

Raport de cercetare științifică 2018–2024

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1. [Prof. dr. Farkas Csaba](#)

Consiliu de Administrație:

1. Prof. dr. Makó Zoltán
2. [Conf. dr. Kátai Zoltán](#)

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- | | |
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| 2. Prof. dr. Szász Róbert | 15. Lector dr. Illyés László |
| 3. Prof. dr. Szilágyi László | 16. Lector dr. Oláh-Gál Róbert |
| 4. Conf. dr. Antal Margit | 17. Lector dr. Osztián Erika |
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| 6. Conf. dr. Kupán Pál | 19. Asistent Osztián Pálma Rozália |
| 7. Conf. dr. Salamon Júlia | 20. Asistent Nagy Zsuzsánna |
| 8. Conf. dr. Pál László | 21. Asistent Naghi Mirtil |
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| 11. Lector dr. Szabó László | 24. Asistent Györfi Ágnes |
| 12. Lector dr. Kovács Lehel | 25. Asistent Filep Levente |
| 13. Lector dr. Márton Gyöngyvér | |

Membrii Centrului au obținut în perioada 2016–2020 șapte contracte IPC în valoarea totală de **141 000 lei**. (două în perioada 2019–2020, două în perioada 2017–2018, și trei în perioada 2016–2017).

Cercetările sunt din domeniile prevăzute în planul de cercetare pe perioada 2018–2023:

- **Informatică aplicată**
 - Modele și structuri de inteligență artificială,
 - Diagnosticarea, repararea, regenerarea rețelelor complexe,
 - Prelucrarea semnalului vocal,
 - Metode avansate de autentificare
- **Matematică discretă cu aplicații**
 - Combinatoria cuvintelor,
 - Teoria grafurilor
- **Analiză cu aplicații**

- Studiul funcțiilor complexe,
- Metode numerice cu aplicații,
- Metode de omogenizare,
- Analiză neliniară,
- Aplicații în teoria optimizării,
- Studiul sistemelor dinamice din mecanica cerească,
- **Didactica predării**
 - Metode neconvenționale de predare a informaticii,
 - Eficientizarea procesului de predare/învățare/evaluare a informaticii,

Revistele ACTA UNIVERSITATIS SAPIENTIAE MATHEMATICA și ACTA UNIVERSITATIS SAPIENTIAE INFORMATICA (<http://www.acta.sapientia.ro>) sunt editate sub patronajului Centrului de cercetare Matinfo. Revistele sunt editate în colaborare cu Sciendo/De Gruyter Open și sunt indexate conform tabelului următor. În 2022, aceste reviste au un factor de impact de 0.5 și 0.3. Pe site-ul Sciendo, revistele pot fi accesate prin intermediul următoarelor link-uri:

- MATHEMATICA, <https://sciendo.com/journal/AUSM>
- INFORMATICA, <https://sciendo.com/journal/AUSI>

Mathematica	Informatica
AMS Digital Mathematics Registry Baidu Scholar CNKI Scholar (China National Knowledge Infrastructure) CNPIEC Dimensions DOAJ (Directory of Open Access Journals) EBSCO (relevant databases) EBSCO Discovery Service EMIS - Electronic Library of Mathematics Genamics JournalSeek Google Scholar Japan Science and Technology Agency (JST) J-Gate JournalGuide JournalTOCs KESLI-NDSL (Korean National Discovery for Science Leaders) Mathematical Reviews (MathSciNet) Microsoft Academic Naviga (Softweco) Primo Central (ExLibris) ProQuest (relevant databases) Publons	ACM Digital Library Baidu Scholar Cabell's Directory Celdes CNKI Scholar (China National Knowledge Infrastructure) CNPIEC Dimensions DOAJ (Directory of Open Access Journals) EBSCO (relevant databases) EBSCO Discovery Service Engineering Village Genamics JournalSeek Google Scholar Inspec io-port.net Japan Science and Technology Agency (JST) J-Gate JournalTOCs KESLI-NDSL (Korean National Discovery for Science Leaders) Microsoft Academic Naviga (Softweco) Primo Central (ExLibris)

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Zentralblatt Math	Zentralblatt für Mathematik

CONFERINȚA MATHINFO

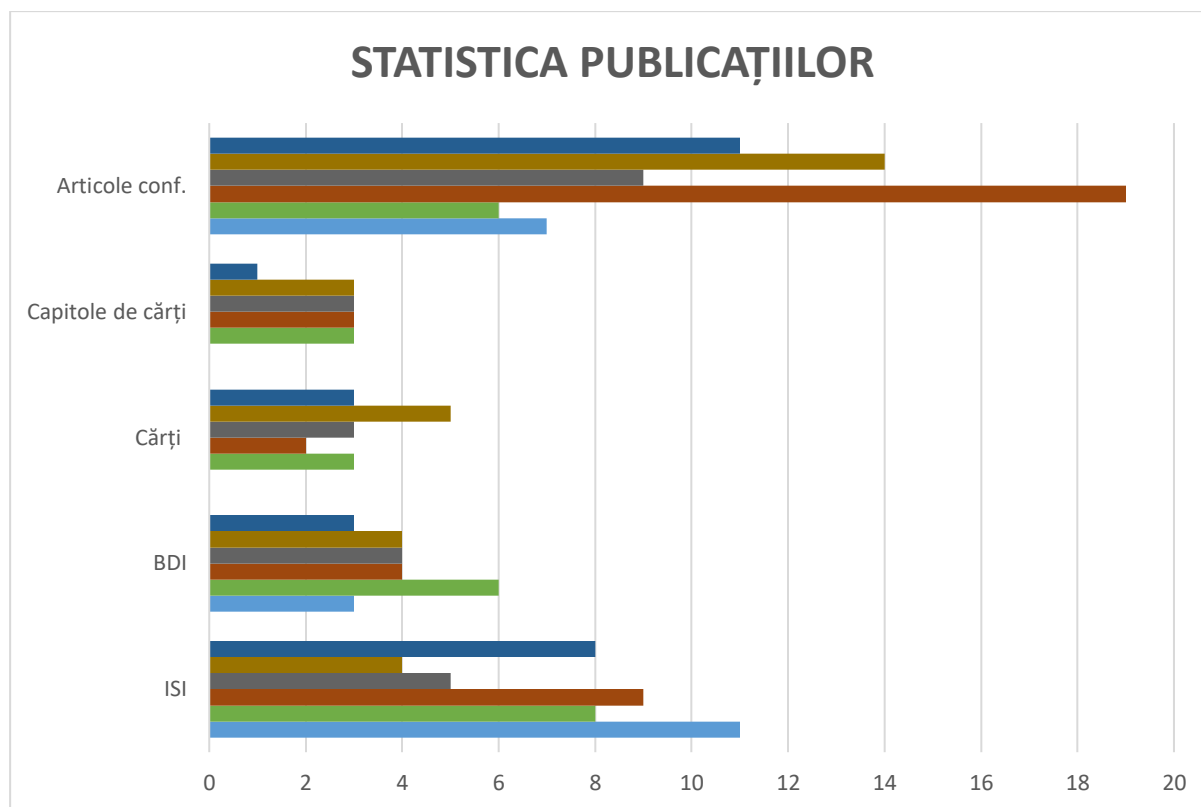
Centrul a organizat până în 2015 conferința MATINFO cu participări din România și Ungaria. Din 2015 conferința a devenit una internațională (Rezumatele tuturor prezentărilor sunt disponibile la următorul <https://mathinfo.ms.sapientia.ro/>) cu participări din Austria, Croația, India, Italia, Turcia, România, Ungaria. De asemenea, în perioada de raportare au avut loc 3 conferințe internaționale:

- 7th International Conference on Mathematics and Informatics September 2-4, 2019
- 8th International Conference on Mathematics and Informatics September 9-10, 2021(Online conference)
- 9th International Conference on Mathematics and Informatics September 7-8, 2023

La ultima conferință au participat o serie de autori care au mai participat la acest eveniment.

STATISTICA PUBLICAȚIILOR

anul	ISI	BDI	Cărți publicate	Capitole de cărți	Articole conf.	Total
2024	1				6	
2023	11	3			7	
2022	8	6	3	3	6	
2021	9	4	2	3	19	
2020	5	4	3	3	9	
2019	4	4	5	3	14	
2018	8	3	3	1	11	
Total	46	24	16	23	72	170



1.	Criterii primare de performanta	nr.	punctaj
1.1.	Lucrari stiintifice/tehnice publicate în reviste de specialitate cotate ISI		
	Numar de lucrari stiintifice ×30	32	960
	Punctaj cumulat ISI ¹ ×5		
	Numar de citari în reviste de specialitate cotate ISI ² ×5	410	2050
1.2.	Brevete de inventie³		
	Numar de brevete ×30	0	0
	Numar de citari de brevete în sistemul ISI ×5	0	0
1.3.	Produse si tehnologii rezultate din activitati de cercetare, bazate pe brevete, omologari sau inovatii proprii. Studii prospective si tehnologice si servicii rezultate din activitatea de cercetare-dezvoltare, comandate de beneficiar <i>(Se indica contractul si firma care utilizeaza produsul, serviciul si tehnologia).</i>		
	Numar de produse, tehnologii, studii, servicii ×20	1	20

¹ Punctajul ISI se obtine prin însumarea factorilor de impact ai publicatiilor respective. Factorii de impact pot fi accesati la www.cimec.org.ar.

² Sunt excluse autocitările.

³ Se specifica daca brevetul este national/international (USPTO, EPO, JPO) si numarul brevetului.

1.4	Cărți/capitole de cărți științifice la ed. internaționale ×3 pe 50 pag.	0	0
Total punctaj cap. 1			3030

2.	Criterii secundare de performanță	nr.	punctaj
2.1.	Lucrări științifice (tehnice) publicate în reviste de specialitate⁴ fara cotație ISI		
	Numar de lucrări ×6	24	144
2.2.	Lucrări științifice prezentate la conferințe internaționale cu comitet de program		
	Numar de comunicări prezentate ×6	66	396
2.3.	Modele fizice, modele experimentale, modele functionale, prototipuri, normative, proceduri, metodologii, reglementări și planuri tehnice noi sau perfectionate, realizate în cadrul programelor naționale sau comandate de beneficiar		
	Numar de modele, normative, proceduri etc. ×5	0	0
2.4.	Lucrări științifice (tehnice) publicate în alte reviste științifice		
	Numar de lucrări ×2	10	20
2.5	Cărți/capitole de cărți științifice la ed. naționale ×1 pe 50 pag.	400pag	8
Total punctaj cap. 2			568

3.	Prestigiul profesional	nr.	punctaj
3.1.	Membri (incluzând statutul de recenzor) în colectivele de redacție ale unor reviste (cotate ISI sau incluse în baze de date internaționale) sau în colective editoriale ale unor edituri internaționale recunoscute		
	Numar de prezente în perioada pentru care se face evaluarea: ×20	10	200
3.2.	Membri în colectivele de redacție ale revistelor recunoscute național (din categoria B în clasificarea CNCSIS sau incluse în BDI)		
	Numar de prezente în perioada pentru care se face evaluarea: ×10	5	50
3.3.	Premii internaționale obținute printr-un proces de selecție		
	Numar de premii: ×20	2	40
3.4.	Premii naționale ale Academiei Române		
	Numar de premii: ×20	1	20
3.5	Conducători de doctorat, membri ai unității de cercetare		
	Numar de conducători de doctorat: ×10	5	50
3.6.	Numar de doctori în știință, membri ai unității de cercetare		
	Numar de doctori în știință: ×10	21	210
Total punctaj cap. 3			570

⁴ În cazul revistelor românești, sunt luate în considerare cele cotate CNCSIS, categoria B (vezi www.cnscis.ro) și revistele incluse în BDI (Baze de date internaționale).

	TOTAL PUNCTAJ OBȚINUT (cap. 1 + cap. 2 + cap. 3)		4168

Punctaj obținut: 29.7 puncte/persoane/an

Punctaj necesar: 10 puncte/persoane/an

Tg. Mureș, 12 decembrie 2024

Prof. dr. Farkas Csaba
președinte



**ANEXA-LISTA PUBLICAȚIILOR
2018–2023**

Cărți - alte edituri din țară

2021

Farkas Csaba, Olteán-Péter Boróka, *Bevezetés a közönséges differenciálegyenletek elméletébe*, Scientia, Kolozsvár, 2021, pag. 417

Horobeț Emil, *Absztrakt és lineáris algebra (informatikus hallgatóknak)*, Editura Letras, Otopeni, 2021, pag. 160, ISBN 978-606-0716-05-1

Kovács Lehel István, *30 érdekes informatikafeladat*, EMT, Kolozsvár, 2021, pag. 260, ISBN 978-973-0-35468-3

2020

Kása Zoltán, Oláh-Gál Róbert, *Az ismeretlen Wald Ábrahám*, magán, Csíkszereda, 2020, pag. 54, ISBN 978-973-0-32931-5

2019

Kupán Pál, *Lineáris algebra és alkalmazásai*, Scientia Kiadó, Kolozsvár, 2019, pag. 204, ISBN 978-606-975-027-8**2018**

Farkas Csaba, *Nonlinear PDE's via variational methods*, Scientia, Kolozsvár, 2018, ISBN 978-606-975-011-7

2018

Lefkovits László, *Procesarea imaginilor de rezonanță magnetică cu aplicații în segmentarea tumorilor cerebrale*, University Press, Universitatea de Medicină, Farmacie și Științe Tehnice, Tg-Mures, 2018, pag. 191, ISBN 978-973-169-541-9

Lucrări – cotație ISI

2021

Farkas Csaba, Iclănzan David, Vekov Géza, Olteán-Péter Boróka, Estimation of parameters for a humidity-dependent compartmental model of the COVID-19 outbreak, *PeerJ*, Vol. 1, 2021, pp. 1–33.

Antal Margit, Fejér Norbert, Buza Krisztian, SapiAgent: A Bot Based on Deep Learning to Generate Human-Like Mouse Trajectories, *IEEE Access*, Vol. 9, 2021, pp. 124396–124408.

Farkas Csaba, Kristály Alexandru, Mester Ágnes, Compact Sobolev embeddings on non-compact manifolds via orbit expansions of isometry groups, *CALCULUS OF VARIATIONS AND PARTIAL DIFFERENTIAL EQUATIONS*, Vol. 2021, No 60, 2021, pp. 1–31.

Farkas Csaba, Winkert Patrick, An existence result for singular Finsler double phase problems, *JOURNAL OF DIFFERENTIAL EQUATIONS*, Vol. 2021, No 286, 2021, pp. 455–473.

Farkas Csaba, Fiscella Alessio, Winkert Patrick, Singular Finsler Double Phase Problems with Nonlinear Boundary Condition, *ADVANCED NONLINEAR STUDIES*, Vol. 2021, No <https://doi.org/10.1515/ans-2021-2143>, 2021, pp. 1–20.

Györfi Ágnes, Szilágyi László, Kovács Levente, A fully automatic procedure for brain tumor segmentation from multi-spectral MRI records using ensemble learning and atlas-based data enhancement, *Applied Sciences (MDPI)*, Vol. 11, No 2:564, 2021, ISSN 2076-3417, pp. 1–24.

Szabó László Zsolt, Szentesi Péter, Csernoch László, Claude Collet, Mercédès Charreton, Marianna Takács, Elementary calcium release events in the skeletal muscle cells of the honey bee *Apis mellifera*, *Scientific Reports*, Vol. 11, No 16731, 2021, pp. 1–14.

2020

Farkas Csaba, Francesca Faraci, On a critical Kirchhoff-type problem, *NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS*, Vol. 192, No 192/111679, 2020, pp. 1–14.

Harangus Katalin, Kátai Zoltán, Computational Thinking in Secondary and Higher Education, *Procedia Manufacturing*, Vol. 46, 2020, pp. 615–622.

Kátai Zoltán, Promoting computational thinking of both sciences- and humanities-oriented students: an instructional and motivational design perspective, *ETR&D-EDUCATIONAL TECHNOLOGY RESEARCH AND DEVELOPMENT*, Vol. 68, No 5, 2020, pp. 2239–2261.

Szász Róbert, On Brannan's conjecture, *Mediterr. J. Math.*, Vol. 17, No 1, 2020, pp. 19–19.

Szász Róbert, Erhan Deniz, Murat Caglar, The final step in a proof of Brannan's conjecture for $\beta=1$. J., *Journal of Mathematical Analysis and Applications*, Vol. 487, No 2, 2020, pp. 5–5.

2019

Farkas Csaba, Francesca Faraci, A characterization related to Schrödinger equations on Riemannian manifolds, *COMMUNICATIONS IN CONTEMPORARY MATHEMATICS*, Vol. 21, No. 8 (2019) 1850060 (24 pages)

Farkas Csaba, Francesca Faraci, On an open question of Ricceri concerning a Kirchhoff-type problem. *Minimax Theory Appl.* [4 \(2019\), no. 2](#), 271–280.

Horobet Emil, M. Weinstein, Offset Hypersurfaces and Persistent Homology of Algebraic Varieties, *Computer Aided Geometric Design*, Volume 74 (2019), Pages 101767

Margit Antal, Elod Egyed-Zsigmond (2019), Intrusion detection using mouse dynamics, *IET Biometrics*, 8(5), September 2019, p. 285-294. DOI: 10.1049/iet-bmt.2018.5126, IET Digital Library,

Szilágyi László, **Lefkovits Szidónia**, **Szilágyi Sándor Mikós**, Self-tuning possibilistic c-means clustering models, *INTERNATIONAL JOURNAL OF UNCERTAINTY FUZZINESS AND KNOWLEDGE-BASED SYSTEMS*, Vol. 27, No Suppl 1, 2019, pp. 143–159.

2018

Kupán Pál, About strong starlikeness conditions, *Filomat*, Vol. 32/6, 2018, pp. 2035–2042.

Szász Róbert, **Baricz Árpád**, **Szakál Anikó**, **Nihat Jagmur**, Radii of starlikeness and convexity of a product and cross-product of Bessel functions., *Results in Mathematics*, Vol. 73, No 2, 2018, ISSN 1422-6383, pp. 1–34.

Szász Róbert, **Selvakumaran Kuppathai Appasamy**, Certain geometric properties of an integral operator involving Bessel functions., *Kyungpook Mathematical Journal*, Vol. 58, No 3, 2018, pp. 507–517.

Antal Margit, **Szabó László Zsolt**, **Tordai Tünde**, Online Signature Verification on MOBISIG Finger-Drawn Signature Corpus, *Mobile Information Systems*, Vol. vol. 2018, No Article ID 3127042, 2018, pp. 1–15.

Farkas Csaba, **Faraci Francesca**, **Kristály Alex**, Multipolar Hardy inequalities on Riemannian manifolds - Dedicated to Professor Enrique Zuazua on the occasion of his 55th birthday, *ESAIM: COCV*, Vol. -, 2018, ISSN 1292-8119, pp. —.

Farkas Csaba, Schrödinger–Maxwell systems on compact Riemannian manifolds, *Electronic Journal of Qualitative Theory of Differential Equations*, Vol. 64, 2018, pp. 1–18.

2017

Szász Róbert, Deniz Erhan, The radius of uniform convexity of Bessel functions, *JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS*, Vol. 453, No 1, 2017, pp. 572–588.

Szász Róbert, Caglar Murat, Erhan Deniz, Radii of α -convexity of some normalized Bessel functions of the first kind., *Results in Mathematics*, Vol. 72, No 4, 2017, pp. 2023–2035.

Bálint János, Balog Adalbert, Benedek Klára, Jánosi-Rancz Katalin Tünde, Domokos Erzsébet, Loxdale Hugh, Szabó Károly-Attila, The arbuscular mycorrhizal fungus *Rhizophagus irregularis* affects arthropods colonization on sweet pepper in both the field and greenhouse, *JOURNAL OF PEST SCIENCE*, Vol. 90, No 3, 2017, pp. 935–946.

Horobet Emil, The Data Singular and the Data Isotropic Loci for Affine Cones, *Comm. Algebra*, Vol. 45, No 3, 2017, pp. 1177–1186.

Horobet Emil, Jose Israel Rodriguez, The Maximum Likelihood Data Singular Locus, *Journal of Symbolic Computation*, Vol. 79, No 1, 2017, pp. 99–107.

Horobet Emil, Draisma Jan, Boralevi Ada, Robeva Elina, Orthogonal and unitary tensor decomposition from an algebraic perspective, *Israel J. Math.*, Vol. 222, 2017, ISSN 1565-8511, pp. 223–260.

Szilágyi László, Haidegger Tamás, Lehotsky Ákos, Wéber György, Bánsághi Száva, Szerémy Péter, Towards objective hand hygiene technique assessment: validation of the ultraviolet-dye-based hand-rubbing quality assessment procedure, *JOURNAL OF HOSPITAL INFECTION*, Vol. 97, No 1, 2017, pp. 26–29.

Frigy FRIGY, Szilágyi László, Magdás Annamária, Moga Victor-Dan, Cotet Ioana-Georgiana, Kozlovsky Miklós, Increase of Short-Term Heart Rate Variability Induced by Blood Pressure Measurements during Ambulatory Blood Pressure Monitoring, *Computational and Mathematical Methods in Medicine*, Vol. 2017, No 5235319, 2017, pp. 1–5.

Szilágyi László, Haidegger Tamás, Lehotsky Ákos, Bánsághi Száva, Morvai Júlia, Benkó Alíz, A kézhigiénés technika vizsgálata elektronikus ellenőrző berendezés segítségével 26 magyarországi betegellátó intézményben, *ORVOSI HETILAP*, Vol. 158, No 29, 2017, pp. 1151–1156.

2016

Szász Róbert, Baricz Árpád, Close-to-convexity of some special functions and their derivatives., *Bulletin of the Malaysian Mathematical Sciences Society*, Vol. 39, No 1, 2016, pp. 427–437.

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Szász Róbert, The radius of starlikeness and the radius of convexity of the Γ_q function., *Bulletin of the Malaysian Mathematical Sciences Society*, Vol. 39, No 4, 2016, pp. 1647–1687.

Viorica Varga, Katalin Tünde Jánosi-Rancz, Balázs Kálmán, Conceptual Design of Document NoSQL Database with Formal Concept Analysis, *Acta Polytechnica Hungarica*, Vol. 13, No 2, 2016, ISSN 1785-8860, pp. 229–248.

Farkas Csaba, Francesca Faraci, New conditions for the existence of infinitely many solutions for a quasi-linear problem, *PROCEEDINGS OF THE EDINBURGH MATHEMATICAL SOCIETY*, Vol. (2) 59, No 3, 2016, ISSN 0013-0915, pp. 655–669.

Farkas Csaba, Kristály Sándor, Schrödinger-Maxwell systems on Hadamard manifolds, *Nonlinear Analysis: Real World Applications*, Vol. 31, No 31, 2016, ISSN 1468-1218, pp. 473–491.

Horobet Emil, An algorithm to construct the basic algebra of a skew group algebra, *Mathematical Reports*, Vol. 18, No 68, 2016, pp. 403–416.

Horobet Emil, Eggermont Rob, Kubjas Kaie, Algebraic boundary of matrices of nonnegative rank at most three, *Linear Algebra Appl.*, Vol. 508, No 1, 2016, pp. 62–80.

Horobet Emil, Draisma Jan, The average number of critical rank-one approximations to a tensor, *Linear and Multilinear Algebra*, Vol. 64, No 12, 2016, pp. 2494–2514.

Horobet Emil, Draisma Jan, Ottaviani Giorgio, Sturmfels Bernd, Thomas Rekha, The Euclidean Distance Degree of an Algebraic Variety, *Foundations of Computational Mathematics*, Vol. 16, No 1, 2016, pp. 99–149.

Szilágyi László, Szilágyi Sándor Miklós, A modified two-stage Markov clustering algorithm for large and sparse networks, *COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE*, Vol. 135, No 1, 2016, ISSN 0169-2607, pp. 15–26.

Szilágyi László, Magdás Annamária, Incze Alexandru, Can ambulatory blood pressure variability contribute to individual cardiovascular risk stratification?, *Computational and Mathematical Methods in Medicine*, Vol. 2016, No 7816830, 2016, ISSN 1748-670X, pp. 1–5.

Szilágyi László, Haidegger Tamás, Lehotsky Ákos, Iclănzan-Demeter Annamária, Wéber György, Education of hand rubbing technique to prospective medical staff, employing UV-based digital imaging technology, *ACTA MICROBIOLOGICA ET IMMUNOLOGICA HUNGARICA*, Vol. 63, No 2, 2016, ISSN 1217-8950, pp. 217–228.

Lucrări - în reviste BDI

2020

Lefkovits László, Szilágyi László, Iclănzan David, A review on suppressed fuzzy c-means clustering models, *Acta Universitatis Sapientiae, Informatica*, Vol. 12, No 2, 2020, pp. 302–324., Scopus

2019

Borsos Bálint, Szilágyi László, Iclănzan David, Nagy László, Low and high grade glioma segmentation in multispectral brain MRI data, *Acta Universitatis Sapientiae, Informatica*, Vol. 11, No 1, 2019, pp. 65–79., DeGruyter

Borsos Bálint, Szilágyi László, Iclănzan David, Nagy László, Automatic detection of hard and soft exudates from retinal fundus images, *Acta Universitatis Sapientiae, Informatica*, Vol. 11, No 1, 2019, pp. 65–79., DeGruyter

2018

David Iclanzan, László Szilágyi, Laszlo Lefkovits, Zoltán Kapás, Zsófia Szabó, Ágnes Győrfi, Low and high grade glioma segmentation in multispectral brain MRI data, *Acta Universitatis Sapientiae Informatica*, Vol. 2018, No 10/1, 2018, pp. 110–132., ACM Digital Library

2017

Kupán Pál, Márton Gyöngyvér, Szász Róbert, A result regarding monotonicity of the Gamma function, *Acta Universitatis Sapientiae, Mathematica*, Vol. 9, No 2, 2017, pp. 291–302., MathSciNet

Kupán Pál, Márton Gyöngyvér, Szász Róbert, A result regarding monotonicity of the gamma function., *Acta Univ. Sapientiae Math.*, Vol. 9, No 2, 2017, pp. 291–302., Zentralblatt für Mathematik

2016

Szász Róbert, Engel Olga, On a subclass of convex functions, *STUDIA UNIVERSITATIS BABES-BOLYAI MATHEMATICA*, Vol. 61, 2016, pp. 137–146., Zentralblatt für Mathematik

Szász Róbert, Engel Olga, Acu Mugur, Preserving properties of the generalized Bernardi integral operator defined on a class of analytic functions with varying arguments, *Indian Journal of Mathematics*, Vol. 58, No 3, 2016, pp. 311–321., Zentralblatt für Mathematik

Farkas Csaba, Kristály Sándor, Szakál Anikó, Sobolev interpolation inequalities on Hadamard manifolds, Vol. 1, No 1, 2016, pp. 161–166., IEEE Xplore

Lucrări – reviste internaționale, fără cotație ISI

2018

Harangus Katalin, Kátai Zoltán, Algorithmic Thinking vs. Text Comprehension, *Procedia Technology*, Vol. 22, 2018, ISSN 2351-9789, pp. 1031–1037.

Iclănzan D, Szilágyi SM, **Szilágyi L**: Evolving computationally efficient hashing for similarity search. International Conference on Neural Information Processing (ICONIP 2018, Siem Reap, Cambodia), accepted paper.

Szilágyi L, Lefkovits Sz, Kucsván ZsL: A self-tuning possibilistic c-means clustering algorithm. Modeling Decisions for Artificial Intelligence (MDAI 2018, Palma de Mallorca, Spain), accepted paper.

Umenhoffer T, Tóth M, Kacsó EÁ, Szécsi L, Szlávecz Á, Somogyi P, **Szilágyi L**, Kubovje A, Szerafin T, Szirmay-Kalos L, Benyó B: Modelling and simulation framework of aortic valve for hemodynamic evaluation of aortic root replacement surgery outcomes. 10th IFAC Symposium on Biological and Medical Systems (IFAC BMS 2018, Sao Paulo, Brazil), accepted paper.

Szabó Zs, Kapás Z, Lefkovits L, Györfi Á, Szilágyi SM, **Szilágyi L**: Automatic segmentation of low-grade brain tumor using a random forest classifier and Gabor features. 14th International Conference on Neural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD, Huangshan, China), pp. 1106-1113, 2018, ISBN 978-1-5386-8097-1

Kapás Z, Lefkovits L, Iclănzan D, Györfi Á, Iantovics BL, Lefkovits Sz, Szilágyi SM, **Szilágyi L**: Automatic brain tumor segmentation in multispectral MRI volumes using a random forest approach. Pacific-Rim Symposium on Image and Video Technology (PSIVT 2017, Wuhan). Lecture Notes in Computer Science vol. 10749, pp. 137-149, 2018

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