

NECULAE Adrian Puiu

Fișa de evaluare CNATDCU

1. Activitatea didactică și profesională

A1 - Cărți în edituri internaționale recunoscute *Web of Science* în calitate de autor

Nr. crt.	Titlul	Autori	Editura, an, link (dacă este cazul)	Punctaj $4/n_i^{ef}$
Punctaj total indicator A ₁				0

Editurile recunoscute *Web of Science* se găsesc pe site-ul *Web of Science – Master Book List- Publishers* (<http://wokinfo.com/mbl/publishers/>)

Se acordă $4/n_i^{ef}$ puncte pentru fiecare carte .

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii.

A2 - Capitole de cărți în edituri internaționale recunoscute *Web of Science*, în calitate de autor/ Review-uri în reviste cotate ISI

Nr. crt.	Titlul capitolului - titlul cărții / titlul Review-ului	Autori	Editura, an / revista, an, pagini, link (dacă este cazul)	Punctaj $1/n_i^{ef}$
1.	Chapter 13, pp. 245-268: <i>Nanoparticle Characterization Using Nanoparticle Tracking Analysis, Part III: Characterization and Detection Methods for Nanoparticles</i> , Book: Nanoparticles' Promises and Risks; Characterization, Manipulation, and Potential Hazards to Humanity and the Environment	A. Lungu, M. Lungu, <u>A. Neculae</u> , R. Giugiulan	Springer Science+Business Media, ISBN: 978-3-319-11727-0 (Print) 978-3-319-11728-7 (Online), 2014. https://www.springer.com/la/book/9783319117270	0.25
2.	Chapter 14, pp. 271-301: <i>Dielectrophoresis Used for Nanoparticle Manipulation in Microfluidic Devices</i> , Part IV: Methods for Sorting, Separating and Manipulating Nanoparticles, Book: Nanoparticles' Promises and Risks; Characterization, Manipulation, and Potential Hazards to Humanity and the Environment	M. Lungu, M. Bunoiu and <u>A. Neculae</u>	Springer Science+Business Media, ISBN: 978-3-319-11727-0 (Print) 978-3-319-11728-7 (Online), 2014. https://www.springer.com/la/book/9783319117270	0.333
3.	Chapter 15, pp. 355-381 - The micro and nanoinvestigation and control of physical processes using optical fiber sensors and numerical simulations, a mathematical approach. Book: "Micro- and Nanophotonic Technologies"	<u>A. Neculae</u> , D. Curticapean	Wiley-VCH Verlag, Weinheim, Germany, ISBN: 978-3-527-34037-8 (2017) https://www.wiley.com/en-ro/Micro+and+Nanophotoni	0.5

	Editors: P. Meyrueis, K. Sakoda, M. Van de Voorde,		c+Technologies-p-9783527340378	
Punctaj total indicator A2				1.083

Editurile recunoscute Web of Science se găsesc pe site-ul Web of Science – Master Book List- Publishers (<http://wokinfo.com/mbl/publishers/>)

Se acordă $1/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii / revistei.

A3 - Cărți în edituri internaționale recunoscute Web of Science în calitate de editor

Nr. crt.	Titlul	Editori	Editura, an, link (dacă este cazul)	Punctaj $0.5/n_i^{ef}$
1.	Nanoparticles' Promises and Risks; Characterization, Manipulation, and Potential Hazards to Humanity and the Environment	Lungu M, <u>Neculae A.</u> , Bunoiu M. and Biris C.	Springer Science+Business Media, ISBN: 978-3-319-11727-0 (Print) 978-3-319-11728-7 (Online), 2014. https://www.springer.com/la/book/9783319117270	0.125
Punctaj total indicator A3				0.125

Editurile recunoscute Web of Science se găsesc pe site-ul Web of Science – Master Book List- Publishers (<http://wokinfo.com/mbl/publishers/>)

Se acordă $0.5/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii .

A4 - Cărți, manuale, îndrumătoare de laborator în edituri naționale sau alte edituri internaționale ca autor, note interne, prezentari sustinute pentru aprobarea analizelor de date in cadrul colaborarilor mari

Nr. crt.	Titlul	Autori	Editura, an, link (dacă este cazul)	Punctaj $0.5/n_i^{ef}$
1.	Îndrumător pentru lucrări de laborator de electricitate, magnetism, electrotehnică. Măsurări, Modelare, Simulare, Control. (254 pag.)	M. Balint, <u>A. Neculae</u> , O. Craiu	Tipografia Universității de Vest din Timișoara, 1996	0.166
2.	Studiu privind procesele de transport de căldură, masă și impuls, respectiv de separare a fazelor și fenomene interfaciale specifice procesării materialelor cristaline, amorfe și compozite în condiții de microgravitație; (164 pag.)	A. M. Balint, <u>A. Neculae</u> , D. Bălțean, M. Mihailovici, Șt. Balint	Univ. de Vest din Timișoara, Monografia de Fizică 14, Editura MIRTON Timișoara, ISBN 1453-7710, 1998	0.1
3.	Modelarea fenomenelor de transport (74 pag.)	A.M. Balint, D. Bălțean, <u>A. Neculae</u> , Șt. Balint	Editura MIRTON Timișoara, ISBN 973-578-715-6, 1998	0.125

4.	Îndrumător pentru lucrări de laborator de electricitate și electromagnetism – Măsurări, Modelare, Simulare, Control (250 pag.)	A. M. Balint, <u>A. Neculae</u>	Editura MIRTON Timișoara , ISBN 973-578-743-1, 1999	0.25
5.	Modelarea fenomenelor electrice și magnetice. Îndrumător pentru lucrări de laborator (76 pag.)	A. M. Balint, <u>A. Neculae</u>	Editura MIRTON Timișoara , ISBN 973-578-742-3, 1999	0.25
6.	Fizica solului (60 pag.)	A.M. Balint, D. Bălțean, <u>A. Neculae</u> , Șt. Balint	Editura MIRTON Timișoara , ISBN 973-578-744-X, 1999	0.125
7.	Măsurarea și estimarea radiației solare, (170 pag.)	M. Paulescu, <u>A. Neculae</u> , E. Tulcan Paulescu	Editura Universității de Vest, Timișoara, ISBN (13) 978-973-125-189-9, 2008	0.166
8.	Fizica Mediului I; Lucrări de laborator, (56 pag.)	N. Ștefu, <u>A. Neculae</u> , A. Balint	Editura Universității de Vest, Timișoara, ISBN 978-973-125-283-4, 2010	0.166
9.	Elemente de algebra liniară (124 pag.)	<u>A. Neculae</u>	Editura Eurobit, Timișoara, 2019 ISBN 978-973-132-571-2	0.5
Punctaj total indicator A4				1.848

Se acordă $0.5/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii .

A5 - Capitle de cărți în edituri naționale sau alte edituri internaționale ca autor

Nr. crt.	Titlul capitolului - titlul cărții	Autori	Editura, an, link (dacă este cazul)	Punctaj $0.2/n_i^{ef}$
1.	Cap. 3: Tipuri convenționale de celule solare (pag. 55-79) capitol în cartea “Celule solare nanostructurate”, Editor: M. Paulescu (204 pag.)	<u>A. Neculae</u>	Editura Universității de Vest, Timișoara, ISBN 978-973-125-110-3, 2007	0.2
2.	Cap. 6: Celule solare cu colorant senzitiv (pag. 133-164) capitol în cartea “Celule solare nanostructurate”, Editor: M. Paulescu (204 pag.)	M. Paulescu, <u>A. Neculae</u> , P. Gravila	Editura Universității de Vest, Timișoara, ISBN 978-973-125-110-3, 2007	0.066
3.	Cap. 1: Simularea funcționării celulelor solare cu joncțiune p-n sau p-i-n (pag.1-10) capitol în cartea:” Modelarea numerică a celulelor fotovoltaice nanostructurate”, Autori: M. Paulescu, <u>A. Neculae</u> , E. Tulcan Paulescu, D. Comanescu (168 pag.)	<u>A. Neculae</u>	Editura Universității de Vest, Timișoara, ISBN 978-973-125-174-5, 2008	0.2
4.	Cap. 2: Modelarea și simularea fenomenelor de transport într-o celulă solară cu colorant senzitiv (pag.11-28) capitol în cartea:” Modelarea numerică a celulelor fotovoltaice nanostructurate”, Autori: M. Paulescu, <u>A. Neculae</u> , E. Tulcan Paulescu, D. Comanescu (168 pag.)	<u>A. Neculae</u>	Editura Universității de Vest, Timișoara, ISBN 978-973-125-174-5, 2008	0.2

5.	George Emil Palade – a pioneer of cell biology (pages 88-96), chapter in the book "Inquiry Based Science Education (IBSE) in the primary school", editors S. Jokic, D. Milicic, (112 pag.)	T. Nicolici-Schultz, <u>A. Neculae</u>	Printing office of Vinca Institute of Nuclear Sciences, University of Belgrade, ISBN 978-86-7306-106-1, 2012	0.1
Punctaj total indicator A5				0.766

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii .

A6 - Lucrări în extenso (cel puțin 3 pagini) publicate în Proceedings-uri cu ISBN indexate ISI

Nr. crt.	Titlul	Autori	Revista, editura, an, link (dacă este cazul)	Punctaj $0.2 / n_i^{ef}$
1.	Analysis of the convective-diffusive transport equation of the dopant in the neighbourhood of the growth interface in the context of Bridgman-Stockbarger crystal growth configuration;	St. Balint, A.M. Balint, D.G. Baltean, <u>A. Neculae</u>	Second International Conference on Nonlinear Problems in Aviation and Aerospace, S. Sivasundaram (Ed.), European Conference Publications, Cambridge, 1999, Vol.1, p.63-72, ISBN 0-95226643-1-3,	0.05
2.	The influence of the precristallization zone on the dopant field in microgravity;	A.M. Balint, D. Băltean, M. Mihailovici, <u>A. Neculae</u> , Șt. Balint	SIOEL '99: SIXTH SYMPOSIUM ON OPTOELECTRONICS Book Series: PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS (SPIE) Volume: 4068 Pages: 33-44, 2000	0.04
3.	The influence of the solid inclusions on the heat transport in the precristallization zone;	A.M. Balint, M.M. Mihailovici, D.G. Baltean, <u>A. Neculae</u> , St. Balint	Advanced Computational Methods in Heat Transfer VI, Ed. B. Sunden & C.A. Brebbia, WIT Press, Southampton, Boston, p.43-52, 2000	0.04
4.	On the solute concentration field in the neighbourhood of the seed in a hydrothermal crystal growth system;	<u>A. Neculae</u> , A.M. Balint, D.G. Băltean, St. Balint	The Third International Conference on Non-Linear Problems in Aviation and Aerospace, May 10-12, 2000, Daytona-Beach, Florida, USA, Ed. S. Sivasundaram, European Conference Publications, Cambridge, 2002, Vol.1-2, p.513-520	0.05
5.	Mass transport by diffusion and convection through periodic porous media;	D. Băltean, A.M. Balint, Th. Levy, <u>A. Neculae</u> , St. Balint	The Third International Conference on Non-Linear Problems in Aviation and Aerospace, May 10-12, 2000, Daytona-Beach, Florida, USA, Ed. S. Sivasundaram, European Conference Publications, Cambridge, 2002, Vol.1-2, p.63-70	0.04
6.	Temperature measurement using optical fibre with applications to automobiles considering a high accurate numerical solution for the conductive heat transport in a circular cylinder;	D. Curticapean and <u>A. Neculae</u>	Proceedings of SPIE, Vol. 7003, 70032K-1, 2008, ISBN 978-0-8194-7203-8, 12 pagini	0.1
7.	Modeling and numerical simulation of the transport processes inside DSSC using a monodomain approach;	<u>A. Neculae</u> , M. Paulescu and D. Curticapean	Proceedings of SPIE, Vol. 7002, 70020Y-1, 2008, ISBN 978-0-8194-7203-8, 8 pagini	0.066

8.	A simple but accurate multiband solar cells model;	M. Paulescu, E. Tulcan-Paulescu, <u>A. Neculae</u> , and P. Gravila	Proceedings of SPIE, Vol. 7002, 70020T-1, 2008, ISBN 978-0-8194-7203-8, 8 pagini	0.05
9.	Some consideration on the dynamics of nanometric suspensions in fluid media;	M. Lungu, <u>A. Neculae</u> , M. Bunoiu	American Institute of Physics Conference Proceedings 1131, Proceedings of the physics conference TIM-08, Timisoara, ROMANIA, November 28-29, 2008, p.164-168, 2009, ISBN 978-0-7354-0668-1	0.066
10.	Numerical study on radiative heat transfer and boundary control of glass fibers cooling process;	<u>A. Neculae</u> , D. Curticean	American Institute of Physics Conference Proceedings 1262, Proceedings of the physics conference TIM-09, Timisoara, ROMANIA, November 27-28, 2009, p.155-160, 2010, ISBN 978-0-7354-0810-4	0.1
11.	Numerical simulation of the bioparticle manipulation process using dielectrophoresis;	<u>A. Neculae</u> , M. Bunoiu, M. Lungu	American Institute of Physics Conference Proceedings 1262, Proceedings of the physics conference TIM-09, Timisoara, ROMANIA, November 27-28, 2009, p.144-149, 2010, ISBN 978-0-7354-0810-4	0.066
12.	Numerical study of heat transfer in buildings for different environmental conditions;	<u>A. Neculae</u> , S. Arjoca, D. Vizman	American Institute of Physics Conference Proceedings 1387, Proceedings of the physics conference TIM-10, Timisoara, ROMANIA, November 25-27, 2010, p.276-281, 2011, ISBN 978-0-7354-0951-4	0.066
13.	Numerical study regarding the influence of electrodes' geometry on the dielectrophoretic forces;	<u>A. Neculae</u> , M. Lungu, T. Nicolici-Schultz, M. Bunoiu	American Institute of Physics Conference Proceedings 1387, Proceedings of the physics conference TIM-10, Timisoara, ROMANIA, November 25-27, 2010, p.270-275, 2011, ISBN 978-0-7354-0951-4	0.05
14.	Electrohydrodynamic modeling for manipulation of micro/nano particles in microfluidic systems;	<u>A. Neculae</u> , M. Lungu, M. Bunoiu, R. Giugiulan	American Institute of Physics Conference Proceedings 1472, Proceedings of the physics conference TIM-11, Timisoara, ROMANIA, November 24-27, 2011, p.155-161, 2012, ISBN 978-0-7354-1079-4	0.05
15.	Numerical analysis of the diffusive mass transport in brain tissues with applications to optical sensors;	<u>A. Neculae</u> , A. Otte, D. Curticean	Proceedings of SPIE, Book Editor(s): Gannot, I, Volume: 8576, Article Number: 857605, DOI: 10.1117/12.2004436 Published: 2013, ISBN: 978-0-8194-9345-3 http://spie.org/Publications/Proceedings/Volume/8576 ; 8 pagini	0.066
16.	Submicron particle trapping using traveling wave dielectrophoresis;	M. Lungu, R. Giugiulan, M. Bunoiu, N. Strambeanu and <u>A. Neculae</u>	American Institute of Physics Conference Proceedings 1564, Proceedings of the physics conference TIM-12, Timisoara, ROMANIA,	0.04

			November 27-30, 2012, p.111-116, 2013, ISBN 978-0-7354-1192-0 http://dx.doi.org/10.1063/1.4832804	
17.	Numerical simulation of bioparticle separation by Dielectrophoretic Field-Flow-Fractionation (DEP-FFF);	A. Marchis, <u>A. Neculae</u>	American Institute of Physics Conference Proceedings 1634, Proceedings of the physics conference TIM-13, Timisoara, ROMANIA, November 21-24, 2013, p.161-167, Melville, New York, 2014, ISBN 978-0-7354-1273-6	0.1
18.	Study of a 3D DEP-based microfluidic system for selective nanoparticle manipulation,	M. Lungu, S. Balasiu, M. O. Bunoiu and <u>A. Neculae</u>	American Institute of Physics Conference Proceedings 1634, Proceedings of the physics conference TIM-13, Timisoara, ROMANIA, November 21-24, 2013, p.89-94, Melville, New York, 2014, ISBN 978-0-7354-1273-6	0.05
19.	Nanoparticles Trapping from Flue Gas Using Dielectrophoresis,	<u>Neculae, A</u> ; Strambeanu, N; Lungu, A; Bunoiu, M; Lungu, M	TIM14 PHYSICS CONFERENCE: PHYSICS WITHOUT FRONTIERS Book Series: AIP Conference Proceedings Volume: 1694 Article Number: UNSP 040004 Published: 2015	0.04
20.	Recovery of Nanoparticles from Flue Gas using Dielectrophoresis,	<u>Neculae, A</u> ; Lungu, A; Strambeanu, N; Lungu, M.	Proceedings of the 24th International Mining Congress and Exhibition of Turkey, IMCET 2015 Pages: 1382-1388 Published: 2015	0.05
21.	Analysis of Airborne Particulate Matter Pollution in Timisoara City Urban Area and Correlations Between Measurements and Meteorological Data,	Lungu, M; Lungu, A; Stefu, N; <u>Neculae, A</u> ; Strambeanu, N.	AIP Conference Proceedings Volume: 1796 Article Number: UNSP 040011, Published: 2017	0.04
22.	Study on nanoparticles flow reduction tests to HWI plants using numerical simulations,	Lungu, M; <u>Neculae, A</u> ; Lungu, A; Strambeanu, N; Arghiriade, D; Demetrovici, L.	20TH INTERNATIONAL SYMPOSIUM - THE ENVIRONMENT AND THE INDUSTRY (SIMI 2017) 99-111, 2017	0.036
Punctaj total indicator A6				1.256

Se acordă $0.2/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina web a editurii .

A7 - Brevete de invenție internaționale acordate

Nr. crt.	Titlul	Autori	Autoritatea care a acordat brevetul link (dacă este cazul)	Punctaj $3/n_i^{ef}$
Punctaj total indicator A7				0

Se acordă $3/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina autorității care a acordat brevetul .

A8 - Brevete de invenție naționale acordate

Nr. crt.	Titlul	Autori	Autoritatea care a acordat brevetul link (dacă este cazul)	Punctaj $0.5/n_i^{ef}$
Punctaj total indicator A8				0

Se acordă $0.5/n_i^{ef}$ puncte pentru fiecare item.

Documente justificative: Copie în format hard, în format electronic sau link pe pagina autorității care a acordat brevetul.

A9 - Director/ responsabil/ coordonator pentru programe de studii, programe de formare continuă, proiecte educaționale și proiecte de infrastructură (proiectele de cercetare se exclud)

Nr. crt.	Titlul proiectului sau programului	Calitatea (director sau responsabil)	Autoritatea contractantă, instituția, link (după cum este cazul)	Punctaj 0.5 pe item
Punctaj total indicator A9				0

Documente justificative: Copie în format hard sau în format electronic a documentelor de contractare sau link pe pagina autorității contractante sau a instituției unde s-a desfășurat programul.

A10 – Director /responsabil pentru proiecte de cercetare câștigate prin competiție națională sau internațională; proiectele de la punctul A9 se exclud).

Nr. crt.	Titlul proiectului	Calitatea (director sau responsabil)	Autoritatea contractantă, link (dacă este cazul)	Punctaj $V/100.000$
Punctaj total indicator A10				0

Precizări:

- n_i^{ef} reprezintă numărul efectiv de autori ai itemului i și ia următoarele valori:

n_i dacă $n_i \leq 5$, $(n_i + 5)/2$ dacă $5 < n_i \leq 15$, $(n_i + 15)/3$ dacă $15 < n_i \leq 75$ și $(n_i + 45)/4$ dacă $n_i > 75$, unde n_i reprezintă numărul de autori ai articolului i . În cazul publicațiilor HEPP (High Energy Particle Physics) cu număr mare de autori, dacă articolul are la bază o notă internă a experimentului la care candidatul este coautor, atunci n_i^{ef} poate fi dat de numărul de autori din nota internă.

- Lucrările de tip "Article. Proceedings paper" pot fi considerate la activitatea de cercetare sau la cea didactică și profesională, o singură dată, la alegerea candidatului.

Punctaj total obținut pentru activitatea didactică și profesională:

$$A = \sum_{i=1}^{10} A_i = \mathbf{5.078}$$

Conferențiar univ : $A \geq 1$

Abilitare, Prof. : $A > 2$

2. Activitatea de cercetare

2.1 – Articole științifice originale, în extenso, ca autor

Nr. crt.	Referința bibliografică (Autori, Titlul, Revista, Vol., anul, pag. încep. – pag.sf.	AIS_i	n_i	n_i^{ef}	AIS_i / n_i^{ef}
1.	A.M. Balint, D.G. Bălțean, Th. Levy, M. Mihailovici, <u>A. Neculae</u> , Șt. Balint: The dopant fields in “uniform-diffusion-layer”, “global-thermal-convection” and “precrystallization-zone” models; Materials Science in Semiconductor Processing, 3, p.115-121, 2000	0.34	6	5.5	0.0618
2.	<u>A. Neculae</u> , B Goyeau, M. Quintard, D. Gobin: Passive dispersion in dendritic structures; Materials Science & Engineering A, Vol. 323/1-2, p. 368-377, 2002.	0.9	4	4	0.225
3.	P. Bousquet-Melou, <u>A. Neculae</u> , B. Goyeau, M. Quintard: Averaged solute transport during solidification of a binary mixture: active dispersion in dendritic structures; Metallurgical and Materials Transactions B, Vol. 33B, p.365-376, 2002.	0.6	4	4	0.15
4.	D. Gobin, B. Goyeau, <u>A. Neculae</u> : Convective heat and solute transfer in partially porous cavities; Int. J. Heat and Mass Transfer, Vol 48/10, p. 1898-1908, 2005.	0.9	3	3	0.3
5.	<u>A. Neculae</u> , A.M. Balint: Axial segregation in unsteady diffusion-dominated solidification of a binary alloy in a finite cylindrical ampoule, International Journal of Modern Physics B, Vol 20, No.18, p. 2551-2560, 2006.	0.2	2	2	0.1
6.	<u>A. Neculae</u> and M. Paulescu: Numerical simulation for the current density of p-n junction like-type solar cells; Journal of Optoelectronics and Advanced Materials, Vol. 10, No.9, p.2438-2440, 2008.	0.113	2	2	0.0565
7.	M. Paulescu, E. Tulcan-Paulescu, <u>A. Neculae</u> , P. Gravila: Internal Reflection Influence on the Multiple Quantum Well Solar Cell Efficiency; Journal of Optoelectronics and Advanced Materials, Vol. 10, No.9, p.2441-2444, 2008.	0.113	4	4	0.0282
8.	M. Paulescu, N. Stefu, E. Tulcan-Paulescu, D. Calinoiu, <u>A. Neculae</u> , P. Gravila: UV solar irradiance from broadband radiation and other meteorological data; Atmospheric Research, 96, p.141-148, 2010.	0.642	6	5.5	0.1167
9.	M. Lungu, <u>A. Neculae</u> , M. Bunoiu: Some considerations on the dielectrophoretic manipulation of nanoparticles in fluid media, Journal of Optoelectronic and Advanced Materials, Vol. 12 ISS 12, p. 2423-2426, 2010.	0.113	3	3	0.0376
10.	M. Lungu, <u>A. Neculae</u> , M. Bunoiu, N. Strambeanu: Some considerations on the nanoparticles manipulation in fluid media using dielectrophoresis; Romanian Journal of Physics, Vol. 56 (5-6), p. 749-756, 2011.	0.09	4	4	0.0225
11.	<u>A. Neculae</u> , C. G. Biris, M. Bunoiu, M. Lungu: Numerical analysis of nanoparticle behavior in a microfluidic channel under dielectrophoresis; Journal of Nanoparticle Research. Vol. 14, p. 1154-1165, 2012.	0.676	4	4	0.169
12.	D. Curticapean, <u>A. Neculae</u> : Radiative heat transfer in optical fibers with applications to temperature measurement and controlled splicing processes considering the SPI approximation; FiO/LS - Frontiers in Optics 2012/ Laser Science XXVIII, Rochester, NY, USA, October 14-18, 2012; Code 102355 (2 pages)	0	2	2	0
13.	A. Otte, A. Neculae, and D. S. Curticapean, "Near-Infrared Spectroscopy for Real-Time Brain Perfusion Diagnostics in	0	3	3	0

	Patients with Late Whiplash Syndrome," in Frontiers in Optics 2013, P. Delyett, Jr. and D. Gauthier, eds., OSA Technical Digest (online) (Optical Society of America, 2013), paper JW3A.25. (2 pages) http://www.opticsinfobase.org/abstract.cfm?URI=LS-2013-JW3A.25				
14.	<u>A. Neculae</u> , R. Giugiulan, M. Bunoiu, M. Lungu: Effects of fluid flow velocity upon nanoparticle distribution in microfluidic devices under dielectrophoresis; Romanian Reports in Physics, Vol. 66, No.3, p. 754-764, 2014.	0.21	4	4	0.0525
15.	M. Lungu, <u>A. Neculae</u> and A. Lungu: Positive dielectrophoresis used for selective trapping of nanoparticles from flue gas in a gradient field electrodes device, Journal of Nanoparticle Research, Vol. 17 (12):491 1-14, 2015, DOI: 10.1007/s11051-015-3304-y	0.529	3	3	0.1763
16.	<u>A. Neculae</u> , M. Bunoiu, A. Lungu and M. Lungu: Filtration of flue gas by retaining of nanoparticles in microfluidic devices using dielectrophoresis, Romanian Reports in Physics, Vol. 68, No. 3, p. 1085-1096, 2016	0.242	4	4	0.0605
17.	<u>A. Neculae</u> , M. Bunoiu, A. Lungu and M. Lungu: Filtration of flue gas in microfluidic devices using dielectrophoresis, Romanian Journal of Physics, Vol. 61, No.5-6, p. 957-969, 2016	0.243	4	4	0.0607
18.	M. Lungu, <u>A. Neculae</u> : Eddy current separation of small nonferrous particles using a complementary air-water method, Separation Science and Technology Vol. 53 (1), 126-135, 2018	0.236	2	2	0.118
19.	A.M. Balint, S. Balint, <u>A. Neculae</u> : On the objectivity of mathematical description of ion transport processes using general temporal Caputo and Riemann-Liouville fractional partial derivatives, Chaos, Solitons and Fractals 156 (2022) 111802	1.106 (2021)	3	3	0.3686
Punctaj total indicator 2.1					I = 2.1039

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- n_i^{ef} reprezintă numărul efectiv de autori ai itemului i și ia următoarele valori:

$$n_i^{ef} = \begin{cases} n_i, & n_i \leq 5 \\ (n_i + 5) / 2, & n_i \in [5, 15] \\ (n_i + 15) / 3, & n_i \in [15, 75] \\ (n_i + 45) / 4, & n_i \geq 75 \end{cases}$$

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Nr.	Referința bibliografică (Autori, Titlul, Revista, Vol., anul, pag.inceput-pag.sfârșit)	AIS_i
1.	<u>A. Neculae</u> , B Goyeau, M. Quintard, D. Gobin: Passive dispersion in dendritic structures; Materials Science & Engineering A, Vol. 323/1-2, p. 368-377, 2002.	0.9
2.	<u>A. Neculae</u> , A.M. Balint: Axial segregation in unsteady diffusion-dominated solidification of a binary alloy in a finite cylindrical ampoule, International Journal of Modern Physics B, Vol 20, No.18, p. 2551-2560, 2006.	0.2
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4.	<u>A. Neculae</u> , C. G. Biris, M. Bunoïu, M. Lungu: Numerical analysis of nanoparticle behavior in a microfluidic channel under dielectrophoresis; J. Nanopart Res. Vol. 14, p. 1154-1165, 2012.	0.676
5.	<u>A. Neculae</u> , R. Giugiulan, M. Bunoïu, M. Lungu: Effects of fluid flow velocity upon nanoparticle distribution in microfluidic devices under dielectrophoresis; Romanian Reports in Physics, Vol. 66, No.3, p. 754-764, 2014.	0.21
6.	<u>A. Neculae</u> , M. Bunoïu, A. Lungu and M. Lungu: Filtration of flue gas by retaining of nanoparticles in microfluidic devices using dielectrophoresis, Romanian Reports in Physics, Vol. 68, No. 3, p. 1085-1096, 2016	0.242
7.	<u>A. Neculae</u> , M. Bunoïu, A. Lungu and M. Lungu: Filtration of flue gas in microfluidic devices using dielectrophoresis, Romanian Journal of Physics, Vol. 61, No.5-6, p. 957-969, 2016	0.243
8.	A.M. Balint, S. Balint, <u>A. Neculae</u> : On the objectivity of mathematical description of ion transport processes using general temporal Caputo and Riemann-Liouville fractional partial derivatives, Chaos, Solitons and Fractals 156 (2022) 111802	1.106 (2021)
Punctaj total indicator 2.2		P = 3.69

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P = 3.69

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3. Recunoașterea impactului activității

3.1. Citări în reviste științifice cu factor de impact care se regasesc in InCites Journal Citation Reports sau in carti in edituri recunoscute Web of Science. Nu se iau in considerare citările provenind din articole care au ca autor sau coautor candidatul.

Nr. publ. citată	Nr. publ. care citează	Referința bibliografică a publicației care citează (Autori, Titlul, Revista, Vol., anul, pag.-inceput -pag.-sfârșit)	C_i al publ. citate	n_i^{ef} al publ. Citate	Punctaj $\frac{C_i}{n_i^{ef}}$
I.		St. Balint, A.M. Balint, D.G. Baltean, <u>A. Neculae</u> : Analysis of the convective-diffusive transport equation of the dopant in the neighborhood of the growth interface in the context of Bridgman-Stockbarger crystal growth configuration; in Second International Conference on Nonlinear Problems in Aviation and Aerospace, S. Sivasundaram (Ed.), European Conference Publications, Cambridge, 1999, Vol.1, p.63-72, ISBN 0-95226643-1-3	4	4	0
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II.		A.M. Balint, D. Bălțean, M. Mihailovici, <u>A. Neculae</u> , Șt. Balint: The influence of the precristallization zone on the dopant field in microgravity; SIOEL '99: SIXTH SYMPOSIUM ON OPTOELECTRONICS Book Series: PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS (SPIE) Volume: 4068 Pages: 33-44, 2000	5	5	0
		-			
III.		A.M. Balint, M.M. Mihailovici, D.G. Baltean, <u>A. Neculae</u> , Șt. Balint: The influence of the solid inclusions on the heat transport in the precristallization zone; in Advanced Computational Methods in Heat Transfer VI, Ed. B. Sunden & C.A. Brebbia, WIT Press, Southampton, Boston, Computational Studies 3, p.43-52, 2000	5	5	0.4
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VII.	<u>A. Neculae</u> , B Goyeau, M. Quintard, D. Gobin: Passive dispersion in dendritic structures; Materials Science & Engineering A, Vol. 323/1-2, p. 368-377, 2002	4	4	1.50
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35.	Ismael, Muneer A. DOUBLE-DIFFUSIVE MIXED CONVECTION IN A COMPOSITE POROUS ENCLOSURE WITH ARC-SHAPED MOVING WALL: TORTUOSITY EFFECT Journal of Porous Media, Volume: 21, Issue: 4 Pages: 343-362 Published: 2018
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40.	Ismael, M. A.; Ghalib, H. S. Double diffusive natural convection in a partially layered cavity with inner solid conductive body SCIENTIA IRANICA Volume: 25 Issue: 5 Pages: 2643-2659 Published: SEP-OCT 2018
41.	Hadidi, N.; Bennacer, R. Heat and mass transfer by natural convection in a bi-layered cubic enclosure with opposing temperature and concentration gradients INTERNATIONAL JOURNAL OF THERMAL SCIENCES Volume: 132 Pages: 534-551 Published: OCT 2018
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45.	<u>Anwar, Talha; Kumam, Poom; Shah, Zahir; et al.</u> <u>Unsteady Radiative Natural Convective MHD Nanofluid Flow Past a Porous Moving Vertical Plate with Heat Source/Sink</u> <u>MOLECULES</u> Volume: 25 Issue: 4 Article Number: 854 Published: FEB 2 2020
46.	<u>Unsteady double diffusive convection inside a partial porous building enclosure subjected to time-periodic temperature boundary condition</u> <u>Hu, JT and Mei, SJ</u> Mar 2021 Feb 2021 (Early Access) INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER 122
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Punctaj total indicator 3.1					C = 37.137

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3.2. Indicele Hirsch

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Precizări:

- Indicele Hirsch h se definește astfel: un autor are un indice Hirsch h dacă a publicat h articole care au fost citate fiecare de cel puțin h ori. Pentru calcularea indicelui Hirsch se va folosi baza de date ISI Web of Science.

Criteria minimale pentru recunoașterea impactului activității:CSII, conferențiar universitar: $C \geq 20$, $h \geq 5$ CS I, profesor universitar: $C \geq 40$ $h \geq 10$ **Punctajul total CNATDCU:**

$$T = A + P / 2 + I / 2 + C / 20 + h / 5$$

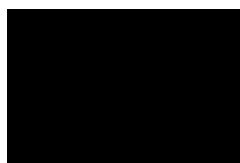
$$T = 5.078 + 2.103/2 + 3.69/2 + 37.137/20 + 7/5 = \mathbf{11.231}$$

Criteria minimale punctaj total:CS I, profesor universitar: $T \geq 12$ CSII, conferențiar universitar: $T \geq 5$

Pentru Asistenți și asistenți cercetare (50% valoare minimă conf/CSII)

Pentru Lectori (80% valoare minimă conf/CSII)

Indicator	A	I	P	C	h	T
Valoare minima pentru poziția ocupată în prezent (cf grilei CNATDCU)	1	2	2	20	5	5
Valoare realizată	5.078	2.103	3.69	37.137	7	11.231
Indeplinit/Neindeplinit	Indeplinit	Indeplinit	Indeplinit	Indeplinit	Indeplinit	Indeplinit

Semnătură**26.05.2023**