Z. Toroczkai, K. Knoblauch, D.C. Van Essen, H. Kennedy. "The role of long-range connections on the specificity of the macaque interareal cortical network" ***PNAS*** vol. 110, pp. 5187-5192, 2013.
21. B. Molnár, M. Ercsey-Ravasz*, „Asymmetric Continuous-Time Neural Networks without Local Traps for Solving Constraint Satisfaction Problems", ***PloS One*** 8(9), e73400, pp. 1-13, 2013.
22. M. Ercsey-Ravasz*, Z. Toroczkai, „The Chaos Within Sudoku", ***Scientific Reports*** 2, pp. 755-762, 2012.
23. M. Ercsey-Ravasz*, Z. Toroczkai, Z. Lakner, J. Baranyi, „Complexity of the international agro-food trade network and its impact on food safety", ***PloS One*** *7(5)*, e37810, pp. 1-7, 2012.
24. 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
25. M. Ercsey-Ravasz*, Z. Toroczkai, „Optimization hardness as transient chaos in an analog approach to constraint satisfaction:", ***Nature Physics ,*** vol. 7, pp. 966-971*,* 2011.
26. N.T. Markov, P. Misery, A. Falchier, C. Lamy, J. Vezoli, R. Quilodran, P. Giroud, M.A. Gariel, M. Ercsey-Ravasz, L.J. Pilaz, C. Huissoud, P. Barone, C. Dehay, Z. Toroczkai, D.C. Van Essen, H. Kennedy, K. Knoblauch. "Weight consistency specifies regularities of macaque cortical network" ***Cerebral Cortex***, vol. 21(6), 1254-1272, 2011.
27. M. Ercsey-Ravasz*, Z. Toroczkai, „Centrality scaling in large networks", ***Physical Review Letters***, vol. 105, 038701, pp. 1-14, 2010.
28. 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.
29. 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.
30. 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.

31. M. Ercsey-Ravasz*, Zs. Sárközi, Z. Néda, A. Tunyagi, I. Burda, „Collective behaviour of electronic fireflies", ***European Physical Journal B***, vol. 65, pp. 271-277, 2008.
32. M. Ercsey-Ravasz*, T. Roska, Z. Néda, „Stochastic optimization of spin-glasses on cellular neural/nonlinear network based processors", ***Physica A: Statistical mechanics and its Applications***", vol. 388, pp. 1024-1030, 2008.
33. M. Ercsey-Ravasz*, T. Roska, Z. Néda, „Statistical Physics on Cellular Neural Network Computers", ***Physica D: Nonlinear Phenomena***, *Special Issue: „Unconventional computing: Quo vadis?",* vol. 237, no.9, pp. 1226-1234, 2008.
34. M. Ercsey-Ravasz*, T. Roska, Z. Néda, „Stochastic simulations on the cellular wave computers", ***European Physical Journal B***, vol. 51., no. 3, pp. 407-412, 2006.
35. M. Ercsey-Ravasz*, T. Roska, Z. Néda, „Perspectives for Monte Carlo simulations on the CNN Universal Machine", ***Int. Journal of Modern Physics C***, vol. 17., no.6, pp. 903-923, 2006.
36. Z. Néda, R. V. Florian, M. Ravasz, A. Libál, and G. Györgyi, „Phase transition in an optimal clusterization model", ***Physica A,*** vol. 362, no. 2, pp. 357–368, 2006.
37. 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.
38. M. Ravasz*, Gy. Szabó, A. Szolnoki, "Spreading of families in cyclic predator-prey models", ***Physical Review E,*** vol. 70, 012901, pp.1-4, 2004.
39. Z. Néda**,** K.-t. Leung, L. Józsa, M. Ravasz, "Spiral cracks in drying precipitates", ***Physical Review Letters,*** vol. 88, 095502, pp. 1-4 , 2002.
40. K.-t. Leung, L. Józsa , M. Ravasz, Z. Néda, "Spiral cracks without twisting", ***Nature,*** vol. 410, pp. 166, 2001.

b) Cărți și capitole de cărți

- K. Knoblauch, **M. Ercsey-Ravasz**, H. Kennedy, Z. Toroczkai, "The Brain in Space", in The 22nd Colloque Médecine et Recherche of the Fondation Ipsen in the Neurosciences series: "Micro-, meso- and macro-connectomics of the brain", Fondation IPSEN, Paris, France. Eds: H. Kennedy, D. Van Essen, Y. Christen Springer, Heidelberg, pp 45-74, 2016.
- M. Ercsey-Ravasz, Z. Toroczkai, "Döntések fizikája és rejtvények káosza" ("Physics of decision making and chaos of puzzles") in A fizika, matematikáes 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.

c) Publicații apărute în lucrările conferințelor internaționale

- Levente Varga; David Deritei; Maria Ercsey-Ravasz, Razvan Florian, Zsolt I. Lazar, Istvan Papp, Ferenc Jarai-Szabo, "Normalizing scientometric indicators of individual publications using local cluster detection methods on citation networks", International Journal of Educational and Pedagogical Sciences, vol. 12, no. 9, (2018). ICCSIB 2018 : 20th International Conference on Cybermetrics, Scientometrics, Informetrics and Bibliometrics, Barcelona, Spain, October 29-30, 2018.

- K. Knoblauch, **M. Ercsey-Ravasz**, H. kennedy, Z. Toroczkai, "The Brain in Space", Proc. of *IPSEN*, Paris, May 2014.

- 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.

- I. Papp, **M. Ercsey-Ravasz**, D. Deritei, R. Sumi, F. Jarai-Szabo, R.V. Florian, A.I. Cabuz, Zs.I. Lazar, "The P-index: Hirsch index of individual publications" Proc. of the International Sociey of Scientometrics and Informetrics Conference, *ISSI2013*, pp. 2086-2088, Vienna, Austria, July 2013.

- B. Molnar, Z. Toroczkai, **M. Ercsey-Ravasz**, "Continuous-tiime neural networks without local traps for solving Boolean satisfiability", *Proc. of the 13th IEEE Int. Conf. on Cellular Nanoscale Networks and their Applications,* Torino, Italy, 4012, pp. 1-6, August 2012.

- N. Markov*, **M. Ercsey-Ravasz***, C. Dehay, P. Barone, D. Sappey-Marinier, P. Misery, C. Lamy, P. Giroud, J. Sallet, S. Clavagnier, C. Huissoud, A. Falchier, R. Quilodran, J. Vezoli,

M. Gariel, H. Kennedy, K. Knoblauch ,Z. Toroczkai, "Principles of inter-areal connections of the macaque cortex", *NeuroComp 2010*, pp. 258-263, October 2010 (* indicates equal contributions).

- M. Ercsey-Ravasz, T. Roska, Z. Néda , „Cellular Neural Networks for NP-hard optimization", *Proc. of the 11th IEEE Int. Conf. on Cellular Neural Networks and their Applications,* (Santiago de Compostela, Spain), pp. 52-56, July 2008.

- M. Ercsey-Ravasz, T. Roska, Z. Néda, „Random number generator and Monte carlo type simulations on the CNN-UM", *Proc. of the 10th IEEE Int. Conf. on Cellular Neural Networks and their Applications*, (Istanbul, Turkey), pp. 47-52, August 2006.

d) Alte lucrări

- M. Ercsey-Ravasz, „Agyi hálózatok modellezése egy távolságszabály alapján" („Modelling cortical networks based on a distance rule"), *FIRKA,* invited paper, vol. 27, nr.4, pp. 13-18, 2018.

- **M. Ercsey-Ravasz**, Z. Toroczkai, "A donteshozatal es a Sudoku kaosza" ("The Chaos Within Sudoku and Decision Making"), *Termeszet Vilaga (World of Nature)*, invited paper in the special issue "Kaosz, Kornyezet, Komplexitas" ("Chaos, Environment, Complexity"), Budapest, Hungary, p. 122, 2013

- M. Ercsey-Ravasz, T. Roska, Z. Néda, „Analogic Cellular Computers – A New Computational Paradigm" (in Hungarian), *Technical Review,* vol. 42. , pp. 19-25, 2008.

- Z. Néda, M. **Ravasz**, R. Florian, A. Libál, G. Györgyi, „Clustering Formation and Phase Transition in Frustrated Networks" (in Hungarian), *Technical Review,* vol.42, pp. 3-8, 2008.

- **M. Ravasz**, Z. Néda, „Fragmentation of drying granular materials on surfaces with high anisotropy" (in Hungarian), *Modern studies in experimental and theoretical physics*, Scientia, Cluj-Napoca, 2003

- Z. Néda, **M. Ravasz**, R. Florian, A. Libál, „Phase transition in optimal clusterization" (in Hungarian), *Modern studies in experimental and theoretical physics*, Scientia, Cluj-Napoca, 2003