

**UNIVERSITATEA "SAPIENTIA" DIN CLUJ-NAPOCA  
FACULTATEA DE ȘTIINȚE TEHNICE ȘI UMANISTE DIN TÎRGU-MUREŞ  
DEPARTAMENTUL DE INGINERIE ELECTRICĂ**

Concurs pentru ocuparea postului de **profesor universitar**, poz. 4

Domeniul de știință: Calculatoare, Tehnologia Informației și Ingineria Sistemelor

Disciplinele postului scos la concurs:

Prelucrarea imaginilor (Prelucrarea digitală a imaginilor)

Modelare și simulare

**FIŞA DE VERIFICARE**

a îndeplinirii standardelor universității de prezentare la concurs pentru postul de  
**conferențiar universitar/profesor universitar**

Candidat: Szilágyi László

Data nașterii: 12 ianuarie 1975

Funcția actuală: conferențiar universitar, Data numirii în funcția actuală: 30 decembrie 2010,

Instituția: Universitatea Sapientia din Cluj-Napoca

*1. Studiile universitare*

Nr. crt.	Instituția de învățământ superior și facultatea absolvită	Domeniul	Perioada	Titlul acordat
1	Universitatea Petru Maior din Tîrgu Mureş, Facultatea de Inginerie	Automatică și Informatică Industrială	1993-1998	Inginer electric (1998)

*2. Studiile de doctorat*

Nr. crt.	Instituția organizatoare de doctorat	Domeniul	Perioada	Titlul științific acordat
1	Universitatea Tehnică și Economică din Budapesta (Ungaria), Facultatea de Inginerie Electrică și Informatică	Inginerie electrică	1998-2000 și 2001-2002	Doctorat (PhD) în inginerie electrică (2009)

*3. Studii și burse postdoctorale (stagii de cel puțin 6 luni)*

Nr. crt.	Tara / Unitatea	Domeniul / Specializarea	Perioada	Tipul de bursă
1	Ungaria, Universitatea Tehnică și Economică din Budapesta	Calculatoare / Prelucrarea imaginilor, Inteligență artificială	2010/09-2013/08	Bursa de cercetare János Bolyai a Academiei de Științe Ungare

*4. Grade didactice/profesionale anterioare*

Nr. crt.	Instituția	Domeniul	Perioada	Titlul/postul didactic sau gradul/postul profesional
1	Universitatea Tehnică și Economică din Budapesta, Ungaria	Calculatoare / Prelucrarea imaginilor, Modelarea sistemelor biologice	2002-2004	Asistent de cercetare

2	Universitatea Sapientia din Cluj-Napoca	Calculatoare / Prelucrarea imaginilor, Sisteme de recunoaștere a formelor	2004/09 – 2011/02	Şef lucrări
3	Universitatea Sapientia din Cluj-Napoca	Calculatoare / Prelucrarea imaginilor, Modelare și simulare, Testarea sistemelor de calcul	Începând din 2011/02	Conferențiar universitar

5. Gradul de îndeplinire a indicatorilor <sup>1</sup>

Criteriu	Indicator minim	Realizat
A1. Activitatea didactică/profesională	100	270,00
A2. Activitatea de cercetare	500	759,24
A3. Recunoașterea și impactul activității	100	759,69
A. Total	700	1788,93
A1.1.1-A1.1.2. Cărți și capitole în cărți de specialitate	4	15
A1.2.1-A1.2.2. Material didactic / lucrări didactice	2	2
A2.1. Articole ISI (reviste și conferințe)	12	40
A2.4.1. Granturi/proiecte câștigate prin competiție (director/responsabil)	2	3
A3.1.1-A3.1.2. Număr citări (cărți și lucrări ISI și BDI)	20	360
Factor de impact cumulat pentru publicații (exclusiv din articole reviste ISI)	6	19,165

Candidat,  
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*Mr. L. L. L.*

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<sup>1</sup> În conformitate cu standardele minime stabilite în anexele OM 6560/2012 pentru domeniul de știință al postului

Criteriul A1. Activitatea didactică/profesională

Criteriul	Descriere	Puncte
A1.1.1.	<p>B5–1 În cartea: Sachse FB, Seemann G (Eds.): Functional Imaging and Modeling of the Heart, Springer International Publishing Switzerland, Lecture Notes in Computer Science vol. 4466, 2007, ISBN: 978-3-540-72906-8. Capitolul: <b>Szilágyi L</b>, Szilágyi SM, Benyó Z: A modified fuzzy c-means algorithm for MR brain image segmentation, pp. 81-90</p> <p>B5–2 În cartea: Kamel MS, Campilho AC (Eds.): Image Analysis and Recognition, Springer International Publishing Switzerland, Lecture Notes in Computer Science vol. 4633, 2007, ISBN: 978-3-540-74258-6 Capitolul: <b>Szilágyi L</b>, Szilágyi SM, Benyó Z: A modified fuzzy c-means algorithm for MR brain image segmentation, pp. 866-877</p> <p>B5–3 În cartea: Mery D, Rueda L (Eds.): Advances in Image and Video Technology, Springer International Publishing Switzerland, Lecture Notes in Computer Science vol. 4872, 2007, ISBN: 978-3-540-77128-9 capitolul: Szilágyi SM, <b>Szilágyi L</b>, Benyó Z: Spatial visualization of the heart in case of ectopic beats and fibrillation, pp. 548-561</p> <p>B5–4 În cartea: Chetty M, Ngom A, Ahmad S (Eds.): Pattern Recognition in Bioinformatics, Springer International Publishing Switzerland, Lecture Notes in Bioinformatics vol. 5265, 2008, ISBN: 978-3540-88434-7 capitolul: Medvés L, <b>Szilágyi L</b>, Szilágyi SM: A modified Markov clustering approach for protein sequence clustering, pp. 110-120</p> <p>B5–5 În cartea: Torra V, Narukawa Y (Eds.): Modeling Decisions for Artificial Intelligence, Springer International Publishing Switzerland, Lecture Notes in Artificial Intelligence vol. 5285, 2008, ISBN: 978-3-540-88268-8 Capitolul: <b>Szilágyi L</b>, Szilágyi SM, Benyó Z: Analytical and numerical evaluation of the suppressed fuzzy c-means algorithm, pp. 146-157</p> <p>B5–6, B5–7, B5–8, B5–9, B5–10, B5–11 În cartea: Wickramasinghe N, Geisler E (eds.): Encyclopaedia of Healthcare Information Systems, IDEA Group Publishing: Hershey-New York, ISBN: 978-1599048895 (2008). Capitolele:            (1) Szilágyi SM, <b>Szilágyi L</b>, Benyó Z: Echocardiographic image sequence compression based on spatial active appearance model, pp. 472-479            (2) <b>Szilágyi L</b>, Szilágyi SM, Benyó Z: Fast and robust fuzzy c-means algorithms for automated brain MR image segmentation, pp. 578-586            (3) Szilágyi SM, <b>Szilágyi L</b>, Luca CT, Cozma D, Ivanica G, Benyó Z: Modification of the accessory pathway localization method to improve the performance of WPW syndrome interventions, pp. 921-930            (4) Szilágyi SM, <b>Szilágyi L</b>, Frigy A, Görög LK, Benyó Z: Spatial heart</p>	25 25 25 25 25 25 25 25 25

	<p>simulation and adaptive wave propagation, pp. 1253-1260</p> <p>(5) Szilágyi SM, Szilágyi L, Benyó Z: Spatial heart simulation and analysis using unified neural network, pp. 1261-1268</p> <p>(6) Szilágyi SM, Szilágyi L, Benyó Z: Volumetric analysis and modeling of the heart using active appearance model, pp. 1374-1382</p>	
	<p>B5–12 În cartea: Torra V, Narukawa Y, Dumas M (Eds.): Modeling Decisions for Artificial Intelligence, Springer International Publishing Switzerland, Lecture Notes in Artificial Intelligence vol. 6408, 2010, ISBN: 978-3-642-16291-6</p> <p>capitolul: Szilágyi L, Szilágyi SM, Kiss Cs: A generalized approach to the suppressed fuzzy c-means algorithm, pp. 140-151</p>	25
	<p>B5–13 În cartea: Torra V, Narukawa Y, Yin JP, Long J (Eds.): Modeling Decisions for Artificial Intelligence, Springer International Publishing Switzerland, Lecture Notes in Artificial Intelligence vol. 6820, 2011, ISBN: 978-3-642-22588-8</p> <p>capitolul: Szilágyi L: Fuzzy-Possibilistic Fuzzy Partition: a novel robust approach to c-means clustering, pp. 150-161</p>	25
	<p>B5–14 În cartea: Torra V, Narukawa Y, Navarro-Arribas G, Megías D (Eds.): Modeling Decisions for Artificial Intelligence, Springer International Publishing Switzerland, Lecture Notes in Artificial Intelligence vol. 8234, 2013, ISBN: 978-3-642-41549-4</p> <p>capitolul: Szilágyi L, Szilágyi SM: Fast implementations of Markov clustering for protein sequence grouping, pp. 214-225</p>	25
	<p>B5–15 În cartea: Torra V, Narukawa Y, Endo Y (Eds.): Modeling Decisions for Artificial Intelligence, Springer International Publishing Switzerland, Lecture Notes in Artificial Intelligence vol. 8825, 2014, ISBN: 978-3-319-12053-9</p> <p>Capitolul: Szilágyi L, Varga ZsR, Szilágyi SM: Application of the fuzzy-possibilistic product partition in elliptic shell clustering, pp.158-169</p>	25
A1.2.1	<p>B1–1 Benyó B, Benyó Z, Paláncz B, Szilágyi L, Ferenci T: Theory of technical and biological systems (Hungarian). Typotex, Budapest, 2014, ISBN 978-963-2791-74-6, 189pp</p> <p>B2–1 Benyó Z, Paláncz B, Szilágyi L: Insight into Computer Science with Maple. Scientia Publishing House, Cluj-Napoca, 2005, ISBN: 973-7953-56-8, 416pp</p>	<p>10</p> <p>10</p>

#### Criteriul A2. Activitatea de cercetare

Criteriul	Descriere	Factor Impact	Autori	Puncte
A2.1.1	<p>C1–2 Szilágyi SM, Szilágyi L, Iclánzan D, Dávid L, Frigy A, Benyó Z: Intensity inhomogeneity correction and segmentation of magnetic resonance images using a multi-stage fuzzy clustering approach. Neural Network World 19:513-528 (2009), ISSN: 1210-0552</p>	0,475	6	5,75

C1–3 <b>Szilágyi L</b> , Medvés L, Szilágyi SM: A modified Markov clustering approach to unsupervised classification of protein sequences. <i>Neurocomputing</i> 73(13-15):2332-2345 (2010), ISSN: 0925-2312	1,429	3	17,86
C1–4 <b>Szilágyi L</b> , Szilágyi SM, Benyó Z: Analytical and numerical evaluation of the suppressed fuzzy c-means algorithm: a study on the competition in c-means clustering models. <i>Soft Computing</i> 14(5):495-505 (2010), ISSN: 1432-7643	1,512	3	18,41
C1–5 <b>Szilágyi L</b> , Benyó Z: Development of a virtual reality guided diagnostic tool based on magnetic resonance imaging. <i>Acta Physiologica Hungarica</i> 97(3):267-280 (2010), ISSN: 0231-424X	1,226	2	24,76
C1–6 <b>Szilágyi SM</b> , <b>Szilágyi L</b> , Benyó Z: A patient specific electro-mechanical model of the heart. <i>Computer Methods and Programs in Biomedicine</i> , 101(2):183-200 (2011), ISSN: 0169-2607	1,516	3	18,44
C1–7 <b>Szilágyi L</b> , Szilágyi SM, Benyó B, Benyó Z: Intensity inhomogeneity compensation and segmentation of MR brain images using hybrid c-means clustering models. <i>Biomedical Signal Processing and Control</i> , 6(1):3-12 (2011), ISSN: 1746-8094	1,000	4	11,25
C1–9 <b>Szilágyi L</b> , Szilágyi SM, Benyó B: Efficient inhomogeneity compensation using fuzzy c-means clustering models. <i>Computer Methods and Programs in Biomedicine</i> , 108(1):80-89 (2012), ISSN: 0169-2607	1,555	3	18,70
C1–10 <b>Szilágyi L</b> , Haidegger T, Lehotsky Á, Nagy M, Csonka EA, Sun XY, Ooi KL, Fisher D: A large-scale assessment of hand hygiene quality and the effectiveness of the “WHO 6-steps”. <i>BMC Infectious Diseases</i> , 13(249):1-10 (2013), ISSN: 1471-2334	2,561	8	9,53
C1–11 <b>Szilágyi L</b> : Robust spherical shell clustering using fuzzy-possibilistic product partition. <i>International Journal of Intelligent Systems</i> 28(6):524-539 (2013), ISSN: 1098-111X	1,411	1	53,22
C1–12 <b>Szilágyi L</b> , Szilágyi SM: Generalized suppression rules for the suppressed fuzzy c-means algorithm. <i>Neurocomputing</i> 139:298–309 (2014), ISSN: 0925-2312	2,005	2	32,55
C1–13 <b>Szilágyi SM</b> , <b>Szilágyi L</b> : A fast hierarchical clustering algorithm for large-scale protein sequence data sets. <i>Computers in Biology and Medicine</i> 48:94–101 (2014), ISSN: 0010-4825	1,475	2	27,25

	C1–14 <b>Szilágyi L:</b> Lessons to learn from a mistaken optimization. Pattern Recognition Letters 36(1):29–35 (2014), ISSN: 0167-6855	1,062	1	46,24
	C1–15 Magdás A, <b>Szilágyi L</b> , Belényi B, Incze A: Ambulatory monitoring derived blood pressure variability and cardiovascular risk factors in elderly hypertensive patients. Bio-Medical Materials and Engineering 24(6):2563–2569 (2014), ISSN 0959-2989	0,847	4	10,48
	<i>SUBTOTAL REVISTE COTATE ISI</i>			
A2.1.1	C6–2 <b>Szilágyi SM, Szilágyi L</b> , Dávid L: ECG signal compression using adaptive prediction. 19th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Chicago 101–104 (1997)	3		10,00
	C6–3 <b>Szilágyi SM, Szilágyi L</b> , Dávid L: Comparison between neural-network-based adaptive filtering and wavelet transform for ECG characteristic points detection. 19th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Chicago 272–274 (1997)	3		10,00
	C6–11 <b>Szilágyi L:</b> Wavelet-transform-based QRS complex detection in on-line Holter systems. 21st Annual International Conference of IEEE Engineering in Medicine and Biology Society, Atlanta 271 (1999), ISBN: 0-7803-5674-8.	1		30,00
	C6–12 <b>Szilágyi SM, Szilágyi L:</b> Wavelet transform and neural-network-based adaptive filtering for QRS detection. 22nd Annual International Conference of IEEE Engineering in Medicine and Biology Society, Chicago 1267–1270 (2000), ISBN: 0-7803-6465-1.	2		15,00
	C6–13 Várady P, Nagy L, <b>Szilágyi L:</b> On-line detection of sleep apnea during critical care monitoring. 22nd Annual International Conference of IEEE Engineering in Medicine and Biology Society, Chicago 1299–1301 (2000), ISBN: 0-7803-6465-1	3		10,00
	C6–15 <b>Szilágyi SM, Szilágyi L:</b> Efficient ECG signal compression using adaptive heart model. 23rd Annual International Conference of IEEE Engineering in Medicine and Biology Society, Istanbul 2125–2128 (2001), ISBN: 0-7803-7211-5	2		15,00
	C6–16 Nagy L, <b>Szilágyi L:</b> Catheter calibration using template matching line interpolation algorithm. 23rd Annual International Conference of IEEE Engineering in Medicine and Biology Society, Istanbul 387–389 (2001), ISBN: 0-7803-7211-5	2		15,00
	C6–17 <b>Szilágyi L</b> , Benyó Z, Szilágyi SM: A new method for epileptic waveform recognition using wavelet decomposition and artificial neural networks. 24th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Houston 2025–2026 (2002), ISBN 0-7803-7612-9	3		10,00

A2.1.1	C6–18 Szilágyi SM, Benyó Z, <b>Szilágyi L</b> : Comparison of malfunction diagnosis sensibility for direct and inverse ECG signal processing methods. 24th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Houston 244–245 (2002), ISBN 0-7803-7612-9	3	10,00
	C6–44 <b>Szilágyi L</b> , Szilágyi SM, Dávid L, Benyó Z: Multi-stage FCM-based intensity inhomogeneity correction for MR brain image segmentation. International Conference on Artificial Neural Networks (ICANN'08, Prague) LNCS 5164:527–536 (2008), ISBN: 978-3-540-85237-7.	4	7,50
	C6–49 Csernáth G, <b>Szilágyi L</b> , Szilágyi SM, Fördős G, Benyó Z: A Novel ECG Telemetry and Monitoring System Based on Z-Wave Communication. 30th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Vancouver 2361–2364, ISBN 978-1-4244-1814-5, ISSN 1557-170X, (2008)	5	6,00
	C6–52 <b>Szilágyi L</b> , Szilágyi SM, Benyó Z: A Unified Approach to c-Means Clustering Models. IEEE Conference on Fuzzy Systems, Jeju Island (S. Korea), pp. 456-461 (2009), ISBN 978-1-4244-3597-5	3	10,00
	C6–53 <b>Szilágyi L</b> , Iclanzen D, Szilágyi SM, Dumitrescu D, Hirsbrunner B: A Generalized C-Means Clustering Model Optimized Via Evolutionary Computation. IEEE Conference on Fuzzy Systems, Jeju Island (S. Korea), pp. 451-455 (2009), ISBN 978-1-4244-3597-5	5	6,00
	C6–61 Ferenci T, Kovács L, Almássy Zs, <b>Szilágyi L</b> , Benyó B, Benyó Z: Differences in the laboratory parameters of obese and healthy Hungarian children and their use in automatic classification. 32nd Annual International Conference of IEEE Engineering in Medicine and Biology Society, Buenos Aires, pp. 3883-3886 (2010), ISBN 978-1-4244-4123-5, ISSN 1557-170X	6	5,00
	C6–69 Haidegger T, Nagy M, Lehotsky Á, <b>Szilágyi L</b> : Digital imaging for the education of proper surgical hand disinfection. Medical Image Computation and Computer Aided Interventions (MICCAI'11, Toronto, Canada) LNCS 6893:619-626 (2011), ISBN: 978-3-642-23625-9.	4	7,50
	C6–73 Szilágyi SM, <b>Szilágyi L</b> , Enăchescu C: Hypoxia modeling using Luo-Rudy II cell model. Computers in Cardiology 39:885-888 (2012), ISSN: 2325-8861	3	10,00
	C6–74 Szilágyi SM, <b>Szilágyi L</b> , Luca CT, Cozma D, Ivănică G, Enăchescu C: Spatial modeling of the Wolff-Parkinson-White syndrome induced ventricular fibrillation. Computers in Cardiology 39:753-756 (2012), ISSN: 2325-8861	6	5,00
	C6–75 Szilágyi SM, <b>Szilágyi L</b> : Study of self maintaining spatial spiral waves in ventricular tissue. Computers in Cardiology 39:853-856 (2012), ISSN: 2325-8861	2	15,00

A2.1.1	C6–78 <b>Szilágyi L</b> , Szilágyi SM: Efficient Markov clustering algorithm for protein sequence grouping. 35th Annual International Conference of IEEE Engineering in Medicine and Biology Society, Osaka, pp. 639-642 (2013), ISBN 978-1-4577-0214-3	2	15,00
	C6–79 Szilágyi SM, <b>Szilágyi L</b> , Hirsbrunner B: Modeling the influence of high fibroblast level on arrhythmia development and obstructed depolarization spread. Computers in Cardiology 40:45-48 (2013), ISSN: 2325-8861	3	10,00
	C6–80 Szilágyi SM, <b>Szilágyi L</b> , Hirsbrunner B: Simulation of arrhythmia using adaptive spatio-temporal resolution. Computers in Cardiology 40:365-368 (2013), ISSN: 2325-8861	3	10,00
	C6–82 <b>Szilágyi L</b> , Szilágyi SM, Hirsbrunner B: A fast and memory-efficient hierarchical graph clustering algorithm. International Conference on Neural Information Processing (ICONIP'14, Kuching, Malaysia) LNCS 8834:247-254 (2014), ISBN: 978-3-319-12636-4	3	10,00
	C6–83 <b>Szilágyi L</b> , Kovács L, Szilágyi SM: Synthetic test data generation for hierarchical graph clustering methods. International Conference on Neural Information Processing (ICONIP'14, Kuching, Malaysia) LNCS 8835:303-310 (2014), ISBN: 978-3-319-12639-5	3	10,00
	C6–84 Szalay P, <b>Szilágyi L</b> , Benyó Z, Kovács L: Sensor drift compensation using fuzzy inference system and sparse-grid quadrature filter in blood glucose control. International Conference on Neural Information Processing (ICONIP'14, Kuching, Malaysia) LNCS 8835:445-453 (2014), ISBN: 978-3-319-12639-5	4	7,50
	C6–85 <b>Szilágyi L</b> , Dénesi G, Szilágyi SM: Fast color reduction using approximative c-means clustering models, IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2014, Beijing), pp. 194-201, ISBN: 978-1-4799-2073-0	3	10,00
	<b>SUBTOTAL ISI PROCEEDINGS</b>		
A2.2	C2–1 <b>Szilágyi L</b> : Medical Image Processing Methods for the Development of a Virtual Endoscope. Periodica Polytechnica Ser. Electrical Engineering 50(1-2):69–78 (2006), ISSN 0324-6000 (Scopus, Google Scholar)	1	20,00
	C6–22 Benyó B, Benyó Z, Paláncz B, Kovács L, <b>Szilágyi L</b> : A fully symbolic design and modelling of nonlinear glucose control with Control System Professional Suite (CSPS) of Mathematica. World Congress on Medical Physics and Biomedical Engineering (WC2003), Sydney. IFMBE Proceedings 4(2813):1-4 (2003), ISBN: 1-8770-4014-2 (SpringerLink, Google Scholar)	5	4,00
	C6–26 Szilágyi SM, <b>Szilágyi L</b> , Benyó Z: Recognition of various events from 3-D heart model. 16th IFAC World Congress, Prague 107–112 (2005) (Google Scholar)	3	6,66

	C6–27 Szilágyi SM, Szilágyi L, Benyó Z: Risk estimation techniques in case of WPW syndrome. 16th IFAC World Congress, Prague 184–189 (2005) (Google Scholar)	3	6,66	
	C6–59 Benyó B, Szilágyi L, Dobó-Nagy Cs: Medial Axis Detection from Dental Micro-CT Records, 31st World Congress on Medical Physics and Biomedical Engineering (WC2009), München, IFMBE Proceedings 25/IV:1688-1691 (2009), ISSN 1727-1983	3	6,66	
	C6–70 Szilágyi L, Szilágyi SM, Iclăzan D, Szabó L: Efficient 3D curve skeleton extraction from large objects. Ibero-American Congress on Pattern Recognition and Image Analysis (CIARP'11, Pucón, Chile) LNCS 7042:133-140 (2011), ISBN: 978-3-642-25084-2	4	5,00	
	C6–76 Szilágyi SM, Szilágyi L, Enăchescu C: Hypoxia modeling in ventricular cells using Beeler-Reuter model. IFAC Symposium on Biological and Medical Systems pp. 426-431 (2012) (IFAC)	3	6,66	
	C6–77 Benyó B, Szilágyi L, Németh Zs, Molnár CsG, Dobó-Nagy Cs: Identification of the root canal and its centreline from dental cone beam CT records. IFAC Symposium on Biological and Medical Systems pp. 1-5 (2012) (IFAC)	5	4,00	
	C6–81 Szilágyi SM, Szilágyi L, Hirsbrunner B: Study of electric and mechanic properties of the implanted artificial cardiac tissue using a whole heart model. Ibero-American Congress on Pattern Recognition and Image Analysis (CIARP'13, La Habana, Cuba) LNCS 8259:230-237 (2013), ISBN: 978-3-642-41826-6	3	6,66	
	Szilágyi L, Dénesi G, Kovács L, Szilágyi SM: Comparison of various improved-partition fuzzy c-means clustering algorithms in fast color reduction, 12th IEEE International Symposium on Intelligent Systems and Informatics (SISY 2014, Subotica), pp. 197-202, ISBN: 978-1-4799-5996-9	4	5,00	
	<b>SUBTOTAL BDI</b>		71,30	
		Rol	Ani	
A2.4.1.2	G–1 Titlul contractului: Metode avansate de segmentare si registrare a imaginilor, cu aplicatii in sisteme medicale. Beneficiar: Universitatea Sapientia, Finanțator: UEFISCDI. Valoarea totală și valoarea care revine insituiției: 322000 RON. Perioada derulării: 2010/08-2012/08. Rolul: <b>director</b> . Rezultate principale: articole jurnal ISI C1-5, C1-6, C1-7, C1-8, C1-11, C1-12 (partial), C1-15. Factor impact total: 8,865	director	2	20
A2.4.1.2	G–2 Titlul contractului: Modern robust fuzzy c-means clustering techniques (OTKA PD103921). Beneficiar: Universitatea Tehnică și Economică Budapesta, Finanțator: OTKA Ungaria. Valoarea totală și valoarea care revine insituiției: 70000 EUR. Perioada derulării: 2012/10-2015/09. Rolul: <b>director</b> . Rezultate principale: articole jurnal ISI C1-12 (parțial), C1-13, C1-14, două articole premiate de UEFISCDI	director	3	25

A2.4.1.2	G-3 Titlul contractului: Metode de segmentare fuzzy cu aplicații în prelucrarea imaginilor medicale. Beneficiar: Universitatea Sapientia, Finanțator: IPC Sapientia. Valoarea totală și valoarea care revine instituției: 12000 RON. Perioada derulării: 2006/09-2007/08. Rolul: <b>director</b> . Rezultate principale: lucrări BDI.	director	1	10
A2.4.2.2	Granturi ca membru de echipă G-4: 1 an G-5: 2 ani G-6: 3 ani G-7: 5 ani G-8: 5 ani G-9: 3,5 ani G-10: 5 ani G-11: 1 an G-12: 1 an G-13: 1 an G-14: 1 an G-15: 3 ani G-16: 3 ani	membru	34,5	69
<b>SUBTOTAL GRANTURI</b>				124

### Criteriul A3. Recunoașterea și impactul activității

#### A3.1. Citări

Lucrarea	Autori	Citări ISI, cărti	Citări BDI	Puncte
C6-19	4	60	102	222,00
B5-2	3	7	15	38,66
C6-3	3	4	12	26,66
C6-17	3	5	10	26,66
C6-14	5	4	8	12,80
C6-12	2	6	7	38,00
C6-21	4	2	10	14,00
C6-56	4	0	9	9,00
C6-11	1	2	3	28,00
C6-13	3	3	3	12,00
C6-6	1	2	1	20,00
C6-41	3	3	2	10,66
C1-4	3	2	4	10,66
C1-7	4	1	6	8,00
C1-9	3	4	2	13,33
C1-10	8	3	2	4,00
C6-29	6	1	2	2,66
C6-31	4	2	3	7,00
C6-53	5	0	4	3,20
A	1	1	2	16,00
B5-5	3	1	3	6,66
C6-45	3	1	3	6,66
C6-48	4	0	3	3,00
C6-49	5	0	2	1,60
C6-38	3	2	0	5,33
C6-40	3	1	0	2,66
C6-70	3	1	1	4,00



C1-2	6	2	0	2,66
C1-3	6	0	1	0,66
C1-6	3	2	0	5,33
C1-14	1	1	1	12,00
C2-1	1	0	1	4,00
C6-24	3	2	0	5,33
C6-52	3	0	2	2,66
C6-44	4	0	1	1,00
B5-12	3	0	1	1,33
C6-71	4	1	0	2,00
C4-1	1	1	0	8,00
C6-22	5	1	0	1,60
C6-23	2	1	0	4,00
C6-26	3	0	1	1,33
C6-33	3	1	0	2,66
C6-34	5	0	1	0,80
C6-58	5	0	1	0,80
C6-62	6	1	0	1,33
<i>Total citări</i>		131	229	
<i>SUBTOTAL</i>				610,69

Citări ISI+cărți: 131

J-1	J-2	J-3	J-4	J-5	J-6	J-7	J-8	J-9	J-10
J-11	J-12	J-13	J-14	J-15	J-16	J-17	J-18	J-19	J-20
J-21	J-22	J-23	J-24	J-25	J-26	J-27	J-28	J-29	J-30
J-31	J-32	J-33	J-34	J-35	J-36	J-37	J-38	J-39	J-40
J-45	J-46	J-47	J-48	J-49	J-50	J-52	J-56	J-60	J-61
J-64	J-77	J-125	J-129	J-131	J-132	J-143	J-144	J-147	J-149
J-167	J-168	J-169	J-170	J-171	J-172	J-182	J-193	J-194	J-195
J-196	J-214	J-215	J-216	J-217	J-218	J-232	J-233	J-234	J-242
J-249	J-250	J-251	J-252	J-253	J-254	J-265	J-266	J-287	J-288
J-294	J-296	J-298	J-301	J-303	J-307	J-308	J-309	J-312	J-313
J-318	J-325	J-326	J-327	J-328	J-331	J-332	J-333	J-338	J-341
J-344	J-350	J-356	J-360	J-367	J-368	J-369	J-372	J-373	J-374
J-377	J-378	J-379	J-383	J-384	J-391	J-392	J-395	J-396	J-399
J-402									

Citări BDI: 229

J-41	J-42	J-43	J-44	J-51	J-53	J-54	J-55	J-57	J-58
J-59	J-62	J-63	J-65	J-66	J-67	J-68	J-69	J-70	J-71
J-72	J-73	J-74	J-75	J-76	J-78	J-79	J-80	J-81	J-82
J-83	J-84	J-85	J-86	J-87	J-88	J-89	J-90	J-91	J-92
J-93	J-94	J-95	J-96	J-97	J-98	J-99	J-100	J-101	J-102
J-103	J-104	J-105	J-106	J-107	J-108	J-109	J-110	J-111	J-112
J-113	J-114	J-115	J-116	J-117	J-118	J-119	J-120	J-121	J-122
J-123	J-124	J-126	J-127	J-129	J-130	J-133	J-134	J-135	J-136
J-137	J-138	J-139	J-140	J-141	J-142	J-145	J-146	J-148	J-150
J-151	J-152	J-153	J-154	J-155	J-156	J-157	J-158	J-159	J-160
J-161	J-162	J-173	J-174	J-175	J-176	J-177	J-178	J-179	J-180
J-181	J-183	J-184	J-185	J-186	J-187	J-188	J-197	J-198	J-199
J-200	J-201	J-202	J-203	J-204	J-205	J-206	J-207	J-208	J-219
J-220	J-221	J-222	J-223	J-224	J-225	J-226	J-227	J-228	J-235
J-236	J-237	J-238	J-239	J-240	J-241	J-243	J-255	J-256	J-257



J–258	J–259	J–260	J–261	J–267	J–268	J–269	J–270	J–271	J–272
J–273	J–274	J–275	J–276	J–278	J–279	J–280	J–281	J–282	J–283
J–284	J–285	J–286	J–289	J–290	J–291	J–295	J–297	J–299	J–302
J–310	J–311	J–314	J–315	J–316	J–317	J–319	J–320	J–321	J–322
J–323	J–324	J–329	J–330	J–334	J–335	J–337	J–339	J–342	J–343
J–345	J–346	J–347	J–348	J–349	J–351	J–352	J–353	J–354	J–355
J–357	J–358	J–359	J–361	J–362	J–363	J–364	J–365	J–371	J–375
J–380	J–381	J–385	J–386	J–389	J–390	J–398	J–400	J–401	

A3.2. Membru în colectivele de redacție sau comitete științifice al revistelor, organizator de manifestări științifice, internaționale indexate ISI

Activitatea	Puncte
Membru comitet program, conferința Modeling Decisions for Artificial Intelligence, Girona, Spania 2012	6
Membru comitet program, conferința Modeling Decisions for Artificial Intelligence, Barcelona, Spania, 2013	6
Membru comitet program, conferința Modeling Decisions for Artificial Intelligence, Tokyo, Japonia, 2014	6
Membru comitet program, conferința Modeling Decisions for Artificial Intelligence, Skövde, Suedia, 2015	0
Membru comitet program, simpoziul IFAC Biomedical Systems, Budapesta, 2012	6
<i>SUBTOTAL</i>	<i>24</i>

A3.4. Premii în domeniu

Premiul	Puncte
János Bolyai Fellowship Award (Hungarian Academy of Sciences), 2010	15
EIB Social Innovation Tournament, 1 <sup>st</sup> Prize (Luxembourg), 2012	15
Best Of Biotech - LISA VR Medtech Award (Viena, Austria), 2012	15
Innovact Campus Award, 1 <sup>st</sup> Prize (Reims, France), 2011	15
ICPIC Innovation Academy Award, 1 <sup>st</sup> Prize (Geneva, Switzerland), 2011	15
Outstanding Student Humanitarian Prize at IEEE Presidents' Change the World Competition, 2010	15
Șapte lucrări premiate (C1–3, C1–4, C1–10, C1–11, C1–12, C1–13, C1–14) în cadrul programul Resurse Umane – Premierea Rezultatelor (UEFISCDI), 7x5=35 puncte	35
<i>SUBTOTAL</i>	<i>125</i>