

Fișa de verificare

Dr. Maria-Magdolna Ercsey-Ravasz

Criteria CNATDCU CS I după ordin 6129/2016

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1. Activitatea didactică și profesională (A)

Nr. Crt.	Tipul activităților	Criteria CNATDCU	Criteria UBB	Indicatori/
1	Cărți în edituri internaționale recunoscute Web of Science			0
2	Capitole de cărți în edituri internaționale recunoscute Web of Science în calitate de autor/Review-uri în reviste cotate ISI			0.75
3	Cărți în edituri internaționale recunoscute Web of Science în calitate de editor			0
4	Cărți, manuale, îndrumare de laborator în edituri naționale sau alte edituri internaționale ca autor, note interne, prezentări susținute pentru aprobare analizărilor de date în cadrul colaborărilor mari			0
5	Capitole de cărți în edituri naționale sau alte edituri internaționale ca autor			0
6	Lucrări în extenso (cel puțin 3 pagini) publicate în Proceeding-uri indexate ISI			0.2181
7	Brevete de invenție internaționale acordate			0
8.	Brevete de invenție naționale acordate			0
9.	Director/ responsabil/ coordonator pentru programe de studii, programe de formare continuă, proiecte educaționale și proiecte de infrastructură (proiecte de cercetare se exclud)			0

10	Director/ responsabil pentru proiecte de cercetare in valoare V_i euro câștigate prin competiție națională și internațională (proiectele de la punctul 9 se exclud). Sumele în lei sai în alte valute se convertesc în euro la cursul mediu din anul respectiv conform www.bnr.ro pentru perioada de după 1999 și la cursul din 1999 pentru perioada anterioară. Pentru responsabilii de grupuri se consideră doar suma aferentă grupului condus.			12.4243
	Total	A\geq2	A\geq2	A=13.3924

2. Activitatea de cercetare

Nr. crt.	Tipul activităților	Criterii CNATDCU	Criterii UBB	Indicatori
1	Articole științifice originale în extenso ca autor	I\geq4	I\geq4	40 de articole I=32.3473
2	Articole științifice originale în extenso ca prim autor sau autor corespondent, conform mențiunilor de pe articol. Nu se iau în considerare articolele la care autorii sunt indicați în ordinea alfabetică a numelui și candidatul este prim-autor exclusiv datorită numelui acestuia și ordonării alfabetice.	P\geq4	P\geq4	22 articole ca prim autor sau autor corespondent P=53.475

3. Recunoașterea impactului activității

Nr.crt.	Tipul activităților	CNATDCU	UBB	Indicatori
1	Citări în reviste indexate ISI.	C\geq40	C\geq40	2253 citări fără autocitări C=391.4687
2	Indicele Hirsch	h\geq10	h\geq10	h=20

Punctajul total CNATDCU: $T=A+P/2+I/2+C/20+h/5$

	Criteria CNATDCU	Criteria UBB	Indicatori
$T=A+P/2+I/2+C/20+h/5$	$T \geq 12$	$T \geq 12$	$T=13.3924+53.475/2+32.3473/2+391.4687/20+20/5=$ $13.3924+26.7375+16.17365+19.5734+4$ $T=79.87$

Atașăm tabelele și file-ul excel pentru calcularea indicatorilor A2, A6, A10, I,P,C, și un extras de pe site-ul WoS care arată valoarea indicelui Hirsch.

Data: 31.05.2023

Dr. Ercsey-Ravasz Maria-Magdolna

Capitole de cărți în edituri internaționale recunoscute Web of Science	Nr. Autori	n_ef	A2
- 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.	4	4	0,25
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 <i>Cerebral Plasticity</i> , eds: L.M. Chalupa, N. Berardi, M. Caleo, L. Galli-Resta, T. Pizzorusso, MIT Press, Cambridge MA, 2011.	7	6	0,16666667
T. Roska, L. Belády, M. Ercsey-Ravasz , „Cellular Wave Computing in Nanoscale via Million Processor Chips”, in <i>Cellular Nanoscale Sensory Wave Computing</i> , eds: C. Baatar, W. Porod, T. Roska. Springer, New York, 2010	3	3	0,33333333

0,75

Lucrări in extenso (cel puțin 3 pagini) publicate in Proceeding-uri indexate ISI	Nr. Autori	N_ef	A6
B. Molnar, Z. Toroczkai, M. Ercsey-Ravasz , "Continuous-time neural networks without local traps for solving Boolean satisfiability", <i>Proc. of the 13th IEEE Int. Conf. on Cellular Nanoscale Networks and their Applications</i> , Torino, Italy, 4012, pp. 1-6, August 2012.	3	3	0,06666667
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", <i>NeuroComp 2010</i> , pp. 258-263, October 2010 (* indicates equal contributions).	18	11	0,01818182
M. Ercsey-Ravasz , T. Roska, Z. Nédá, „Cellular Neural Networks for NP-hard optimization”, <i>Proc. of the 11th IEEE Int. Conf. on Cellular Neural Networks and their Applications</i> , (Santiago de Compostela, Spain), pp. 52-56, July 2008.	3	3	0,06666667
M. Ercsey-Ravasz , T. Roska, Z. Nédá, „Random number generator and Monte carlo type simulations on the CNN-UM”, <i>Proc. of the 10th IEEE Int. Conf. on Cellular Neural Networks and their Applications</i> , (Istanbul, Turkey), pp. 47-52, August 2006.	3	3	0,06666667

0,21818182

Articole științifice originale în extenso ca autor	Nr. Autori	N_ef	AIS	I=AIS/n_ef	Autor prim	P=Ais * Prim	Citari (fara auto-citari)	C
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", <i>Cerebral Cortex</i> , 1-32, 2022	9	7	2,128	0,304	0	0	1	0,1428571
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", <i>Entropy</i> , 23, 103, 2021.	4	4	0,498	0,1245	1	0,498	2	0,5
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", <i>Cerebral Cortex</i> , 31, 731-745, 2021.	11	8	2,128	0,266	0	0	1	0,125
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", <i>Journal of Informetrics</i> , 15, 101105, 2021.	7	6	1,515	0,2525	1	1,515	3	0,5
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", <i>Neuropharmacology</i> 195, 108496, 2021.	7	6	1,157	0,1928333	0	0	8	1,3333333
B Molnár, F. Molnar, M Varga, Z Toroczka, M Ercsey-Ravasz *, „A high-performance analog max-SAT solver”, <i>Nature Communications</i> , vol. 9, 4864, pp. 1-12, 2018	5	5	5,685	1,137	1	5,685	17	3,4
R. Gamanut, H. Kennedy, Z. Toroczka, M. Ercsey-Ravasz , DC Van Essen, K. Knoblauch, A. Burkhalter, "The mouse cortical connectome, characterized by an ultradense cortical graph, maintains specificity by distinct connectivity profiles", <i>Neuron</i> , 97, 698-715, e10, 2018	7	6	8,618	1,436333333	0	0	92	15,33333333
Xunzhao Yin, Behnam Sedighi, Melinda Varga, Mária Ercsey-Ravasz , Zoltán Toroczka, Xiaobo Sharon Hu, „Efficient analog circuits for Boolean satisfiability”, <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , vol. 26 (1), pp. 155-167, 2018	6	5,5	0,529	0,096181818	0	0	15	2,727272727
H. Noori, J. Schottlet, M. Ercsey-Ravasz , A. Cosa-Linan, M. Varga, Z. Toroczka, R. Spanagel, <i>PLoS Biology</i> , 15 (7), e2002612 2017	7	6	5,188	0,864666667	0	0	28	4,666666667
Zs. I. Lazar, I. Papp, L. Varga, F. Jarai-Szabo, D. Deritei, M. Ercsey-Ravasz *, "Stochastic graph Voronoi tessellation reveals community structure", <i>Physical Review E</i> , vol. 95, 022306, 2017	6	5,5	0,816	0,148363636	1	0,816	1	0,181818182
Sz. Horváth, Răzvan Gămănuț, Mária Ercsey-Ravasz † Loïc Magrou, Bianca Gămănuț, David C. Van Essen, Andreas Burkhalter, Kenneth Knoblauch, Zoltán Toroczka, Henry Kennedy, "Spatial embedding and wiring cost constrain the functional layout of cortical networks in rodents and primates", <i>PLoS Biol.</i> , vol. 14, e1002512, 2016. († indicates equal contribution).	10	7,5	5,188	0,691733333	1	5,188	94	12,53333333
R. Sumi, M. Varga, Z. Toroczka, M. Ercsey-Ravasz *, "Order-to-chaos transition in the hardness of random Boolean satisfiability", <i>Physical Review E</i> , vol. 93, 052211, 2016	4	4	0,816	0,204	1	0,816	5	1,25
D. Deritei, W.B. Aird, M. Ercsey-Ravasz , E. Ravasz Regan, "Principles of dynamical modularity in biological regulatory networks", <i>Scientific Reports</i> , vol. 6, 21957, 2016	4	4	1,484	0,371	0	0	22	5,5
Y. Ren, M. Ercsey-Ravasz , P. Wang, M.C. Gonzalez, Z. Toroczka, "Predicting commuter flows in spatial networks using a radiation model based on temporal ranges", <i>Nature Communications</i> , vol. 5, 5347 (2014).	5	5	5,723	1,1446	0	0	98	19,6
D. Deritei, Zs. Lazar, I. Papp, F. Jarai-Szabo, R. Sumi, L. Varga, ER Regan, M. Ercsey-Ravasz *, "Community detection by graph Voronoi diagrams", <i>New Journal of Physics</i> , vol. 16, 063007, 2014.	8	6,5	1,982	0,304923077	1	1,982	19	2,923076923
R. Sumi, B. Molnar, M. Ercsey-Ravasz *, "Robust optimization with transiently chaotic dynamical systems", <i>European Physics Letters</i> , vol. 106, 40002, 2014	3	3	0,953	0,317666667	1	0,953	6	2
N.T. Markov, M. Ercsey-Ravasz , ARR Gomes, C.Lamy, L. Magrou, J. Vezoli, P. Misery, A. Falchier, R. Quilodran, MA Gariel, J. Sallet, R. Gamanut, C. Huissoud, S. Clavagnier, P. Giroud, DS. Marinier, P. Barone, C. Dehay, Z. Toroczka, K. Knoblauch, D. C. Van Essen, H. Kennedy, "A weighted and directed interareal connectivity matrix for macaque cerebral cortex", <i>Cerebral Cortex</i> , vol. 24, pp. 17-36, 2014	22	12,33333333	3,29	0,266756757	0	0	456	36,97
M. Ercsey-Ravasz , N.T. Markov, C. Lamy, D.C. Van Essen, K. Knoblauch, Z. Toroczka, H. Kennedy, "A predictive network model of cerebral cortical connectivity based on a distance rule.", <i>Neuron</i> vol. 80, pp. 184-197, 2013	7	6	8,682	1,447	1	8,682	230	38,33333333
N.T. Markov, M. Ercsey-Ravasz , D.C. Van Essen, K. Knoblauch, Z. Toroczka, H. Kennedy, "Cortical High-density Counter-stream Architectures", <i>Science</i> vol. 342, pp. 1238406:1-15, 2013	6	5,5	17,698	3,217818182	0	0	299	54,36363636
N.T. Markov, M. Ercsey-Ravasz , C. Lamy, AR. Gomes, L. Magrou, P. Misery, P. Giroud, P. Barone, C. Dehay, Z. Toroczka, K. Knoblauch, D.C. Van Essen, H. Kennedy. "The role of long-range connections on the specificity of the macaque interareal cortical network" <i>PNAS</i> vol. 110, pp. 5187-5192, 2013	13	9	4,878	0,542	0	0	115	12,77777778
B. Molnár, M. Ercsey-Ravasz *, „Asymmetric Continuous-Time Neural Networks without Local Traps for Solving Constraint Satisfaction Problems”, <i>PloS One</i> 8(9), e73400, pp. 1-13, 2013	2	2	1,37	0,685	1	1,37	12	6
M. Ercsey-Ravasz , Z. Toroczka, „The Chaos Within Sudoku”, <i>Scientific Reports</i> 2, pp. 755-762, 2012	2	2	1,576	0,788	1	1,576	29	14,5
M. Ercsey-Ravasz , Z. Toroczka, Z. Lakner, J. Baranyi, „Complexity of the international agro-food trade network and its impact on food safety”, <i>PloS One</i> 7(5), e37810, pp. 1-7, 2012.	4	4	1,545	0,38625	1	1,545	122	30,5
M. Ercsey-Ravasz , R. Lichtenwalter, N.V. Chawla, Z. Toroczka, „Range-limited Centrality Measures in Weighted and Non-weighted Complex Networks”, <i>Physical Review E</i> vol. 85, 066103, pp. 1-14, 2012	4	4	0,894	0,2235	1	0,894	29	7,25
M. Ercsey-Ravasz , Z. Toroczka, „Optimization hardness as transient chaos in an analog approach to constraint satisfaction”, <i>Nature Physics</i> , vol. 7, pp. 966-971, 2011.	2	2	13,608	6,804	1	13,608	57	28,5

N.T. Markov, P. Misery, A. Falchier, C. Lamy, J. Vezoli, R. Quilodran, M.A. Gariel, P. Giroud, 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" <i>Cerebral Cortex</i> , vol. 21(6), 1254-1272, 2011	17	10,66666667	2,997	0,28096875	0	0	233	21,84375
M. Ercsey-Ravasz , Z. Toroczkai, "Centrality scaling in large networks", <i>Physical Review Letters</i> , vol. 105, 038701, pp. 1-14, 2010	2	2	3,47	1,735	1	3,47	29	14,5
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", <i>PLoS Computational Biology</i> 6, e1001015, pp. 1-13, 2010.	11	8	2,979	0,372375	0	0	56	7
Z. Neda, R. Sumi, M. Ercsey-Ravasz , M. Varga, B. Molnar, Gy. Cseh, "Correlation clustering on networks", <i>J. of Physics A: Mathematical and Theoretical</i> , vol. 42, 345003, pp. 1-15, 2009	6	5,5	0,671	0,122	0	0	4	0,727272727
M. Ercsey-Ravasz , T. Roska, Z. Neda, "Cellular Neural Networks for NP-hard optimization", <i>EURASIP Journal on Advances in Signal Processing, Special issue: CNN Technology for Spatio-temporal Signal Processing</i> , doi: 10.1155/2009/646975, pp. 1-7, 2009.	3	3	0,424	0,141333333	1	0,424	0	0
M. Ercsey-Ravasz , Zs. Sárközi, Z. Neda, A. Tunyagi, I. Burda, "Collective behaviour of electronic fireflies", <i>European Physical Journal B</i> , vol. 65, pp. 271-277, 2008.	5	5	0,727	0,1454	1	0,727	1	0,2
M. Ercsey-Ravasz , T. Roska, Z. Neda, "Stochastic optimization of spin-glasses on cellular neural/nonlinear network based processors", <i>Physica A: Statistical mechanics and its Applications</i> , vol. 388, pp. 1024-1030, 2008	3	3	0,485	0,161666667	1	0,485	1	0,333333333
M. Ercsey-Ravasz , T. Roska, Z. Neda, "Statistical Physics on Cellular Neural Network Computers", <i>Physica D: Nonlinear Phenomena, Special Issue: Unconventional computing: Quo vadis?</i> , vol. 237, no.9, pp. 1226-1234, 2008.	3	3	1,041	0,347	1	1,041	2	0,666666667
M. Ercsey-Ravasz , T. Roska, Z. Neda, "Stochastic simulations on the cellular wave computers", <i>European Physical Journal B</i> , vol. 51, no. 3, pp. 407-412, 2006.	3	3	0,8	0,266666667	1	0,8	4	1,333333333
M. Ercsey-Ravasz , T. Roska, Z. Neda, "Perspectives for Monte Carlo simulations on the CNN Universal Machine", <i>Int. Journal of Modern Physics C</i> , vol. 17., no.6, pp. 903-923, 2006.	3	3	0,3	0,1	1	0,3	1	0,333333333
Z. Neda, R. V. Florian, M. Ravasz , A. Libal, and G. Györgyi, "Phase transition in an optimal clusterization model", <i>Physica A</i> , vol. 362, no. 2, pp. 357-368, 2006.	5	5	0,5	0,1	0	0	11	2,2
A. Szolnoki, G. Szabó, M. Ravasz , "Three-state Potts model in combination with the rock-scissors-paper game", <i>Physical Review E</i> , vol. 71, 027102, pp. 1-4, 2005.	3	3	1,1	0,366666667	0	0	20	6,666666667
M. Ravasz , Gy. Szabó, A. Szolnoki, "Spreading of families in cyclic predator-prey models", <i>Physical Review E</i> , vol. 70, 012901, pp.1-4, 2004.	3	3	1,1	0,366666667	1	1,1	15	5
Z. Neda, K.-t. Leung, L. Józsa, M. Ravasz , "Spiral cracks in drying precipitates", <i>Physical Review Letters</i> , vol. 88, 095502, pp. 1-4, 2002.	4	4	3,8	0,95	0	0	71	17,75
K.-t. Leung, L. Józsa, M. Ravasz , Z. Neda, "Spiral cracks without twisting", <i>Nature</i> , vol. 410, pp. 166, 2001	4	4	18,7	4,675	0	0	44	11
				31,20753722	20	51,462	2238	388,8675777

V_i Director/ responsabil pentru proiecte de cercetare in valoare euro câștigate prin competiție națională și internațională	Titlul proiectului	Perioada	Suma in lei	Curs valutar mediu annual	V=Suma in Euro	A10
Director proiect: PN- II-RU-TE-2011-03-121.	A continuous-time approach to constraint satisfaction: optimization hardness as transient chaos	2011	50040	4,2379	11807,73496	0,11807735
Director proiect: PN- II-RU-TE-2011-03-121.	A continuous-time approach to constraint satisfaction: optimization hardness as transient chaos	2012	273480	4,456	61373,42908	0,613734291
Director proiect: PN- II-RU-TE-2011-03-121.	A continuous-time approach to constraint satisfaction: optimization hardness as transient chaos	2013	348480	4,419	78859,47047	0,788594705
Director proiect: PN- II-RU-TE-2011-03-121.	A continuous-time approach to constraint satisfaction: optimization hardness as transient chaos	2014	248000	4,4446	55798,04707	0,557980471
Director proiect: PN-II-PT-PCCA-2011-3.2-0895	Improving scientific evaluation through analysis of scientific networks	2012	467164	4,456	104839,3178	1,048393178
Director proiect: PN-II-PT-PCCA-2011-3.2-0895	Improving scientific evaluation through analysis of scientific networks	2013	584599	4,419	132292,1475	1,322921475
Director proiect: PN-II-PT-PCCA-2011-3.2-0895	Improving scientific evaluation through analysis of scientific networks	2014	696907	4,4446	156798,587	1,56798587
Director proiect: PN-II-PT-PCCA-2011-3.2-0895	Improving scientific evaluation through analysis of scientific networks	2015	564319	4,445	126955,9055	1,269559055
Director proiect: PN-II-PT-PCCA-2011-3.2-0895	Improving scientific evaluation through analysis of scientific networks	2016	675011	4,4908	150309,7444	1,503097444
Director proiect: PN-III-P2-2.1-BG-2016-0252	Dezvoltarea unui indicator scientometric optim	2016	20250	4,4908	4509,218847	0,045092188
Director proiect: PN-III-P2-2.1-BG-2016-0252	Dezvoltarea unui indicator scientometric optim	2017	239250	4,5681	52374,07237	0,523740724
Director proiect: PN-III-P2-2.1-BG-2016-0252	Dezvoltarea unui indicator scientometric optim	2018	200500	4,6535	43085,84936	0,430858494
Director proiect: PN-III-P1-1.1-TE-2016-1457	Continuous dynamical systems as state transition networks: a new perspective on brain signal processing	2018	123625	4,6535	26566,02557	0,265660256
Director proiect: PN-III-P1-1.1-TE-2016-1457	Continuous dynamical systems as state transition networks: a new perspective on brain signal processing	2019	245588	4,7452	51755,03667	0,517550367
Director proiect: PN-III-P1-1.1-TE-2016-1457	Continuous dynamical systems as state transition networks: a new perspective on brain signal processing	2020	80787	4,8371	16701,53604	0,16701536
Director proiect: COFUND-FLAGERA II-CORTICITY	Comparative investigation of the Cortical Circuits in Mouse, NHP and Human	2018	232050	4,6535	49865,69249	0,498656925
Director proiect: COFUND-FLAGERA II-CORTICITY	Comparative investigation of the Cortical Circuits in Mouse, NHP and Human	2019	279999	4,7452	59006,7858	0,590067858
Director proiect: COFUND-FLAGERA II-CORTICITY	Comparative investigation of the Cortical Circuits in Mouse, NHP and Human	2020	288000	4,8371	59539,80691	0,595398069
Director proiect: PN III-P4-PCE-2021-0408	Brain network analysis for capturing transitions between perceptual states	2022	228000	4,9315	46233,39755	0,462333975
Director proiect: ERANET-NEURON-2-UnscrAMBLY	Understanding brain circuit dysfunction in amblyopia using large-scale multimodal recordings in a new visuomotor task applied to animal models and patients	2022	98396	4,9315	19952,54993	0,199525499

12,42438408