L I S T A
lucrărilor ştiinţifice si a contractelor de cercetare

A. Teza de doctorat : „*Senzori Inteligenţi cu Model Intern şi Tehnici Fuzzy*”, Universitatea „Politehnica” Timişoara, Conducător Ştiinţific Prof. dr. ing. Mircea Ciugudean, în domeniul **Inginerie Electronică şi Telecomunicaţii**, susţinută în 13.06.2004 la Universitatea „Politehnica” Timişoara, Diplomă de doctor: Seria C, Nr. 0004886/13019 din 22.09.2003, în baza Ordinului Ministrului Educatiei şi Cercetării nr. 4741/25.08.2003

B. Cărţi si capitole în cărţi (selectie)

Edituri internaționale

1. Chiranjibe Jana, Madhumangal Pal, Valentina Emilia Balas, Ronald R. Yager, Picture Fuzzy Logic and Its Applications in Decision Making Problems, Elsevier, 2023, ISBN: 9780443220241, https://shop.elsevier.com/books/picture-fuzzy-logic-and-its-applications-in-decision-making-problems/jana/978-0-443-22024-1
2. Rejeeb Dey, Goshaidas Ray, Valentina Emilia Balas, Stability and Stabilization of Linear and Fuzzy Time-Delay Systems, A Linear Matrix Inequality Approach, Springer, 2018, ISBN 978-3-319-70147-9, 308 pag. http://www.springer.com/gp/book/9783319701479
3. Marius M. Bălaş, Valentina E. Bălaş – Postmodernism and Control Engineering, Rudolf Seising (editor): Views on Fuzzy Sets and Systems from Different Perspective. Philosophy, Logic; Criticism and Applications**,** Vol. 243, ISBN 978-3-540-93801-9, Cap 18, pag. 377-390, 2009**,** http://www.springerlink.com/content/n2jvt13463n5pj37/
4. Marius M. Bălaş, Valentina E. Bălaş – The Fuzzy Interpolative Control for Passive Greenhouses, H.-N. Teodorescu, J. Watada, and L.C. Jain (Eds.): **Intelligent Systems and Technologies, SCI 217,** Vol. 217, ISBN978-3-642-01884-8, pag. 219–231**,** 2009, Springer, http://www.springer.com/engineering/book/978-3-642-01884-8 .
5. Nicolae Popescu-Bodorin, Valentina E. Bălaş, Learning Iris Biometric Digital Identities for Secure Authentication. A Neural-Evolutionary Perspective Pioneering Intelligent Iris Identification, Springer, Title of the book: Recent Advances in Intelligent Engineering Systems, Volume 378, Editor(s): J. Fodor, R. Klempous and C.P. Suárez Araujo, pag. 405-430. Springer Verlag, 2011, SBN 978-3-642-23229-9, http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-642-23228-2
6. Valentina E. Bălaş, Iulia Moţoc, Alina Barbulescu, Combined Haar-Hilbert and Log-Gabor Based Iris Encoders, Title of the book: New concepts and applications in Soft Computing, Volume, Studies in Computational Intelligence, Vol. 417, Balas, V. E.; Fodor, J; Varkonyi-Koczy, A. (Eds.), 2012, XII, ISBN 978-3-642-28958-3, pag. 1-26, Springer. http://link.springer.com/book/10.1007/978-3-642-28959-0/page/1
7. Valentina E. Bălaş, Marius M. Bălaş, Fuzzy Systems towards Field Applications,Rudolf Seising, Enric Trillas, Claudio Moraga, and Settimo Termini (eds.), On Fuzziness. A Homage to Lotfi A. Zadeh, Springer Verlag, Berlin, New York, 2013, Volume 216, Chapter 25, pag. 189-195, http://link.springer.com/book/10.1007/978-3-642-35641-4/page/1 , http://link.springer.com/chapter/10.1007/978-3-642-35641-4_3#page-1
8. Ahmad Taher Azar and Valentina E. Bălaş, Classification and Detection of Diabetic Retinopathy, Advances in Intelligent analysis of Medical Data and Decision Support Systems, Studies in Computational Intelligence, Springer, Volume 473, 2013, Roumen Kountchev and Barna Iantovics, (Eds.), ISBN: 978-3-319-00028-2 (Print) 978-3-319-00029-9 (Online), pp.135-145**,** From 2nd International Workshop on Next Generation Medical Decision Support Systems 2012 MedDecSup'2012, Sofia, Bulgaria, 10-11 July.
9. Ahmed T. Azar, Valentina E. Bălaş, Teodora Olariu, Classification of EEG-Based Brain-Computer Interfaces, Springer, Advanced Intelligent Computational Technologies and Decision Support Systems, Barna Iantovics**,** Roumen Kountchev (Eds.) in Studies in Computational Intelligence, ISBN: 978-3-319-00466-2 (Print) 978-3-319-00467-9, Volume 486, 2014, pag. 97-106.
10. Mousumi Kumar, **Valentina E. Balas, Bijay Baran Pal,** Using Fuzzy Goal Programming with Penalty Functions for Solving EEPGD Problem via Genetic Algorithm, IGI Global, Handbook of Research on Natural Computing for Optimization Problems Chapter 34, pag. 847-869, ISBN 9781522500582, DOI: 10.4018/978-1-

5225-0058-2.ch034, 2016

11. Debjani Chakraborti, **Valentina E. Balas, Bijay Baran Pal,** Genetic Algorithm for FGP Model of a Multiobjective Bilevel Programming Problem in Uncertain Environment, IGI Global, Handbook of Research on Natural Computing for Optimization Problems Chapter 35, pag. 870-888, ISBN 9781522500582, DOI: 10.4018/978-1-5225-0058-2.ch035, 2016
12. Jagatheesan Kaliannan, Anand B, Nguyen Gia Nhu, Nilanjan Dey, Amira S. Ashour and **Valentina E. Balas**, Automatic Generation Control of Hydro-Hydro Interconnected Power System Based on Ant Colony Optimization, Recent Developments in Intelligent Nature-Inspired Computing, Editior Srikanta Patnaik, IGI Global, pag 153-170, 2017,
http://www.igi-global.com/book/recent-developments-intelligent-nature-inspired/173681
13. Valentina E. Bălaş, Janos Fodor, Annamaria Várkonyi-Kóczy, Jozsef Dombi, Lakhmi C. Jain (**editori**) la Soft Computing Applications, Proceedings of the 5th International Workshop Soft Computing Applications (SOFA 2012), Advances in Intelligent Systems and Computing, Springer, 2013,Vol. 195, ISBN 978-3-642-33941-7, 726 pag.
14. Valentina E. Bălaş, Annamaria Varkonyi-Koczy, Janos Fodor (**editori**) la **"** New Concepts and Applications in Soft Computing, Studies in Computational Intelligence, Berlin: Springer, 2012, Vol 417, ISBN 978-3-642-28958-3, 278 pag.
http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-642-28958-3
15. Valentina E. Bălaş, Annamaria Varkonyi-Koczy, Janos Fodor (**editori**) la "Soft Computing Based Modeling in Intelligent Systems", Studies in Computational Intelligence, Berlin: Springer, 2009, Vol. 196, ISBN 978-3-642-00447-6, 206 pag. http://www.springer.com/engineering/book/978-3-642-00447-6
16. Jain, L.C.; Sato-Ilic, M.; Virvou, M.; Tsihrintzis, G.A.; Valentina E. Bălaş, Abeynayake, C., (**editori**), la Computational Intelligence Paradigms, Innovative Applications, Studies in Computational Intelligence, Springer, 2008, Vol. 137, VIII, ISBN: 978-3-540-79473-8, 282 pag.
17. Valentina E. Bălaş, Lakhmi C. Jain, Branco Kovacevic (**editori**) la Soft Computing Applications, Proceedings of the 6th International Workshop Soft Computing Applications (SOFA 2014), Advances in Intelligent Systems and Computing, Springer, 2016, Volume 356 and 357, Vol. 1 si Vol. 2, ISSN: 2194-5357,
ISBN 978-3-319-18296-4, ISBN 978-3-319-18416-6
http://www.springer.com/gp/book/9783319182957 http://www.springer.com/gp/book/9783319184159
18. Valentina Emilia Balas, Lakhmi C. Jain, Xiangmo Zhao, Fuqian Shi (**editori**), Information Technology and Intelligent Transportation Systems : Proceedings of the 2nd International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2017), Xi'an, China, June 10, 2017, Springer 2017, ISBN 9781614997849, https://www.bookdepository.com/Information-Technology-and-Intelligent-Transportation-Systems/9781614997849?status=invalid-email
19. **Jude Hemanth and Valentina Emilia Balas, (editori), Biologically Rationalized Computing Techniques For Image Processing Applications, Springer 2018, ISBN 978-3-319-61316-1, http://www.springer.com/in/book/9783319613154**
20. **Valentina Emilia Balas, Lakhmi C. Jain, Zhao, X., (editori), Information Technology and Intelligent Transportation Systems, Proceedings of the 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015), Springer 2017, Vol. 1 si Vol. 2, ISBN 978-3-319-38789-5, ISBN 978-3-319-38771-0, http://www.springer.com/in/book/9783319387697 , http://www.springer.com/in/book/9783319387871**
21. Amlan Chakrabarti, Neha Sharma, Valentina Emilia Balas (**editori**), Advances in Computing Applications, Springer 2017, ISBN: 978-981-10-2629-4, http://www.springer.com/la/book/9789811026294
22. Pijush Samui, Sanjiban Sekhar Roy, Valentina Emilia Balas (editori), Handbook of Neural Computation, Elsevier 2017, ISBN: 9780128113189,
https://www.elsevier.com/books/handbook-of-neural-computation/samui/978-0-12-811318-9
23. **Valentina Emilia Balas, Lakhmi C. Jain, Marius Mircea Balas (editori), Soft Computing Applications: Proceedings of the 7th International Workshop Soft Computing Applications (SOFA 2016) , Vol. 1 + Vol. 2, Springer 2017,**
ISBN: 9783319625201, ISBN: 9783319625232
http://www.springer.com/gp/book/9783319625201, http://www.springer.com/gp/book/9783319625232
24. **Balas,** V.E**., Roy,** S.S., **Sharma,** D**., Samui,** P. **(editori)**
Handbook of Deep Learning Applications
ISBN 978-3-030-11479-4, 2019
https://www.springer.com/gp/book/9783030114787

25. **Engineering Research Methodology**
A Practical Insight for Researchers
Deb, Dipankar, **Dey**, Rajeeb, **Balas,** Valentina E., **(editori)**
ISBN 978-981-13-2947-0, 2019
https://www.springer.com/gp/book/9789811329463
Internet of Things and Big Data Analytics for Smart Generation

26. **Balas,** V.E., **Solanki,** V.K**., Kumar,** R**., Khari,** M. **(editori)**
ISBN 978-3-030-04203-5, 2019
https://www.springer.com/gp/book/9783030042028

27. **Data and Communication Networks**
Proceedings of GUCON 2018
Jain, Lakhmi C., **E. Balas,** Valentina**, Johri,** Prashant **(editori)**
ISBN 978-981-13-2254-9, 2019
https://www.springer.com/gp/book/9789811322532

28. **Proceedings of International Ethical Hacking Conference 2018**
eHaCON 2018, Kolkata, India
Chakraborty, M., **Chakrabarti,** S., **Balas,** V.E., **Mandal,** J.K. **(editori)**
ISBN 978-981-13-1544-2, 2019
https://www.springer.com/gp/book/9789811315435

29. **Innovations in Infrastructure**
Proceedings of ICIIF 2018
Deb, Dipankar, **Balas,** Valentina E., **Dey**, Rajeeb **(editori)**
ISBN 978-981-13-1966-2, 2019
https://www.springer.com/gp/book/9789811319655

30. **Nature Inspired Optimization Techniques for Image Processing Applications**
Hemanth, Jude, **Balas**, Valentina Emilia **(editori)**
ISBN 978-3-319-96002-9, 2019
https://www.springer.com/gp/book/9783319960012

31. **Innovative Research in Transportation Infrastructure**
Proceedings of ICIIF 2018
Deb, D., **Balas,** V.E**., Dey**, R., **Shah**, J. **(editori)**
ISBN 978-981-13-2032-3, 2019
https://www.springer.com/gp/book/9789811320316

32. **Data Management, Analytics and Innovation**
Proceedings of ICDMAI 2018, Volume 2
Balas, Valentina Emilia**, Sharma**, Neha, **Chakrabarti,** Amlan **(editori)**
ISBN 978-981-13-1274-8, 2019
https://www.springer.com/gp/book/9789811312731

33. **Data Management, Analytics and Innovation**
Proceedings of ICDMAI 2018, Volume 1
Balas, Valentina Emilia, **Sharma,** Neha, **Chakrabarti,** Amlan **(editori)**
ISBN 978-981-13-1402-5, 2019

34. **Big Data Processing Using Spark in Cloud**
Mittal, M., **Balas,** V.E., **Goyal,** L.M., **Kumar,** R. **(editori)**
ISBN 978-981-13-0550-4, 2019
https://www.springer.com/gp/book/9789811305498

35. **Security with Intelligent Computing and Big-data Services**
Peng, S.-L., **Wang,** S.-J., **Balas,** V.E., **Zhao,** M. **(editori)**
ISBN 978-3-319-76451-1, 2018
https://www.springer.com/gp/book/9783319764504

36. **Biologically Rationalized Computing Techniques For Image Processing Applications**
Hemanth, D. Jude, **Balas,** Valentina Emilia **(editori)**
ISBN 978-3-319-61316-1, 2018
https://www.springer.com/gp/book/9783319613154

37. **Intelligent Data Analysis for Biomedical Applications: Challenges and Solutions**
Intelligent Data-Centric Systems: Sensor Collected Intellige
Hemanth D. Jude , Deepak Gupta , Valentina Emilia Balas **(editori)**
https://www.bookdepository.com/Intelligent-Data-Analysis-for-Biomedical-Applications/, ISBN 9780128155530, 2019

38. **Handbook of Neural Computation**
Pijush Samui , Sanjiban Sekhar Roy , Valentina Emilia Balas, **(editori)**
ISBN13 9780128113189, 2017
https://www.bookdepository.com/Handbook-Neural-Computation/9780128113189

39. **Biologically Rationalized Computing Techniques For Image Processing Applications**
Lecture Notes in Computational Vision and Biomechanics
JUDE HEMANTH , Valentina Emilia Balas **(editori)**
ISBN13 9783319613154, 2019
https://www.bookdepository.com/Biologically-Rationalized-Computing-Techniques-For-Image-Processing-Applications/9783319613154

Edituri naționale

40. Valentina E. Bălaş, Teoria Sistemelor, Editura Universităţii "Aurel Vlaicu" Arad, 2013, ISBN 978-973-752-672- 4, 150 pag.

41. Valentina E. Bălaş, **(Editor)** volumul Proceedings of **International Symposium *Research and Education in Innovation Era*, Section 3,** *Engineering Processes and Technology, Electrical,* **Arad, 16-18 November 2006, ISBN: 9978-973-752-110-1, Editura Universităţii "Aurel Vlaicu" din Arad, 457 pag.**

42. Valentina E. Bălaş, *Senzori inteligenţi cu model intern şi fuziune fuzzy,* Editura Politehnica, 2004, Timişoara, ISBN 973-625-113-6, 151 pag., Prefaţa scrisă de Prof. Lotfi A. Zadeh.

43. Valentina E. Bălaş, Marius M. Bălaş. *A Survey on the Constant Time to Collision Techniques*, Lotfi A. Zadeh, Dan Tufiş, Florin Gheorghe Filip, Ioan Dzitac (eds.), From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence , Editing House of Romanian Academy, ISBN:978-973-27-1678-6, 2008, pag. 23-31.

44. Marius M. Bălaş, Valentina E. Bălaş. *World Knowledge for Controllers by Fuzzy-Interpolative Systems*, Lotfi A. Zadeh, Dan Tufiş, Florin Gheorghe Filip, Ioan Dzitac (eds.), From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence , Editing House of Romanian Academy, ISBN:978-973-27-1678-6, 2008, pag.11-21.

45. Marius M. Bălaş, Valentina E. Bălaş, *Curs de Dispozitive Electronice*, Editura Universităţii "Aurel Vlaicu" Arad, 2003, ISBN 973-9361-83-8, 126 pag.

46. Marius M. Bălaş, Valentina E. Bălaş, *Dispozitive şi circuite electronice,* Îndrumător de laborator, Editura Universităţii "Aurel Vlaicu" Arad, 2000, ISBN 973-9361-38-2, 55 pag.

C. Lucrări indexate ISI/BDI

Reviste ISI

1.
Vacarescu, S.P.I.; Balas, V.E.; Paraschiv, N.; Petcut, F. (2025). A Systematic Review for Quality within the Automotive Industry 4.0, International Journal of Computers Communications & Control, 20(4), 7123, 2025. https://doi.org/10.15837/ijccc.2025.4.7123, **Q3**

2.
Alexuta, D.; Balas, V. E.; Balas, M. M. (2025). On the Three-Tank Aquaponic Configuration, International Journal of Computers Communications & Control, 20(2), 7032, 2025. https://doi.org/10.15837/ijccc.2025.2.7032, **Q3**

3.
Wu, CP., Hsieh, NK., Chen, LR. and Valentina E. Balas, Enhancing Longitudinal Flight Stability of Electric-powered Micro Unmanned Aerial Vehicles Using Fuzzy Proportional-integral-derivative Control. Int. J. Control Autom. Syst. 23, 2132–2141 (2025). https://doi.org/10.1007/s12555-024-0930-0 **Q2**

4.
M Popa, MM Balas, R Lile, VE Balas. *The Three-tank Watergy Configuration*, INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL 19 (1), INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL
Online ISSN 1841-9844, ISSN-L 1841-9836, Volume: 19, Issue: 1, Month: February, Year: 2024
Article Number: 6418, https://doi.org/10.15837/ijccc.2024.1.6418, **Q3**

5.
Dana Rad , Nicolae Paraschiv , Csaba Kiss 3, Valentina Emilia Balas, Cornel Barna , Physiological Reactions Profiling in Polygraph Testing: Insights from Fuzzy C-Means Clustering Analysis, Volume 21, Issue 10, Acta Polytechnica Hungarica, 2024, pag. 365-377, **Q3**

6.
Sanjiban Sekhar Roy, Ching-Hsien Hsu, Akash Samaran, Ranjan Goyal, Arindam Pande and **Valentina E. Balas,** *Vessels Segmentation in Angiograms Using Convolutional Neural Network: A Deep Learning Based Approach*, CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, ISSN:1526-1492 (print), Volume 136, Issue 1, pag. 241-255, 2023, **Q2**

7.
SA Jose, R Raja, BI Omede, RP Agarwal, J Alzabut, J Cao, **VE Balas,** *Mathematical modeling on coinfection: transmission dynamics of Zika virus and Dengue fever*, Nonlinear Dynamics ISSN 0924-090X (print) , Volume 111, Issue 5, pag. 4879-4914, 2023, **Q1**

8.
SA Jose, R Ramachandran, D Baleanu, HS Panigoro, J Alzabut, **VE Balas,** *Computational dynamics of a fractional order substance addictions transfer model with Atangana-Baleanu-Caputo derivative*, Mathematical Methods in the Applied Sciences, ISSN 0170-4214 (print), Volume 46, Issue 5, pag. 5060-5085, **Q1**

9.
Jose Sayooj Aby; Raja Ramachandran; Zhu Quanxin; Alzabut Jehad, Niezabitowski Michal; Balas, Valentina E., *Impact of strong determination and awareness on substance addictions: A mathematical modeling approach*, Mathematical

Methods in the Applied Sciences, DOI 10.1002/mma.7859; Early Access OCT 2021, Indexed 2021-11-11; Document Type Article; Early Access, Accession Number WOS:000712741600001, ISSN 0170-4214, eISSN 1099-1476
Special Issue,

IF = 3,01 - Q1

10.

Asad Muhammad Usman; G, Jason; Farooq Umar; Balas Valentina E. (Corresponding author); Chen Zheng; Chang Chunqi; Hanif Athar, *Self-Learning Network-based segmentation for real-time brain M.R. images through HARIS*, Peerj Computer Science, Volume 7, Article Number e654, DOI 10.7717/peerj-cs.654, Published AUG 2 2021, Indexed 2021-09-28, Accession Number: WOS:000697099500002, eISSN 2376-5992

IF = 1,392 - Q1

11.

Asad Muhammad Usman; G, Jason; Farooq Umar; Balas Valentina E. (Corresponding author); Chen Zheng; Chang Chunqi; Hanif Athar, *A Composite State Convergence Scheme for Multilateral Teleoperation Systems*, Studies in Informatics and Control, Volume 30; Issue 2; Page 33-42, DOI 10.24846/v30i2y202103, Published JUN 2021; Indexed 2021-07-15, Accession Number WOS:000665728800003

IF = 1,649 – Q3

12.

Albahli Saleh; Rauf Hafiz Tayyab; Algosaibi Abdulelah, Balas Valentina Emilia (Corresponding author), *AI-driven deep CNN approach for multi-label pathology classification using chest X-Rays*, Peerj Computer Science, Peerj Computer Science, Article Number e495, DOI 10.7717/peerj-cs.495, Published APR 20 2021, Indexed 2021-05-24
Accession Number: WOS:000645430200001, eISSN 2376-5992

IF = 1,392 - Q1

13.

Venkatraman Yegnanarayanan; Narayanaa Y. Krithicaa; Balas Valentina E.; Rad Dana, *Graph Theory Applications to Comprehend Epidemics Spread of Disease*, BRAIN-BROAD RESEARCH IN ARTIFICIAL INTELLIGENCE AND NEUROSCIENCE, Volume 12, Issue 2, Page 161-177, DOI 10.18662/brain/12.2/198; Published JUN 2021
Indexed 2021-09-02, Accession Number WOS:000688360400010, ISSN 2067-3957

ESCI, IF=0

14.

Ashraf Naveed, Izhar Tahir, Abbas Ghulam, Awan Ahmed Bilal, Alghamdi Ali S., Abo-Khalil Ahmed G., Sayed Khairy, Farooq Uma, Balas Valentina E.,
A New Single-Phase Direct Frequency Controller Having Reduced Switching Count without Zero-Crossing Detector for Induction Heating System
ELECTRONICS, Volume: 9, Issue: 3, Article Number: 430, DOI: 10.3390/electronics9030430
Published: MAR 2020

IF=1,764-Q3

15.

Ashraf Naveed, Izhar Tahir, Abbas Ghulam, Awan Ahmed Bilal, Farooq Umar, Balas Valentina E,
A New Single-Phase AC Voltage Converter with Voltage Buck Characteristics for Grid Voltage Compensation
IEEE ACCESS, Volume: 8, Pages: 48886-4890, DOI: 10.1109/ACCESS.2020.2979506
Published: 2020

IF=4,098-Q1

16.

Lin, Yu-Chen, Balas, Valentina Emilia, Balas, Marius Mircea, Peng, Jian-Zhang, Adaptive Backstepping Nonsingular Fast Terminal Sliding Mode Control for Hydro-Turbine Governor Design, ENERGIES, Volume: 13, Issue: 1, Article Number: 126, DOI: 10.3390/en13010126
Published: JAN 2020

IF=2,707-Q3

17.

Shahid, Muhammad Arslan, Abbas, Ghulam, Hussain, Mohammad Rashid, Asad, Muhammad Usman, Farooq, Umar, Gu, Jason, Balas, Valentina E., Uzair, Muhammad, Awan, Ahmed Bilal, Yazdan, Tanveer,Artificial Intelligence-Based Controller for DC-DC Flyback Converter , APPLIED SCIENCES-BASEL, Volume: 9 Issue: 23 Article Number: 5108
Published: DEC 2019

IF=2,217-Q2

18.

Asad, Muhammad Usman; Farooq, Umar; Gu, Jason ; Balas, Valentina E. ; Abbas, Ghulam; Balas, Marius ; Muresan, Vlad - An enhanced state convergence architecture incorporating disturbance observer for bilateral teleoperation systems, INTERNATIONAL JOURNAL OF ADVANCED ROBOTIC SYSTEMS, Volume: 16, Issue: 5
Article Number: 1729881419880052, DOI: 10.1177/1729881419880052
Published: SEP 2019

IF=1,223-Q4

19.

Asad, Muhammad Usman; Farooq, Umar; Gu, Jason; Abbas, Ghulam; Liu, Rong ; Balas, Valentina E. - A composite state convergence scheme for bilateral teleoperation systems, IEEE-CAA JOURNAL OF AUTOMATICA SINICA
Volume: 6, Issue: 5, Pages: 1166-1178, DOI: 10.1109/JAS.2019.1911690
Published: SEP 2019

ESCI

20.

Tahir, Umair ; Abbas, Ghulam; Glavan, Dan Ovidiu ; Balas, Valentina E. ; Farooq, Umar; Balas, Marius M.; Raza, Ali; Asad, Muhammad Usman ; Gu, Jason - Design of Three Phase Solid State Transformer Deployed within Multi-Stage Power Switching Converters, APPLIED SCIENCES-BASEL, Volume: 9, Issue: 17, Article Number: 3545
DOI: 10.3390/app9173545
Published: SEP 1, 2019

IF=2,217-Q2

21.

Pandey, Ashish; Rajan, Abhishek; Nandi, Arnab; Balas, Valentina E. - On Lifetime Enhancement of Super Nodes based Wireless Sensor Networks by using Sine Cosine Algorithm, JOURNAL OF INFORMATION SCIENCE AND ENGINEERING, Volume: 35, Issue: 5, Pages: 1147-1159, Special Issue: SI, DOI: 10.6688/JISE.201909_35(5).0013
Published: SEP 2019

IF=0,525-Q4

22.

Abbas, Ghulam; Nazeer, Muhammad Qumar ; Balas, Valentina E. ; Lin, Tsung-Chih ; Balas, Marius M.; Asad, Muhammad Usman; Raza, Ali ; Shehzad, Muhammad Naeem ; Farooq, Umar; Gu, Jason, Derivative-Free Direct Search Optimization Method for Enhancing Performance of Analytical Design Approach-Based Digital Controller for Switching Regulator, ENERGIES, Volume: 12, Issue: 11, Article Number: 2183, DOI: 10.3390/en12112183
Published: JUN 1 2019

IF=2,707-Q3

23.

Ashraf, Naveed ; Izhar, Tahir; Abbas, Ghulam ; Balas, Valentina E.; Balas, Marius M. ; Lin, Tsung-Chih; Asad, Muhammad Usman ; Farooq, Umar; Gu, Jason, A Single-Phase Buck and Boost AC-to-AC Converter with Bipolar Voltage Gain: Analysis, Design, and Implementation, ENERGIES, Volume: 12, Issue: 7, Article Number: 1376
DOI: 10.3390/en12071376
Published: APR 1 2019

IF=2,707-Q3

24.

Dhiman, Harsh S.; Deb, Dipankar; Muresan, Vlad; Balas, Valentina E., Wake Management in Wind Farms: An Adaptive Control Approach, ENERGIES, Volume: 12, Issue: 7
Article Number: 1247, DOI: 10.3390/en12071247,
Published: APR 1 2019

IF=2,707-Q3

25.

Jagatheesan, K.; Anand, B.; Samanta, Sourav; Dey, Nilanjan; Ashour, Amira S.; Balas, Valentina E., Design of a Proportional-Integral-Derivative Controller for an Automatic Generation Control of Multi-area Power Thermal Systems Using Firefly Algorithm, IEEE-CAA JOURNAL OF AUTOMATICA SINICA, Volume: 6, Issue: 2, Pages: 503-515
DOI: 10.1109/JAS.2017.7510436,
Published: MAR 2019

ESCI

26.

Farooq, Umar; Gu, Jason; Balas, Valentina E.; Abbas, Ghulam; Asad, Muhammad Usman; Balas, Marius M., A Hybrid Time Series Forecasting Model for Disturbance Storm Time Index using a Competitive Brain Emotional Neural Network and Neo-Fuzzy Neurons, ACTA POLYTECHNICA HUNGARICA, Volume: 16, Issue: 4, Pages: 213-229
DOI: 10.12700/APH.16.4.2019.4.11
Published: 2019

IF=1,286-Q3

27.

Optimized Digital Controllers for Switching-Mode DC-DC Step-Down Converter
G Abbas, J Gu, U Farooq, M Abid, A Raza, M Asad, V Balas, M Balas
Electronics, 7 (12), 412
2018

IF=2,11–Q2

28.

Visual analysis of geospatial habitat suitability model based on inverse distance weighting with paired comparison analysis
R Varatharajan, G Manogaran, MK Priyan, VE Balaş, C Barna

MULTIMEDIA TOOLS AND APPLICATIONS , Volume: 77 Issue: 14 Pages: 17573-17593
2018
IF=1,541-Q2

29.
Secure VANETs: Trusted Communication Scheme between Vehicles and Infrastructure Based on Fog Computing
Arif, Muhammad; Wang, Guojun; Balas, Valentina Emilia
STUDIES IN INFORMATICS AND CONTROL, Volume: 27 Issue: 2 Pages: 235-246
2018
IF=1,02-Q4

30.
Image feature-based affective retrieval employing improved parameter and structure identification of adaptive neuro-fuzzy inference system
Dan Wang, Ting He, Zairan Li, Luying Cao, Nilanjan Dey, Amira S Ashour, Valentina E Balas, Pamela McCauley, Yezhi Lin, Jiang Xu, Fuqian Shi
NEURAL COMPUTING & APPLICATIONS , Volume: 29 Issue: 4 Pages: 1087-1102
2018
IF=4,215-Q1

31.
Estimating heating load in buildings using multivariate adaptive regression splines, extreme learning machine, a hybrid model of MARS and ELM
Roy, Sanjiban Sekhar; Roy, Reetika; Balas, Valentina E.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, Volume: 82 Pages: 4256-4268 Part: 3
2018
IF=9,184-Q1

32.
Design of a Single-Master/Multi-Slave Nonlinear Teleoperation System through State Convergence with Time Varying Delays
Farooq, Umar, Asad, Muhammad Usman, Gu, Jason, Abbas, Ghulam, Balas, Valentina E., Balas, Marius M.
ACTA POLYTECHNICA HUNGARICA, Volume: 15 Issue: 8 Pages: 55-82
Published: 2018
IF=0,909-Q3

33.
State Convergence-based Control of a Multi-Master-Single-Slave Non-linear Teleoperation System
Umar Farooq, Jason Gu, Mohamed El-Hawary, Valentina E Balas, Marius M Balas, Ghulam Abbas, Muhammad Usman Asad, Jun Luo
ACTA POLYTECHNICA HUNGARICA, Volume: 15 Issue: 4 Pages: 7-26
2018
IF=0,909-Q3

34.
Load frequency control of multi-area interconnected thermal power system: artificial intelligence-based approach
K Jagatheesan, B Anand, N Dey, AS Ashour, VE Balas
International Journal of Automation and Control, 12 (1), 126-152
2018
ESCI

35.
Application of flower pollination algorithm in load frequency control of multi-area interconnected power system with nonlinearity , NEURAL COMPUTING & APPLICATIONS
Jagatheesan, K.; Anand, B.; Samanta, Sourav; Dey, Nilanjan; Santhi, V.; Ashour, Amira S.; Balas, Valentina E.
NEURAL COMPUTING & APPLICATIONS , Volume: 28 Supplement: 1 Pages: S475-S488
2017
IF=4,215-Q1

36.
Optimization of 5.5-GHz CMOS LNA parameters using firefly algorithm, NEURAL COMPUTING & APPLICATIONS
Kumar, Ram; Rajan, Abhishek; Talukdar, Fazal A.; Dey, Nilanjan; Santhi, V.; Balas, Valentina E.
NEURAL COMPUTING & APPLICATIONS , Volume: 28 Issue: 12 Pages: 3765-3779
2017
IF=4,215-Q1

37.
A new clustering protocol for energy harvesting-wireless sensor networks
Bozorgi, Seyed Mostafa; Rostami, Ali Shokouhi' Hosseinabadi, Ali Asghar Rahmani, Balas, Valentina Emilia
COMPUTERS & ELECTRICAL ENGINEERING, Volume: 64, Pages: 233-247
2017
IF=1,747-Q2

38.
Improved Energy Detector for Spectrum Sensing Using Neuro-Fuzzy Double Threshold Technique

Dey, Barnali; Hossain, Ashraf; Balas, Valentina. E.; Bera, R. N.
Studies in Informatics and Control, Volume: 26 Issue: 3 Pages: 335-342
2017
IF=1,02-Q4

39.
Particle swarm optimization trained neural network for structural failure prediction of multistoried RC buildings
Chatterjee, Sankhadeep; Sarkar, Sarbartha; Hore, Sirshendu; Dey, Nilanjan; Ashour, Amira S.; Balas, Valentina E.,
NEURAL COMPUTING & APPLICATIONS , Volume: 28 Issue: 8 Pages: 2005-2016
2017
IF=4,215-Q1

40.
Convolutional Neural Network Based Clustering and Manifold Learning Method for Diabetic Plantar Pressure Imaging Dataset
Li, Zairan; Dey, Nilanjan; Ashour, Amira S.; Cao, Luying; Wang, Yu; Wang, Dan; McCauley, Pamela; Balas, Valentina E.; Shi, Kai; Shi, Fuqian
JOURNAL OF MEDICAL IMAGING AND HEALTH INFORMATICS, Volume: 7 Issue: 3 Pages: 639-652
2017
IF=0,549-Q4

41.
Nonparametric de-noising filter optimization using structure-based microscopic image classification
Beagum, Samsad; Dey, Nilanjan; Ashour, Amira S.; Sifaki-Pistolla, Dimitra; Balas, Valentina E.
MICROSCOPY RESEARCH AND TECHNIQUE, Volume: 80 Issue: 4 Pages: 419-429
2017
IF=1,087-Q3

42.
Image Fusion Incorporating Parameter Estimation Optimized Gaussian Mixture Model and Fuzzy Weighted Evaluation System: A Case Study in Time-Series Plantar Pressure Data Set
Wang, Dan; Li, Zairan; Cao, Luying; Balas, Valentina E.; Dey, Nilanjan; Ashour, Amira S.; McCauley, Pamela; Dimitra, Sifaki-Pistolla; Shi, Fuqian
IEEE SENSORS JOURNAL , Volume: 17 Issue: 5 Pages: 1407-1420
2017
IF=2,617-Q1

43.
Rule-based back propagation neural networks for various precision rough set presented KANSEI knowledge prediction: a case study on shoe product form features extraction
Li, Zairan; Shi, Kai; Dey, Nilanjan; Ashour, Amira S.; Wang, Dan; Balas, Valentina E.; McCauley, Pamela; Shi, Fuqian
NEURAL COMPUTING & APPLICATIONS, Volume: 28 Issue: 3 Pages: 613-630
2017
IF=4,215-Q1

44.
Fuzzy Model-based Design of a Transparent Controller for a Time Delayed Bilateral Teleoperation System Through State Convergence
Umar Farooq, Jason Gu, Mohamed E. El-Hawary, Valentina E. Balas, Muhammad Usman Asad, Ghulam Abbas
Acta Polytechnica Hungarica, Vol. 14, No. 8, 2017, pag. 7-26
2017
IF=0,909-Q3

45.
Stochastic optimal controller design for medium access constrained networked control systems with unknown dynamics
Balasubramaniyan, Sreram; Srinivasan, Seshadhri; Kebraei, Hamed; Subathra, B.; Balas, Valentina Emilia; Glielmo, Luigi
INTELLIGENT DECISION TECHNOLOGIES-NETHERLANDS, Volume: 11 Issue: 3 Pages: 253-264
2017
ESCI

46.
An optimal vibration control strategy for robust active suspension systems design with actuator delays and uncertainties
By: Lin, Y. C.; Lin, T. C.; Peng, C. K.; Balas V.E.
INTELLIGENT DECISION TECHNOLOGIES-NETHERLANDS, Volume: 11 Issue: 3 Pages: 345-356
Published: 2017
ESCI

47.
Optimal Access Class Barring in Machine to Machine Systems with Random Activation Time
Shah-Mansouri, Vahid; Srinivasan, Seshadhri; Balas, Valentina E.
INFORMATICA, Volume: 28 Issue: 2 Pages: 285-302
2017

IF=1,386-Q2

48.
AGC of multi-area interconnected power systems by considering different cost functions and Ant Colony Optimization technique based PID controller
Jagatheesan, K.; Anand, B.; Dey, Nilanjan; Omar, M., Balas, Valentina E.
INTELLIGENT DECISION TECHNOLOGIES-NETHERLANDS, Volume: 11 Issue: 1, Pages: 29-38
2017
ESCI

49.
FbMapping: AN AUTOMATED SYSTEM FOR MONITORING FACEBOOK DATA
Kamal, S.; Dey, N.; Ashour, A. S.; Ripon, S.; Balas, V. E.; Kaysar, M. S.
NEURAL NETWORK WORLD, Volume: 27 Issue: 1 Special Issue: SI Pages: 27-57
2017
IF=0,5-Q1

50.
Effect of fuzzy partitioning in Crohn's disease classification: a neuro-fuzzy-based approach
Ahmed, Sk. Saddam; Dey, Nilanjan; Ashour, Amira S.; Sifaki-Pistolla, Dimitra; Balas-Timar, Dana; Balas, Valentina E.; Tavares, Joao Manuel R. S.
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, Volume: 55 Issue: 1 Pages: 101-115
2017
IF=1,971-Q2

51.
An optimal vibration control strategy for robust active suspension systems design with actuator delays and uncertainties
Lin, Y. C.; Lin, T. C.; Peng, C. K.; Balas, V. E.
INTELLIGENT DECISION TECHNOLOGIES-NETHERLANDS, Volume: 11 Issue: 3 Pages: 345-356
2017
ESCI

52.
Fast and accurate fuzzy C-means algorithm for MR brain image segmentation
Hemanth, D. Jude; Anitha, J.; Balas, Valentina Emilia
INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY, Volume: 26, Issue: 3, 2016, Pages: 188-195
2016
IF=1,423-Q3

53.
Neural-based prediction of structural failure of multistoried RC buildings
Hore, Sirshendu; Chatterjee, Sankhadeep; Sarkar, Sarbartha; Dey, Nilanjan; Ashour, Amira S.; Balas-Timar, Dana; Balas, Valentina E.
STRUCTURAL ENGINEERING AND MECHANICS, Volume: 58, Issue: 3, 2016, Pages: 459-473
2016
IF=2,191-Q2

54.
Generalized Predictive Controller for Ball Mill Grinding Circuit in the Presence of Feed-grindability Variations
Venkatesh, Sivanandam; Ramkumar, Kannan; Guruprasath, Muralidharan; Srinivasan, Seshadhri; Balas, Valentina E
STUDIES IN INFORMATICS AND CONTROL, Volume: 25, Issue: 1, 2016, Pages: 29-38
2016
IF=1,02-Q4

55.
Curvature manipulation of the spectrum of Valence-Arousal-related fMRI dataset using Gaussian-shaped Fast Fourier Transform and its application to fuzzy KANSEI adjectives modeling
He, Ting; Cao, Luyin; Balas, Valentina E.; McCauley, Pamela; Shi, Fuqian
NEUROCOMPUTING, Volume: 174, 2016, Pages: 1049-1059, Part: B
2016
IF=3,241-Q1

56.
Modeling and optimization of Quality of Service routing in Mobile Ad hoc Networks
Rafsanjani, Marjan Kuchaki, Fatemidokht, Hamideh, Balas, Valentina Emilia
OPEN PHYSICS, Volume: 14, Issue: 1, Pages: 498-507
2016
IF=0,755-Q4

57.
Stochastic Wheel-Slip Compensation Based Robot Localization and Mapping
Sidharthan, Rakesh Kumar; Kannan, Ramkumar; Srinivasan, Seshadhri; Balas, Valentina Emilia
ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, Volume: 16, Issue: 2, 2016, Pages: 25-3

2016
IF=0,699-Q4
58.
Adaptive Model Predictive Controller for Web Transport Systems
Muthukumar, N.; Srinivasan, Seshadhri; Ramkumar, K.; Kannan, K.; Balas, Valentina Emilia
ACTA POLYTECHNICA HUNGARICA, Volume: 13, Issue: 3, 2016, Pages: 181-194
2016
IF=0,909-Q3
59.
Tuning Multivariable Decentralized PID Controller Using State Transition Algorithm
G. Saravanakumar, K. Valarmathi, M. Pallikonda Rajasekaran, Seshadhri Srinivasan, M. Willjuice Iruthayarajan, Valentina E. Balas
Studies in Informatics and Control, Volume: 24 Issue: 4 Pages: 367-378
2015
IF=1,02-Q4
60.
Grid Color Moment Features in Glaucoma Classification
Ghosh, Abir, Sarkar, Anurag, Ashour, Amira S., Balas-Timar, Dana, Dey, Nilanjan, Balas, Valentina E.
INTERNATIONAL JOURNAL OF ADVANCED COMPUTER SCIENCE AND APPLICATIONS
Volume: 6, Issue: 9, Pages: 99-107
2015
ESCI
61.
Improved Delay-Range-Dependent Stability Analysis of a time-delay system with Norm Bounded Uncertainty
R Dey, S Ghosh, G Ray, A Rakshit, VE Balas
ISA Transactions, Volume: 58, Pages: 50-57
2015
IF=3,37-Q1
62.
Performance Improved Modified Fuzzy C-Means Algorithm for Image Segmentation Applications
D. Jude Hemanth, J. Anitha, Valentina E. Balas
Informatica Lithuan International Journal, Volume: 26 Issue: 4 Pages: 635-648
2015
IF=1,386-Q2
63.
Supervisory GPC and Evolutionary PI Controller for Web Transport Systems
N. Muthukumar, Seshadhri Srinivasan, K. Ramkumar, P. Kavitha and Valentina Emilia Balas
ACTA POLYTECHNICA HUNGARICA, Volume: 12, Issue: 5, Pages: 135-153
2015
IF=0,909-Q3
64.
Hand Vein based Multimodal Biometric Recognition
S.Bharathi, R.Sudhakar, Valentina E Balas
ACTA POLYTECHNICA HUNGARICA, Volume: 12, Issue: 6, Pages: 213-229
2015
IF=0,909-Q3
65.
Multi-source information fusion model in rule-based Gaussian-shaped fuzzy control inference system incorporating Gaussian density function
Zairan Li, Ting He, Luying Cao, Pamela McCauley, Valentina Emilia Balas, Shi Fuqian
Journal of Intelligent and Fuzzy Systems, Volume: 29, Issue: 6, Pages: 2335-2344
2015
IF=1,426-Q3
66.
A Content-based Image Retrieval System Based on Convex Hull Geometry
Santhosh P Mathew, Valentina Emilia Balas, Zacharia K.P
ACTA POLYTECHNICA HUNGARICA, Volume: 12, Issue: 1, Pages: 103-116
2015
IF=0,909-Q3
67.
Real-time fuzzy system identification using uncertainty bounds
Lin, Tsung-Chih; Kuo, Chia-Hao; Balas, Valentina Emilia
NEUROCOMPUTING, Volume: 125 Special Issue: SI Pages: 195-216
2014
IF=3,241-Q1

68.
A Content-based Image Retrieval System Based on Polar Raster Edge Sampling Signature
Mathew, Santhosh P., Balas, Valentina E., Zachariah, K. P., Samuel, Philip
ACTA POLYTECHNICA HUNGARICA, Volume: 11, Issue: 3, Pages: 25-36
2014
IF=0,909-Q3
69.
Fuzzy Membership, Possibility, Probability and Negation in Biometrics
Popescu-Bodorin, Nicolaie; Balas, Valentina E.
ACTA POLYTECHNICA HUNGARICA, Volume: 11 Issue: 4 Special Issue: SI Pages: 79-100
2014
IF=0,909-Q3
70.
Adaptive fuzzy H-infinity tracking design of SISO uncertain nonlinear fractional order time-delay systems
Lin, Tsung-Chih; Kuo, Chia-Hao; Lee, Tun-Yuan; Balas, Valentina Emilia
NONLINEAR DYNAMICS, Volume: 69 Issue: 4 Pages: 1639-1650
2012
IF=4,339-Q1
71.
A New Approach to Nonlinear Tracking Control Based on Fuzzy Approximation
Du, Z.; Lin, T. -C.; Balas, V. E.
INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL, Volume: 7 Issue: 1 Pages: 61-72
2012
IF=1,29-Q3
72.
Adaptive fuzzy sliding mode control for synchronization of uncertain fractional order chaotic systems
Lin, Tsung-Chih; Lee, Tun-Yuan; Balas, Valentina E.
CHAOS SOLITONS & FRACTALS, Volume: 44 Issue: 10 Pages: 791-801
2011
IF=2,213-Q1
73.
Uncertain Fractional Order Chaotic Systems Tracking Design via Adaptive Hybrid Fuzzy Sliding Mode Control
Lin, T. C.; Kuo, C. H.; Balas, V. E.
INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL
Volume: 6 Issue: 3 Special Issue: SI Pages: 418-427
2011
IF=1,29-Q3
74.
World knowledge for sensors and estimators by models and internal models
Volume: 21 Issue: 1-2 Pages: 79-88
Balas, V. E.; Jain, L. C.
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, Volume: 21 Issue: 1-2 Pages: 79-88
2010
IF=1,426-Q3
75.
World knowledge for control applications by fuzzy-interpolative systems
Balas, Marius M.; Balas, Valentina E.
INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL, Volume: 3 Pages: 28-32
2008
IF=1,29-Q3
76.
Constant time to collision platoons
Balas, Valentina E.; Balas, Marius M.
INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL, Volume: 3 Supplement: S Pages: 33-39
2008
IF=1,29-Q3
77.
Fusion devices and changes of belief
Balas, V. E.; Roventa, E.; Spircu, T.
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, Volume: 19 Issue: 1 Pages: 9-18
2008
IF=1,426-Q3

Articole ISI Proceedings

1. R. E. Precup, S. Preitl, Marius M. Bălaş, Valentina E. Bălaş, *Fuzzy Controllers for Tire Slip Control in Anti-lock Braking Systems.* Proceedings of the 2004 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE ,04, Budapest, 25-29 July 2004, Volume 3, pag. 1317 – 1322, Indexed by INIST-CNRS, Cote INIST: Y 38577(1), 35400013866828.2270, Indexed by IEE INSPEC IEEE CNF, INSPEC Accession Number: 8254425, IEEE Catalog Number 04CH37542, ISBN 0-7803-8353-2, ISSN 1098-7584, **INSPEC Indexed, IEEE Xplore, *(ARC Cat. A).***
2. Marius M. Bălaş, Valentina E. Bălaş, *Modeling Passive Greenhouses. The Sun's Influence*, **INES 2008,** 12th IEEE International Conference on Intelligent Engineering Systems, **February 25-29, Miami, Florida, USA, pp.71-75,** IEEE Catalog Number: CFP08IES-CDR, ISBN: 978-1-4244-2083-4, Library of Congress: 2008900450, **INSPEC Indexed, IEEE Xplore, ISI Proceedings.**
3. Dana Bălaş-Timar, Valentina E. Bălaş, *Decision Making in Human Resources Selection Methodology*, **2nd IEEE International Workshop on Soft Computing Applications, 21-23 August 2007, Gyula-Hungary, Oradea-Romania, pp. 123-127, IEEE Catalog Number: CFP0728D, ISBN 978-1-4244-1607-3, Library of Congreso 2007905895,** Digital Object Identifier 10.1109/SOFA.2007.4318316, Indexed by IEE INSPEC IEEE CNF, **INSPEC Indexed, IEEE Xplore, ISI Proceedings, *(ARC Cat. C).***
4. Navid Noroozi, Mehdi Roopaei, Valentina E. Bălaş, Tsung-Chih Lin, *Observer-Based Adaptive Variable Structure Control and Synchronization of Unknown Chaotic Systems*, 5th International Symposium on Applied Computational Intelligence and Informatics, SACI 2009, May 28-29, 2009, Timisoara, Romania, pag. 71-76, ISBN: 978-1-4244-4478-6, IEEE Catalog Number CFP0945C-CDR, Library of Congress 2009903350, Digital Object Identifier10.1109/SACI.2009.5136215 **BDI Indexed, INSPEC, IEEE Xplore, ISI Proceedings, *(ARC Cat. C).***
5. Marius M. Bălaş, Valentina E. Bălaş, J. Duplaix, *Optimizing the Distance-Gap between Cars by Constant Time to Collision Planning*. **2007 IEEE International Symposium on Industrial Electronics, June 4-7, 2007, Vigo, Spain, pag. 109 Abstract Book, CD Proceedings, pag. 304-309, IEEE Catalog Number: 07TH8928C, ISBN: 1-4244-0755-9 Library of Congress: 2006935487, INSPEC Indexed, IEEE Xplore, ISI Proceedings.**
6. Marius M. Bălaş, Valentina E. Bălaş, C Barna, *The Constant Effort Imposed Distance Braking for Urban Railway Vehicles*. EUROCON 2005 – The International Conference "Computer as a Tool", Belgrade, Serbia and Montenegro, November 21-24, 2005, IEEE Catalog Number: 05EX1255C. ISBN: 1-4244-0050-3, pag. 365-368, Indexed by IEE INSPEC IEEE CNF, **INSPEC Indexed, IEEE Xplore.**
7. Mehdi Roopaei, Valentina E. Bălaş, *Adaptive Gain Sliding Mode Control in Uncertain MIMO Systems*, 3rd International Workshop on Soft Computing Applications, SOFA2009, 29 July – 1 August 2009, Szeged (Hungary) – Arad (Romania), IEEE Catalog Number CFP0928D-PRT, ISBN 978-1-4244-5054-1, Library of Congress: 2009907136, pag. 75-79, , **INSPEC Indexed, IEEE Xplore, ISI Proceedings, *(ARC Cat. C.)***
8. Valentina E, Bălaş, V. Ceregan, A. Codrean, T. L. Dragomir, *Extension of a Control Structure with PSAIC*, 3rd International Workshop on Soft Computing Applications, SOFA2009, 29 July – 1 August 2009, Szeged (Hungary) – Arad (Romania), IEEE Catalog Number CFP0928D-PRT, ISBN 978-1-4244-5054-1, Library of Congress: 2009907136, pag. 81-84, **INSPEC Indexed, IEEE Xplore., ISI Proceedings, *(ARC Cat. C).***
9. Marius M. Balas, Valentina E. Balas, *A Sustainable Alimentation System for Our Future: The Passive Greenhouse*, Proceedings of the European Computing Conference (ECC '09) and the 3rd International Conference on COMPUTATIONAL INTELLIGENCE (CI'09), SESSION: COMPUTATION INTELLIGENCE APPLICATION, Tbilisi, Georgia, June 26-28, 2009, pag. 86-90, ISSN 1790-5117, ISBN 978-960-474-088-8
10. I. Szeidert, O. Prostean, N. Budisan, I. Filip, V.E. Balas, G. Prostean, *Viewpoint on Wind Energy Usage in Romania- Banat Region*, Proceedings of the WSEAS International Conference, 11th WSEAS International Conference os Sustainability in Science Engineering (SSE '09), Timisoara, Romania, May 27-29, 2009, pag. 17-21, ISSN: 1790-2769, ISBN: 978-960-474-080-2
11. V.E Balas, *Fuzzy Techniques and Internal Models for Sensors*, Recent Advances in Fuzzy Systems, Proceedings of the 10th WSEAS International Conference on Fuzzy Systems (FS '09), Prague, Czech Republic, March 23-25, 2009**,** pag.13-17, ISBN: 978-960-474-066-6, ISSN: 1790-5109
12. M. M. Balas, V. E. Balas, N. E. Mastorakis, *The Fuzzy-Interpolative Adaptive Controllers*, Recent Advances in Fuzzy Systems, Proceedings of the 10th WSEAS International Conference on Fuzzy Systems (FS '09), Prague, Czech Republic, March 23-25, 2009, pag.18-21, ISBN: 978-960-474-066-6, ISSN: 1790-5109
13. Marius M. Bălaş, Valentina E. Bălaş, *Monoscopic CCD Cameras as Distance Sensors*, Editors: Calin Enachescu, Petru Maior University, Tg. Mures, Romania; Barna L. Iantovics, Petru Maior University, Romania ; Gheorghe F. Florin, Romanian Academy, Bucharest, Romania, BICS 2008: Proceedings of the 1st International Conference Bio-Inspired Computational Methods Used for Solving Difficult Problems--Development of Intelligent and Complex Systems, American Institute of Physics, Conference Proceedings Volume 1117, 2009, ISBN: 978-0-7354-0654-4, pp. 67-73, http://proceedings.aip.org/dbt/dbt.jsp?KEY=APCPCS&Volume=1117&Issue=1
14. Valentina E. Bălaş, Marius M. Bălaş, ***On the Switching Control*, Editors:** Calin Enachescu, Petru Maior University, Tg. Mures, Romania ; Barna L. Iantovics, Petru Maior University, Romania ; Gheorghe F. Florin, Romanian Academy, Bucharest, Romania, BICS 2008: Proceedings of the 1st International Conference Bio-Inspired Computational Methods Used for Solving Difficult Problems--

Development of Intelligent and Complex Systems, American Institute of Physics, Conference Proceedings Volume 1117, 2009, ISBN: 978-0-7354-0654-4, pp. 81-88, ENVIRO http://proceedings.aip.org/dbt/dbt.jsp?KEY=APCPCS&Volume=1117&Issue=1

15. V. E. Balas, A. V. Stoica, A. L. Rugea. *Automatic Library Assistant*, Distance Learning, Multimedia and Video Technologies, Proceedings of the 8th WSEAS International Conference on MULTIMEDIA, INTERNET & VIDEO TECHNOLOGIES (MIV '08) & Proceedings of the 8th WSEAS International Conference on DISTANCE LEARNING and WEB ENGINEERING (DIWEB '08), ISSN: 1790-5109, ISBN: 978-960-474-005-5, Santander, Cantabria, Spain, September 23-25, 2008, pag. 185-190

16. Valentina E. Bălaş, Marius M. Bălaş, Mircea V. Putin-Racoviţă, *Passive Greenhouses and Ecological Reconstruction*, **INES 2008,** 12th IEEE International Conference on Intelligent Engineering Systems, **February 25-29, Miami, Florida, USA, pp.77-81,** IEEE Catalog Number: CFP08IES-CDR, ISBN: 978-1-4244-2083-4, Library of Congress: 2008900450

17. Marius M. Bălaş, Valentina E. Bălaş**,** *Some Observations on Stability of Switching Adaptive Rule Based of Fuzzy Self-Adapted Interpolative Controllers*. **ISCIII'07 3rd International Symposium on Computational Intelligence and Intelligent Informatics, Proceedings, March 28-30, 2007, Agadir, Morocco, pag. 63-66, IEEE Catalog Number: 07EX1756, ISBN: 1-4244-1157-2**

18. Valentina E. Bălaş, Marius M. Bălaş, *Switching Adaptive Correctors for Fuzzy Fusion Self Adapted Interpolative Controllers*. **ISCIII'07 3rd International Symposium on Computational Intelligence and Intelligent Informatics, Proceedings, March 28-30, 2007, Agadir, Morocco, pag. 67-72, IEEE Catalog Number: 07EX1756, ISBN: 1-4244-1157-2**

19. Marius M. Bălaş, Valentina E. Bălaş, *A Simple Model of the Air Conditioning Installation of a Compartmented Railway Coach*, **ICCC 2007, Proceedings, 5th IEEE International Conference on Computational Cybernetics, Gammart, Tunisia, October 19-21, 2007, pp. 271-274,** IEEE Catalog Number: 07EX1750C, ISBN: 1-4244-1146-7, Library of Congress: 2007922966

20. **Marius M. Bălaş, Valentina E. Bălaş,** *World Knowledge for Control Applications*. **INES 2007 Proceedings, 29 June-1 July 2007, Budapest, Hungary, 11th International Conference on Intelligent Engineering Systems, pag. 225-228, IEEE Catalog Number: 07EX1751, ISBN: 1-4244-1147-5, Library of Congreso: 2007922965**

21. **Marius M. Bălaş, Valentina E. Bălaş, J. Duplaix,** *On the Switching Controlers' Issue*, **2nd IEEE International Workshop on Soft Computing Applications, 21-23 August 2007, Gyula-Hungary, Oradea-Romania, pp. 103-108, IEEE Catalog Number: CFP0728D, ISBN 978-1-4244-1607-3, Library of Congreso 2007905895,** Digital Object Identifier 10.1109/SOFA.2007.4318313

22. M. Babescu, I. Filip, V. E. Balas, O. Prostean, C. Vasar. *Considerations regarding the Control of a Mixed Genset based on the usage of Synchronous and Asynchronous Generator*. Proceedings of the 2nd IASME/WSEAS International Conference on ENERGY and NMENT, Portoz (Portorose), Slovenia, May 15-17, 2007, pag.123-128, ISSN 1790-5095, ISBN 978-960-8457-69-0

23. N. Budisan, I. Filip, V. E. Balas, G. Prostean, I. Szeidert. *Considerations regarding the Induction Generator's Compound Excitation*. Proceedings of the 2nd IASME/WSEAS International Conference on ENERGY and ENVIRONMENT, Portoz (Portorose), Slovenia, May 15-17, 2007, pag.140-146, ISSN 1790-5095, ISBN 978-960-8457-69-0

24. Dana V. Balas-Timar, Valentina E. Bălaş, *Ability Estimation in CAT with Fuzzy Logic*, ISCIII'09 Proceedings, 4th International Symposium on Computational Intelligence and Intelligent Informatics, 21-25 October 2009, Egypt, pag. 55-62, IEEE Catalog Number: CFP0936C-CDR, ISBN: 978-1-4244-5382-5, Library of Congress: 2009909581

25. Tsung-Chih Lin, Tun-Yuan Lee, Valentina E. Bălaş, *Syncronization of Uncertain Order Chaotic Systems via Adaptive Interval Type-2 Fuzzy Sliding Mode Control*, 2011 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2011, June 27-30, 2011, Taipei, Taiwan, Proceedings ISBN 978-1-4244-7316-8/11, pag. 2882-2889

26. Tsung-Chih Lin, Chia-Hao Kuo, Valentina E. Bălaş, *Fractional Order Chaotic System Tracking Design Based on Adaptive Hybrid Intelligent Control*, 2011 IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2011, June 27-30, 2011, Taipei, Taiwan, Proceedings ISBN 978-1-4244-7316-8/11, pag. 2890-2896

27. Tsung-Chih Lin, Chia-Hao Kuo, Valentina Emilia Balas, *Real-Time Recurrent Interval Type-2 Fuzzy-Neural System Identification Using Uncertainty Bounds*, FUZZ-IEEE 2012, June 10-15, 2012, Brisbane, Australia, pag. 2087-2094

28. Tsung-Chih Lin, Chung-Ching Wang, I-Shin Liu, Valentina E. Bălaş, *Identifier Based Interval Type-2 Fuzzy Tracking Control*, The 2013 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2013), July 7-10, 2013, Hyderabad, India

29. M. Buzera, V. E. Balas, G. Proştean, N. Mastorakis, *Non destructive techniques of automatic shape classification of vegetal products*, Recent Advances in Neural Networks, Proceedings of the 10th WSEAS International Conference on Neural Networks (ICAI '09), Prague, Czech Republic, March 23-25, 2009, pag.184-187, ISBN: 978-960-474-064-2, ISSN: 1790-5117

30. Rajeeb Dey, Valentina E. Balas, T.C. Lin and G. Ray, Improved Delay-range-dependent Stability Analysis of a T-S Fuzzy System with Time Varying Delay, CINTI 2013, 14th IEEE International Symposium on Computational Intelligence and Informatics, 19-21 November 2013, Budapest, Hungary, pag.

173-178

31. Ting-Ching Chu, Tsung-Chih Lin and Valentina Emilia Balas, *Observer-based indirect adaptive supervisory control for unknown time delay system*, International Conference on Fuzzy Systems 2014, FUZZ-IEEE 2014, 1-11 July, Beijing, China, ISBN 978-1-4799-2073-0, pag. 1883-1890, DOI 10.1109/FUZZ-IEEE.2014.6891631

32. Farooq, Umar; Gu, Jason; El-Hawary, Mohamed E, Valentina E. Balas , Experimental Study of Optimal Takagi Sugeno Fuzzy Controller for Rotary Inverted Pendulum, , Muhammad Usman Asad, Edited by: Yazici, A; Pal, NR; Kaymak, U; et al., Conference: IEEE International Conference on Fuzzy Systems (FUZZ-IEEE) Location: Istanbul, TURKEY Date: AUG 02-05, 2015, Sponsor(s): IEEE; IEEE Computat Intelligence Soc; Middle E Tech Univ; Kadir Has Univ; Eindhoven Univ Technol
2015 IEEE INTERNATIONAL CONFERENCE ON FUZZY SYSTEMS (FUZZ-IEEE 2015) Book Series: IEEE International Fuzzy Systems Conference Proceedings Published: 2015

33. Adaptive Fuzzy Moving Sliding Mode Control of Unknown Multivariable Nonlinear Time Delay Systems Lin, Tsung-Chih; Kuo, Chia-Hao; Hung, Tseng-Chuan, Valentina E. Balas, Edited by: Yazici, A; Pal, NR; Kaymak, U; et al., Conference: IEEE International Conference on Fuzzy Systems (FUZZ-IEEE) Location: Istanbul, TURKEY Date: AUG 02-05, 2015, Sponsor(s): IEEE; IEEE Computat Intelligence Soc; Middle E Tech Univ; Kadir Has Univ; Eindhoven Univ Technol
2015 IEEE INTERNATIONAL CONFERENCE ON FUZZY SYSTEMS (FUZZ-IEEE 2015) Book Series: IEEE International Fuzzy Systems Conference Proceedings Published: 2015

34. Tsung-Chih Lin, Jian-Lin Yeh, Chia-Hao Kuo, Yu-Chen Lin and E. Balas Valentina, Adaptive Fuzzy Sliding Mode Active Vibration Control for Rail Vehicle Pantograph, IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2016) Vancouver, Canada, 24-29 July 2016, **DOI:** 10.1109/FUZZ-IEEE.2016.7737711

35. Davood M. Souran ; Saeed Tavakkoli ; Majid Hatamian ; Armin Mehrabian; Valentina E. Balas., *Classification of the Liver Disorders Data Using Multi-Layer Adaptive Neuro Fuzzy Inference System*, The Sixth International Conference on Computing, Communications and Networking Technologies (ICCCNT), July 13, art. no. 7395182, pages 1-4, ISBN 978-1-4799-7983-7

36. Jagatheesan, K.; Anand, B.; Santhi, V., Nilanjan Dey, Amira Ashour, Valentina E. Balas, *Dynamic Performance Analysis of AGC of MultiArea Power System Considering Proportional Integral-Derivative Controller with Different Cost Functions*, Source: 2016 International Conference on Electrical, Electronics, and Optimization Techniques (Iceeot) Pages: 171-176 Published: 2016

37. K.Jagatheesan, B.Anand, Nilanjan Dey, Amira S. Ashour, Valentina E. Balas, *Conventional controller based AGC of multi-area Hydro-Thermal power systems*, 2016 International Conference on Computer Communication and Informatics (*ICCCI* -2016), Jan. 07 – 09, 2016, Coimbatore, INDIA, ISBN 978-1-4673-6680-9, IEEE Xplore, pag. 560-565

38. K.Jagatheesan, B.Anand, Nillanjan Dey, Amira S. Ashour, Cornel Barna, Valentina E. Balas, *Automatic Generation Control of an Interconnected Multi-Area Reheat Thermal Power Systems with Conventional Proportional-Integral Controller Considering various Performance Indices*, SACI 2016, May, 2016, Timisoara, Romania, **DOI:** 10.1109/SACI.2016.7507387

39. Raja Rajeswari, P.; Raju, S. V.; Ashour, A. S., Nilanjan Dey, Valentina E. Balas , Active Site Cavities Identification of Amyloid beta precursor protein: Alzheimer Disease Study, INES 2016 20th Jubilee IEEE International Conference on Intelligent Engineering Systems Pages: 319-323 Published: 2016

40. Ahmad Taher Azar, Shaimaa A. El-Said, Valentina E. Bălaş and Teodora Olariu, *Linguistic Hedges Fuzzy Feature Selection for Differential Diagnosis of Erythemato-Squamous Diseases*, in Advances in Intelligent and Soft Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 5th International Workshop on Soft Computing Applications – SOFA 2012 August 22-24, 2012, Szeged, Hungary, V. E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L. C. Jain, (Eds.), Springer, 2013, ISBN 978-3-642-33941-7, pag. 487–500

41. Nicolaie Popescu-Bodorin, Valentina E. Bălaş and Iulia Maria Motoc, *The Biometric Menagerie – A Fuzzy and Inconsistent Concept*, in Advances in Intelligent and Soft Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 5th International Workshop on Soft Computing Applications – SOFA 2012 August 22-24, 2012, Szeged, Hungary, V. E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L. C. Jain, (Eds.), Springer, 2013, ISBN 978-3-642-33941-7, pp. 27–43

42. Tsung-Chih Lin, Wei-Nan Liao and Valentina E. Bălaş, *Memristor-Based Phase-Lead Controller Circuit Design*, in Advances in Intelligent and Soft Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 5th International Workshop on Soft Computing Applications – SOFA 2012 August 22-24, 2012, Szeged, Hungary, V. E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L. C. Jain, (Eds.), Springer, 2013, ISBN 978-3-642-33941-7, pag. 309–318

43. Rekik Ali, Gabsi Mounir, Valentina Emilia Balas, Masmoudi Nissen, *Fuzzy Evaluation Method for Project Profitability*, Volume 512 of the series Advances in Intelligent Systems and Computing, Selected Papers from the International Conference on Computer Science and Information Technologies, CSIT 2016, September 6-10 Lviv, Ukraine, pp 17-27, Springer 2016, http://link.springer.com/chapter/10.1007/978-3-319-45991-2_2

44. Jagatheesan K., Anand B., Dey Nillanjan, Ashour Amira S., Barna Cornel, Balas Valentina **E.**, *Automatic Generation Control of an Interconnected Multi-Area Reheat Thermal Power Systems with*

Conventional Proportional-Integral Controller Considering Various Performance Indices, 2016 IEEE 11TH INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI), Pages: 289-294, 2016

45. Farooq Umar, Gu Jason, El-Hawary Mohamed E., Balas Valentina E., Asad Muhammad Usman, *Experimental Study of Optimal Takagi Sugeno Fuzzy Controller for Rotary Inverted Pendulu,* 2015 IEEE INTERNATIONAL CONFERENCE ON FUZZY SYSTEMS (FUZZ-IEEE 2015), 2015, Turkey.

46. Rohatinovici, Noemi-Clara; Prostean, Octavian; Balas, Valentina E. *On Reliability of 3D Hammock Networks*, Conference: 12th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI) Location: Timisoara, ROMANIA Date: MAY 17-19, 2018 Sponsor(s): IEEE, 2018 IEEE 12TH INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI) Pages: 149-153 Published: 2018

47. Rohatinovici, Noemi-Clara; Cowell, Simon R.; Daus, Leonard; Poulin, P ; Dragoi, V ; Balas, VE ; Beiu, V *On Algorithms for Evaluating the Reliability of Large Hammock Networks* Conference: 7th International Conference on Computers Communications and Control (ICCCC) Location: Oradea, ROMANIA Date: MAY 08-12, 2018, Sponsor(s): IEEE; IEEE Reg 08; Agora Univ Oradea; R & D Agora, Cercetare Dezvoltare Agora, 2018 7TH INTERNATIONAL CONFERENCE ON COMPUTERS COMMUNICATIONS AND CONTROL (ICCCC 2018) Pages: 131-135 Published: 2018

48. Nath, Anirudh; Dey, Rajeeb; Balas, Valentina E. *Closed Loop Blood Glucose Regulation of Type 1 Diabetic Patient Using Takagi-Sugeno Fuzzy Logic Control* Conference: 7th International Workshop on Soft Computing Applications (SOFA) Location: Arad, ROMANIA Date: AUG 24-26, 2016
Sponsor(s): Aurel Vlaicu Univ Arad; Univ Belgrade; Romanian Acad, Iasi Branch, Inst Comp Sci; IEEE Romanian Sect; Romanian Soc Control Engn & Tech Informat, Arad Sect; Gen Assoc Engineers Romania, Arad Sect; BTM Resources Arad, SOFT COMPUTING APPLICATIONS, SOFA 2016, VOL 2 Book Series: Advances in Intelligent Systems and Computing Volume: 634 Pages: 286-296 Published: 2018

49. Najariyan, Marzieh; Mazandarani, Mehran; Balas, Valentina Emilia *Fuzzy Fractional Derivative: A New Definition* Conference: 7th International Workshop on Soft Computing Applications (SOFA) Location: Arad, ROMANIA Date: AUG 24-26, 2016, Sponsor(s): Aurel Vlaicu Univ Arad; Univ Belgrade; Romanian Acad, Iasi Branch, Inst Comp Sci; IEEE Romanian Sect; Romanian Soc Control Engn & Tech Informat, Arad Sect; Gen Assoc Engineers Romania, Arad Sect; BTM Resources Arad, SOFT COMPUTING APPLICATIONS, SOFA 2016, VOL 2 Book Series: Advances in Intelligent Systems and Computing Volume: 634 Pages: 314-329 Published: 2018

50. Najariyan, Marzieh; Mazandarani, Mehran; Balas, Valentina Emilia, *Solving First Order Linear Fuzzy Differential Equations System ,* Conference: 7th International Workshop on Soft Computing Applications (SOFA) Location: Arad, ROMANIA Date: AUG 24-26, 2016
Sponsor(s): Aurel Vlaicu Univ Arad; Univ Belgrade; Romanian Acad, Iasi Branch, Inst Comp Sci; IEEE Romanian Sect; Romanian Soc Control Engn & Tech Informat, Arad Sect; Gen Assoc Engineers Romania, Arad Sect; BTM Resources Arad, SOFT COMPUTING APPLICATIONS, SOFA 2016, VOL 2 Book Series: Advances in Intelligent Systems and Computing Volume: 634 Pages: 330-353

51. BT Gavrila, VE Balas, MM Balas, A Review on artificial pancreas mathematical models, Journal of Physics: Conference Series 2714 (1), 012005, 2024

Articole în Reviste şi Conferinţe BDI

1. AAP Lasc, VE Balas, FM Petcut, Real-Time Performance Evaluation of a MATLAB/Simulink-Based Residential PV System, 2025 International Conference on Circuit, Systems and Communication (ICCSC), Fez, Morocco, 19-20 June 2025, pag.1-5

2. VSP Ioana, BV Emilia, P Nicolae, Artificial Intelligence in Quality Management within the Automotive Industry 4.0: Real Life Applications, 2025 IEEE 29th International Conference on Intelligent Engineering Systems, INES 2025, 11-13 June, 2025, Palermo, Italy, DOI: 10.1109/INES67149.2025.11078204

3. MM Balas, VE Balas, FM Petcut, C Barna, R Dey, Automation of the Two-Second Rule via Constant Time-to-Collision Curves, 2025 IEEE 29th International Conference on Intelligent Engineering Systems, INES 2025, 11-13 June, 2025, Palermo, Italy, DOI: 10.1109/INES67149.2025.11078218

4. AAP Lasc, VE Balas, FM Petcut, C Barna, Modelling and Identification of Two Genetic Algorithms used for Solar Cell Parameter, 2025 IEEE 29th International Conference on Intelligent Engineering Systems, INES 2025, 11-13 June, 2025, Palermo, Italy, DOI**:** 10.1109/INES67149.2025.11078181

5. M Popa, D Alexuta, MM Balas, VE Balas, Current Trends in Research on Temperature Control in Rooftop Greenhouses, 2025 18th International Conference on Engineering of Modern Electric Systems, EMES 2025, 29-30 mai 2025, Oradea, DOI**:** 10.1109/EMES65692.2025.11045579

6. AA Petcut-Lasc, VE Balas, FM Petcut, A Survey of MPPT Techniques Under Partial Shading Conditions: Evaluating the Firefly Algorithm's Performance, 2025 18th International Conference on Engineering of Modern Electric Systems, EMES 2025, 29-30 mai 2025, Oradea, DOI**:** 10.1109/EMES65692.2025.11045613

7. N Gaudence, VE Balas, M Didacienne, H Eric, Developing Early Autism Detection through Deep Learning and Data Analytics, 2025 25th International Conference on Control Systems and Computer Science, CSCS 2025, 27-30 mai 2025, Bucuresti, Romania
8. V.K. Sudha, R. Sudhakar, Valentina E. Bălaş, *Fuzzy Rule Based Segmentation of CT Brain Images of Hemorrhage for Compression*, International Journal of Advanced Intelligence Paradigms, No. 3-4/2012, pag. 256-267, ISSN 1755-0394, http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijaip, **SCOPUS, INSPEC.**
9. Ahmad Taher Azar, Valentina E. Bălaş, *Statistical Methods and Artificial Neural Networks Techniques in Electromyography*, International Journal of System Dynamics Applications (IJSDA), IGI Global, DOI: 10.4018/ijsda.2012010103, ISSN: 2160-9772, EISSN: 2160-9799 , Volume 1, Issue 1, 2012, pag. 39-47, http://www.irma-international.org/viewtitle/62869/, http://www.igi-global.com/article/international-journal-system-dynamics-applications/62869, **INSPEC.**
10. Tsung-Chih Lin, Mehdi Roopaei, Valentina E. Bălaş, *Adaptive Interval Type-2 FNN H∞ Control for Synchronization between Two Different Time-Delay Chaotic Systems*, Mathematics in Engineering, Science and Aerospace, MESA, The transdisciplinary international journal, ISSN 2041 - 3165 (print), 3173 (online), Vol. 2, Nr. 1 2011, pag. 105-120, http://nonlinearstudies.com/index.php/mesa/issue/view/67
11. I. Szeidert, O. Prostean, N. Budisan, I. Filip, Valentina E. Bălaş, G. Prostean, *Actual Situation and Perspectives on Wind Energy Usage in Banat Region*, WSEAS TRANSACTIONS on SYSTEMS AND CONTROL , ISSN: 1991-8763, Issue 8, Volume 4, August 2009, pag. 369-372, **ACM, SCOPUS Indexed**.
12. Mehdi Roopaei, Valentina E. Bălaş, Tsung-Chih Lin, Alireza Seifi, *Adaptive gain fuzzy sliding mode control in uncertain MIMO nonlinear systems*, Nonlinear Studies, Florida, USA, ISSN 1359- 8678 , Vol. 16, No. 3, 2009, pp. 261-273, **BDI**, http://nonlinearstudies.com/index.php/nonlinear/issue/current
13. M.M. Balas, Valentina E. Bălaş, D. V. Balas-Timar, L. R. Szantho, *The Fuzzy-Interpolative Methodology in Soft Computing*. WSEAS Transactions on Information Science and Applications, Issue 9, Volume 3, September 2006, ISSN 1790-0832, pg. 1625-1631, **SCOPUS Indexed**.
14. I. Filip, O. Proştean, I. Szeidert, Valentina E. Bălaş, G. Proştean, *Comparative Study Regarding an Adaptive Fuzzy Controller and a Self-Tuning Controller with Application to the Excitation Control of a Synchronous Generator*. WSEAS Transactions on Systems, Issue 7, Volume 5, July 2006, ISSN 1109-2777, pag. 1587-1994, **SCOPUS Indexed**.
15. Valentina E. Bălaş, Marius M. Bălaş, *Observing Control Systems by Phase Trajectories of the Error*. WSEAS Transactions on Systems, Issue 7, Volume 5, July 2006, ISSN 1109-2777, pag. 1717-1722, http://www.worldses.org/journals/systems/systems-july2006.doc, **SCOPUS Indexed**
16. Marius M. Bălaş , Valentina E. Bălaş, S. V. Muscă, C. Muscă, *Ecological Reconstruction Using Energetic Passive Greenhouses*. RSEE, 6th International Conference on Renewable Sources and Environmental Electro-Technologies, 8 - 10 June 2006, *Oradea , Romania, Computer Science And Control Systems Session pag. 7-10*, Analele Universitatii din Oradea/Fascicula ELECTROTEHNICA, Sectiunea: Stiinta Calculatoarelor si Sisteme de Control, *ISSN 1841-7213*, **BDI**.
17. Valentina E. Bălaş, *Railway vehicles' diagnosis by internal models*. Analele Universităţii din Oradea, Fascicula Electrotehnică, Secţiunea Ştiinţa Calculatoarelor şi Sisteme de Control, Proceedings of the 8th International Conference on Engineering of Modern Electric Systems EMES '05, 26 - 28 May, 2005, Oradea, pag. 18-23, ISSN 1223-2106, ***BDI***
18. Marius M. Bălaş, M. Ciugudean, Valentina E. Bălaş, *Adaptive Fuzzy Interpolative Controllers and Applications*. Revista de Inventica, Nr. 48, Vol IX, An XV, 2005, Romanian Journal for Creativity in Engineering and Technology – Research and Education Reports, Special Issue, Guest Editors: Horia-Nicolai Teodorescu, Seizaburo Arita, Zvetlana Cojocaru, Romanian Inventors Society, Iasi, ISSN 1210-3084, pag. 13-23.
19. Valentina E. Bălaş, E. Rovenţa. T. Spircu, *Weighted Fusion of Changes of Belief*. CONTI 2004, The 6-th International Conference on Technical Informatics „Politehnica" University of Timisoara, Faculty of Automation and Computers, 27-28 May 2004, Scientific Bulletin of „Politehnica" University of Timişoara, Romania, Transactions on Automatic Control and Computer Science, Vol.49(63), 2004, ISSN 1224-600X, pag. 105 – 110, Editura Politehnica
20. Marius M. Bălaş, Valentina E. Bălaş, T. L., Dragomir, *A preamble on the identification of the operating regimes of the controllers by the help of the phase trajectory* . Electronic BUSEFAL ISSN 0296-3698. Busefal #87, LAMII / CESALP – Universite de Savoie, Annecy, France, Iunie 2002 Format electronic. http://www.listic.univ-savoie.fr/modules.php?name=Busefal&func=AfficherVolume&no_volume=87
21. Valentina E. Bălaş, *The Computer Model of an Intelligent Speed Sensor for Railway Coaches*. A 5-a Conferinţă internaţională de Ingineria Sistemelor Moderne în Electrotehnică, Universitatea din Oradea, Fascicola Electrotehnică, Analele Universităţii din Oradea, Fascicola electrotehnica, Sect. C, 28-29 mai 1999, Băile Felix, pag. 33-37, ISSN 1223-2106, ***BDI.***
22. Marius M. Bălaş, Valentina E. Bălaş, C. Alexandrescu, *Some Remarks on the Fuzzy - PID Controllers*. Buletinul Ştiinţific al Universităţii "Politehnica " din Timişoara, Proceedings of the Symposium on Electronics and Telecommunications "Etc.'98', Vol II, Timişoara, sept. 17-18 1998, pag. 277-282, ISSN 1224-6034, *Revista **CNCSIS categ. B+***.
23. M. Balas, V. Balas, L. Foulloy, S. Galichet. *A model of the sliding Wheel During Braking*. BOGIE 2001: *The 5-th International Conference on Railway Bogies and Running Gears*, Budapest University of Technology and Economics, Department of Railway Vehicles, Sept. 2001, Budapest, Hungary, **SCOPUS indexed.**

24. V. Bălaş, M. Bălaş. *The Real-Time Evaluation of the Adhesion by Internal Model*. The 8th Mini Conference on Vehicle System Dynamics, Identification and Anomallies, 11-13 November, 2002, Budapest, Hungary, ISBN 963 420 8177, pag. 247-254, **SCOPUS indexed.**

25. M. Bălaş, V. Bălaş, L. S. Bocîi, I. Radu. I. Koles. *The Real Time Evaluation of the Weariness of trhe Disc Brake*. The 8 Th Mini Conference on Vehicle System Dynamics, Identification and Anomallies, 11-13 November, 2002, Budapest, Hungary, pag. 241-246, ISBN 963 420 8177, **SCOPUS indexed.**

26. M. Balas, V. Balas, C. Barna, J. Duplaix, Gh. Gherman, R. E. Precup. *The Real Time Estimation od the Weariness of the Wheels' Tread for Railway Vehicles.* Proceedings of the 6th International Conference on Railway Bogies and Running Gears, Budapest, Hungary, 13-16 sept. 2004, edited by Prof. Istvan Zobory, Department of Railway Vehicles BME, Budapest, Hungary, ISBN 963-421-5750, pag. 387-392., **SCOPUS indexed**.

27. M. Bălaş, V. Bălaş. *The Family of Fuzzy Self Adaptive Interpolative Controllers.* International Conference on Information Processing and Management of Uncertainty in Knowledge-based Systems, IPMU2004, Special Session „Control", July 4 – 9, 2004, Perugia, Italy, Vol III, pp. 2119-2124, ***(ARC Cat. C), Google Scholar.***

28. L.T.Koczy, M. Balas, M. Ciugudean, V.Balas, J. Botzheim. *On the Interpolative Side of the Fuzzy Sets.* IEEE – SOFA 2005 Proceedings, IEEE International Workshop on Soft Computing Applications, SOFA, 27-30 August, 2005, Szeged–Hungary & Arad-Romania, pag. 17-23, ISBN 963 219 001 7, ***(ARC Cat. C), Google Scholar***

29. M. M. Balas, V. E. Balas. *Optimising the Distance-Gap Between Cars by Fuzzy-Interpolative Control with Time to Collision Planning*. ICM 2006, IEEE Conference on Mechatronics, Budapest, Hungary, July 3-5, 2006, pag. 215-218, IEEE Catalog Number of printed proceedings06EX1432, ISBN 1-4244-9712-6, Indexed by IEE INSPEC IEEE CNF, INSPEC Accession Number: 9157024, Digital Object Identifier 10.1109/ICMEH.2006.252527, **INSPEC Indexed, IEEE Xplore.**

30. M. M. Balas, V. E. Balas. *Another Possible Way towards the Intelligent Nano-Systems: the Fuzzy-Interpolative*. The 11th IPMU International Conference, July 2-7, 2006, Paris, France, pp. 2135-2141, Editions EDK, Paris, 2006, ISBN: 2-84254-112-X, ***(ARC Cat. C)***

31. V. E. Balas, M. Costin, D. V. Balas-Timar. *Automatic Voice Emotional Evaluation.* Proceedings of the 6th International Conference on Recent Advances in Soft Computing – RASC 2006, Canterbury, 10-12 July, 2006, UK, Editor Konstantinos Sirlantzis, Department of Electronics, pp. 471-476, ISBN: 978-1-902671-43-7, 1-902671-43-0

32. V. E. Balas, M. M. Balas. *Driver Assisting by Inverse Time to Collision.* WAC 2006, July 24-27, 2006, Budapest, Hungary, Indexed by IEE INSPEC IEEE CNF, IEEE Catalog Number: 06EX1486, ISBN 1-889335, **INSPEC Indexed**

33. V. E. Balas, M. M. Balas. *Assisting the Drivers by Means of the Constant Time to Collision Criterion*, 12th Internacional Conference IPMU 08, Information Processing and Management of Uncertainty in Knowledge-Based Systems, June 22-27, 2008, Malaga, Spain, pp. 946-951, L. Magdalena, M. Ojeda-Aciego, J.L. Verdegay (eds), ISBN: 978-84-612-3061-7, Dep.Legal: MA-500-2008, ***(ARC Cat. C)***

34. M. M. Balas, V. E. Balas. *Smart Control for Passive Greenhouses*, 12th Internacional Conference IPMU 08, Information Processing and Management of Uncertainty in Knowledge-Based Systems, June 22-27, 2008, Malaga, Spain, pp. 826-831, L. Magdalena, M. Ojeda-Aciego, J.L. Verdegay (eds), ISBN: 978-84-612-3061-7, Dep.Legal: MA-500-2008, ***(ARC Cat. C)***

35. V. E. Balas**,** Marius M. Balas**,** *The traffic Control by Constant Time to Collision Platoons*, 11th Mini Conference on Vehicle System Dynamics, Identification and Anomalies, VSDIA, 11-12 November 2008, Budapest University of Technology and Economics, Hungary, pag. 559-566, ISBN 978 963 313 011 7, **BDI**

36. M.M. Balas, V.E. Balas, *The Switching Controllers' Effect and its Rejection in the Case of the Airplanes,* 11th Mini Conference on Vehicle System Dynamics, Identification and Anomalies, VSDIA, 11-12 November 2008, Budapest University of Technology and Economics, Hungary, pag. 559-566, ISBN 978 963 313 011 7, **BDI**

37. Nicolaie Popescu-Bodorin, Valentina E. Balas, *From Cognitive Binary Logic to Cognitive Intelligent Agents*, IEEE 14th International Conference on Intelligent Enginnering Systems, INES 2010, pag. 337-340, May 5-7, 2010, Las Palmas of Gran Canaria, Spain, ISBN: 978-1-4244-7651-0, IEEE Catalog Number: CFP10IES-CDR, **SCOPUS Indexed**

38. Tsung-Chih Lin, Shuo-Wen Chang, Tun-Yuan Lee, Valentina Emilia Balas, Mehdi Roopaei, *A Novel Takagi-Sugeno-Based Robust Adaptive Fuzzy Synchronization of Discrete-Time Chaotic Systems*, IEEE International Joint Conference on Computational Cybernetics and Technical Informatics, ICCC-CONTI 2010, pag 61-66, May 27-29, Timisoara, Romania, ISBN: 978-1-4244-7431-8, IEEE Catalog Number: CFP10575-CDR, **SCOPUS Indexed, INSPEC,** ***(ARC Cat. C)***

39. Nicolaie Popescu-Bodorin, Valentina E. Balas, *AI Challenges in Iris Recognition. Processing Tools for Bath Iris Image Database*. Recent Advances in Automation & Information, Proc. WSEAS 11th Int. Conf. on Automation & Information (ICAI'10) June 13-15, Iasi, Romania, pp. 116-121, ISSN: 1790-5117, ISBN 978-960-474-193-9, WSEAS Press., **ACM**

40. Nicolae Popescu-Bodorin, Valentina E. Balas, *Comparing Haar-Hilbert and Log-Gabor Based Iris Encoders on Bath Iris Image Database*, 4th International Workshop on Soft Computing Applications, SOFA 2010, pag. 191-196, 15-17 July 2010, Arad, Romania, ISBN: 978-1-4244-7982-5, IEEE Catalog Number: CFP1028D-PRT, **SCOPUS Indexed, INSPEC,** ***(ARC Cat. C)***

41. Ahmad T. Azar, Valentina E. Balas, Teodora Olariu, *Artificial Neural Network for Accurate Prediction of Post-Dialysis Urea Rebound*, 4th International Workshop on Soft Computing Applications, SOFA 2010, pag. 165-

170, 15-17 July 2010, Arad, Romania, ISBN: 978-1-4244-7982-5, IEEE Catalog Number: CFP1028D-PRT, **SCOPUS Indexed, INSPEC, *(ARC Cat. C)***

42. Tsung-Chih Lin, Kang-Wei Hsu, Valentina E. Balas, Mehdi Roopaei, *Stable Adaptive Synchronization of a Class of Uncertain Time-Delay Chaotic Systems via H∞ type-2 FNN Control*, 4th International Workshop on Soft Computing Applications, SOFA 2010, pag. 237-242, 15-17 July 2010, Arad, Romania, ISBN: 978-1-4244-7982-5, IEEE Catalog Number: CFP1028D-PRT, **SCOPUS Indexed, INSPEC, *(ARC Cat. C)***

43. Tsung-Chih Lin, Ming-Che Chen, Valentina E. Balas, Mehdi Roopaei, Chien-Ming Lee, *Synchronization of Uncertain Multivariable Chaotic Systems Using Adaptive Interval Type-2 Fuzzy Sliding Mode Control*, 4th International Workshop on Soft Computing Applications, SOFA 2010, pag. 249-254, 15-17 July 2010, Arad, Romania, ISBN: 978-1-4244-7982-5, IEEE Catalog Number: CFP1028D-PRT, **SCOPUS Indexed, INSPEC, *(ARC Cat. C)***

44. Nicolae Popescu-Bodorin, Valentina E. Balas, *Exploratory simulation of an Intelligent Iris Verifier Distributed System, SACI 2011 - 6th IEEE International Symposium on Applied Computational Intelligence and Informatics,* May 19-21, 2011 in Timisora, Romania, *Proceedings*, art. no. 5873010, ISBN 978-1-4244-9107-0, Catalog Number CFP1145C-CDR, pp. 259-262, **SCOPUS indexed,** http://conf.uni-obuda.hu/saci2011/index.html, ***(ARC Cat. C)***

45. N. Popescu-Bodorin, V.E. Balas, I.M. Motoc, *Iris Codes Classification Using Discriminant and Witness Directions*, 5th International Symposium on Computational Intelligence and Intelligent Informatics, ISCIII 2011, September 15-17, 2011, Floriana, Malta, pag. 143-148, ISBN 978-1-4577-1859-5, IEEE Catalog Number: CFP 1136C-CDR, http://www.trivent.hu/ISCIII2011/index.php?p=invitation , **DBLP**

46. N. Popescu-Bodorin, V.E. Balas, I.M. Motoc, *8-Valent Fuzzy Logic for Iris Recognition and Biometry*, 5th International Symposium on Computational Intelligence and Intelligent Informatics, ISCIII 2011**,** September 15-17, 2011, Floriana, Malta, pag. 149-154, ISBN 978-1-4577-1859-5, IEEE Catalog Number: CFP 1136C-CDR, http://www.trivent.hu/ISCIII2011/index.php?p=invitation, **DBLP**

47. Valentina E. Balas, Soumya Banerjee, *Seeded Text Auto-Summarization: An Experience with Simplified Statistical and Fuzzy Ranking Algorithm*, **15th IEEE International Symposium on Computational Intelligence and Informatics, CINTI 2014, November 19-21, 2014 in Budapest, Hungary, ISBN 978-1-4799-5338-7/14, pag. 143-146**

48. Manash Sarkar, Soumya Banerjee and Valentina E. Balas, *Configuring Trust Model for Cloud Computing: Decision Exploration Using Fuzzy Reasoning*, INES 2015, IEEE 19th International Conference on Intelligent Engineering Systems • September 3–5, 2015, Bratislava, Slovakia, pag. 219-223.

49. D. Jude Hemanth, J. Anitha, Valentina Emilia Balas, *Performance Improved Hybrid Intelligent System for Medical Image Classification*, Proceedings of the 7th Balkan Conference in Informatics Conference Proceedings, 2-4 September 2015, Craiova, Romania, Article 8, ACM ISBN: 978-1-4503-3335-1, doi>10.1145/2801081.2801095

50. K.Jagatheesan, B.Anand, Nilanjan Dey, Amira S. Ashour and Valentina Emilia Balas, *Proportional-Integral-Derivative (PID) Controller Equipped LFC of Multi-Area Interconnected Power System*, V International Conference Industrial Engineering and Environmental Protection 2015 (IIZS 2015), Zrenjanin, Serbia; October 15-16, 2015, pag. 427-436, ISBN 978-86-7672-259-4

51. Taras Kotyk, Amira S. Ashour, Sayan Chakraborty, Nilanjan Dey and Valentina E. Balas, *Apoptosis Analysis in Classification Paradigm: A Neural Network based Approach*, Healthy World Conference 2015 - A Healthy World for a Happy Life, Kakinada (AP) India5-7 September 2015, Pag. 17-22, http://www.hwc.2015.org/share/PapersList%Final%29.zip

52. Ram Kumar, F. A. Talukdar, Nilanjan Dey, Amira S. Ashour, V. Santhi, Valentina E. Balas, Fuqian Shi, *Histogram Thresholding in Image Segmentation: A Joint Level Set Method and Lattice Boltzmann Method based Approach*, 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015), 12-13 December 2015, Xi'an, China

53. Sirshendu Hore, Sankhadeep Chatterjee, V. Santi, Nilanjan Dey, Amira S. Ashour, Valentina E. Balas, Fuqian Shi, *Indian Sign Language Recognition using Optimized Neural Networks*, 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015), 12-13 December 2015, Xi'an, China

54. Rakesh kumar S, Ramkumar K, Seshadhri Srinivasan, Valentina Emilia Balas, Fuqian Shi, *Self-Calibration of Dead Reckoning Sensor for Skid-Steer Mobile Robot Localization using Neuro-Fuzzy Systems*, 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015), 12-13 December 2015, Xi'an, China

55. SMJ Mortazavi, Omid Jaberi, Atefeh Zamani, SAR Mortazavi, Valentina E. Balas, Ali Soleimani, Ali Zamani, Masoud Haghani, *The Importance of Quantification of Data in Studies on the Health Effects of Exposure to Electromagnetic Fields Generated by Mobile Base Stations*, The Congress on Information Technology, Computational and Experimental Physics (*CITCEP 2015*), Kraków, Poland, 18-20 December 2015, Paper 22, pag 113-116

56. Marjan Kuchaki Rafsanjani, Hamideh Fatemidokht, Valentina E. Balas, *A modeling framework for Quality of Service in Mobile Ad hoc Networks*, The Congress on Information Technology, Computational and Experimental Physics (*CITCEP 2015*), Kraków, Poland, 18-20 December 2015, Paper 30, pag 154-158

57. Marzieh Najariyan, Mehran Mazandarani, Valentina E. Balas, *Modified Reimann-Liouville fuzzy fractional derivative*, The Congress on Information Technology, Computational and Experimental Physics (*CITCEP 2015*), Kraków, Poland, 18-20 December 2015, Paper 31, pag. 159-170

58. Marius M. Balas, Valentina E. Balas, *The Parallel Shift. A Fundamental Challenge for the Information Technology after 2008*, The Congress on Information Technology, Computational and Experimental Physics (*CITCEP 2015*), Kraków, Poland, 18-20 December 2015, Paper 47, pag, 242-246

59. Jagatheesan Kaliannan, Anand B, Santhi V, Nilanjan Dey, Amira S. Ashour and Valentina Emilia Balas, *Dynamic Performance Analysis of AGC of Multi-Area Power System Considering Proportional-Integral-Derivative Conroller with Different Cost Functions*, IEEE-ICEEOT-2016 conference which is organizing by DMI College of engineering, Chennai, Tamilnadu during 3rd to 5th March 2016.

60. Seshadhri Srinivasan, Daniel Grossman, Carmen Del Vecchio, Valentina E. Balas, Luigi Glielmo, *Enabling technologies for Enterprise Wide Optimization*, 2015 IEEE 10th International Conference on Industrial and Information Systems (ICIIS) , 17-20 December, 2015, University of Peradeniya, Akbar Bridge, Peradeniya, Sri Lanka, pag. 434-439, DOI: 10.1109/ICIINFS.2015.7399051

61. Valentina E. Bălaş, Marius M. Bălaş. *Traffic Management by Constant Time to Collision*, Ignac Lovrek, Robert J. Howlett and Lakhmi C. Jain (Eds.), Book: *Knowledge-Based Intelligent Information and Engineering Systems*, 12th International Conference, KES 2008, Zagreb, Croatia, September 3-5, 2008, Proceedings, Part III, LNCS 5179/2008, pag. 658–663, 2008, © Springer-Verlag Berlin Heidelberg 2008, ISBN 978-3-540-85566-8, http://www.springerlink.com/content/54066776m5814356/, **DPLB (Computer Science Bibliograpy) indexed, ACM, SCOPUS indexed, *(ARC Cat. B).***

62. Marius M. Bălaş, Valentina E. Bălaş, *Adaptive Rule-Based Reasoning by Qualitative Analysis*, 13 International Conference on Information Processing and Management of Uncertainty, IPMU 2010, Dortmund, Germany, June 28- July 2, Proceedings, Part I, Communications in Computer and Information Science, 2010, Volume 80, Part 3, Part 11, pag. 553-560, E. Hullermeier, R. Kruse, F. Hoffman (Eds.), Springer-Verlag, Berlin –Heidelberg 2010, ISSN 1865-0929, ISBN-10 3-642-14054-8 Springer Berlin Heidelberg NewYork, **SCOPUS Indexed,** http://www.springerlink.com/content/u50w1n1652815147/ ***(ARC Cat. C)***

63. V. E. Balas, C. M. Noaica, J.R. Popa, C. Munteanu, V. C. Stroescu, *Establishing PNN-Based Iris Code to Identity Fuzzy Membership for Consistent Enrollment*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2014, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2016, AISC, Volume 357, ISSN 2194-5357, ISBN 978-3-319-18415-9, Vol. 2, pag. 805-818,** (ARC Cat. C**, SCOPUS**).

64. N. Popescu-Bodorin, V. E. Balas, *Best Practices in Reporting Iris Recognition Results*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2014, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2016, AISC, Volume 357, Volume 2, pag. 925-938,** (ARC Cat. C**, SCOPUS**)

65. D. Balas Timar, V. E. Balas, R. Lile, Rajendra Sinha, *Fuzzy scoring algorithm and long term job performance*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2016, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2014, AISC, Volume 357, Vol. 2, pag. 925-938,** (ARC Cat. C**, SCOPUS**)

66. D. Jude Hemanth, Valentina E. Balas and J. Anitha, *Hybrid Neuro-Fuzzy Approaches for Abnormality Detection in Retinal Images*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2014, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2016, AISC, Volume 356, vol. 1, pag. 295-306,** (ARC Cat. C**, SCOPUS**)

67. S. Senthil Kumar, H. Hannah Inbarani, Ahmad Taher Azar, Hala S. Own, Valentina Emilia Balas, Teodora Olariu, *Optimistic Multi-Granulation Rough set based Classification for Neonatal jaundice*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2014, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2016, AISC, Volume 356, Vol. 1, pag. 307-318,** (ARC Cat. C**, SCOPUS**)

68. Ahmad Taher Azar, Hanaa S. Ali, Valentina E. Balas, Teodora Olariu, Rujita Ciurea, *Diagnosis Boosted Decision Trees for Vertebral Column Disease Diagnosis*, In volume Advances in Intelligent Systems and Computing, Series Ed.: Kacprzyk, Janusz, Proceedings of the 6th International Workshop on Soft Computing Applications SOFA 2014, July 22-24, 2014, Timisoara, Romania, Guest Editors: Valentina E. Balas, Lakhmi C. Jain, **Branko Kovačević, Springer Verlag, 2016, AISC, Volume 356, Vol. 1, pag. 319-334,** (ARC Cat. C**, SCOPUS**)

69. **Ram Kumar, F. A. Talukdar, Nilanjan Dey, Amira S. Ashour, V. Santhi, Valentina Emilia Balas, Fuqian Shi, *Histogram Thresholding in Image Segmentation: A Joint Level Set Method and Lattice Boltzmann Method Based Approach*, Volume 2, Proceedings of the 2015 International Conference on Information Technology and Intelligent Transportation Systems ITITS 2015, held December 12-13, 2015, Xi'an China, Editors: Valentina Emilia Balas, Lakhmi C. Jain, Xiangmo Zhao, ISBN: 978-3-319-38769-7, Volume 455 of the series Advances in Intelligent Systems and Computing, 2017, pp 529-539.**

70. S. Rakesh kumar K. Ramkumar, Seshadhri Srinivasan, Valentina Emilia Balas, Fuqian Shi, *Self-Calibration of Dead Reckoning Sensor for Skid-Steer Mobile Robot Localization Using Neuro-Fuzzy Systems*, Volume 2, Proceedings of the 2015 International Conference on Information Technology and Intelligent Transportation Systems ITITS 2015, held December 12-13, 2015, Xi'an China, Editors: Valentina Emilia Balas, Lakhmi C. Jain, Xiangmo Zhao, ISBN: 978-3-319-38769-7, Volume 455 of the series Advances in Intelligent Systems and Computing, 2017, pp 541-551.

71. **Sirshendu Hore, Sankhadeep Chatterjee, V. Santhi, Nilanjan Dey, Amira S. Ashour, Valentina Emilia Balas, Fuqian Shi, *Indian Sign Language Recognition Using Optimized Neural Networks*, Volume 2, Proceedings of the 2015 International Conference on Information Technology and Intelligent Transportation Systems ITITS 2015, held December 12-13, 2015, Xi'an China, Editors: Valentina Emilia Balas, Lakhmi C. Jain, Xiangmo Zhao, ISBN: 978-3-319-38769-7, Vol. 455 of the series Advances in Intelligent Systems and Computing, 2017, pp 553-563.**

D. Lucrări publicate în reviste şi volume de conferinţe cu referenţi (neindexate)

1. Valentina E. Bălaş, Radu Costineanu, Srgian Danity, Valeriu Ille, Cristian Marton, Bela A. Sajgo,Csik Zsolt, *On Watergy And Aquifers*, ISREIE 2010, International Symposium Research and Education in Innovation Era, 3rd Edition, Arad, Romania, November 11-12, 2010, Proc. 3rd ISREIE (Aurel Vlaicu Univ. of Arad Symposium), Series: Engineering, Oct. 10-12, 2010, ISSN 2065-2569, pag. 292-298.

2. Ahmad. T. Azar, Valentina E. Bălaş, *Artificial Neural Network for Electromyografic Classification*, ISREIE 2010, International Symposium Research and Education in Innovation Era, 3rd Edition, Arad, Romania, November 11-12, 2010, Proc. 3rd ISREIE (Aurel Vlaicu Univ. of Arad Symposium), Series: Engineering, Oct. 10-12, 2010, ISSN 2065-2569, pag. 238-251.

3. Onisifor Olaru, Marius Buzera, Valentina E. Bălaş, Ioan Emeric Koles, *New Algorithms for color Classification with Machine Vision Devices*, ENEC 2010, The 2nd International Symposium 2010, Education in Nowadays European Context, Anale, pag. 214-217, 17-18 Aprilie 2010, Tg. Jiu, Gorj, Romania, ISBN 978-606-510-870-7, Editura Universitaria, Craiova.

4. Valentina E. Bălaş, Emeric I. Koles, Corina Mnerie, *Optimizing the Speed Controllers' Tuning*, International Symposium Research and Education in Innovation Era, 4th Edition, Arad, November 08-09, pag. 121-126, 2012.

E. Brevete obţinute în întreaga activitate -

NU

F. Contracte de cercetare

Director granturi/proiecte internationale

1. **Project no.** 015942, **Project acronym** CEEC IST NET, FP 6, 2005-2006.
   Project title SUPPORT TO ORGANISATIONS FROM THE CENTRAL AND EASTERN EUROPEAN COUNTRIES,
   Thematic Priority: Information Society Technologies
   Deliverable D 4.1.8: NATIONAL MAPPING REPORT for ROMANIA, 20 April 2006, Duration: 24 months
   Director Stiintific din partea UAV – Valentina E. Balas (pag.87)
   https://slideblast.com/project-no-015942-project-acronym-ceec-ist-net-project-title-_595ceac01723dd8e40283dc3.html
2. **Grant Internaţional** – **NSF Awards ENG-1047778 and ENG-1047714**– *Collaborative Research* - oferit de Georgia Institute of Technology, School of Materials Science and Engineering, Atlanta, Georgia, USA, **WIRES 2011 (**Women's International Research Engineering Summit), Pathways to International Collaborations, 30 Martie - 2 Aprilie 2011, *Şef de program* **- Valentina E. Bălaş, grant castigat prin competitie** http://wires.gatech.edu/main.php,

http://www.wires.gatech.edu/committee.php,
http://wires.gatech.edu/resources/WIRES2-agenda.pdf

3. Global Initiative for Academic Network (GIAN) programme approved by Union Cabinet in Higher Education aimed at tapping the talent pool of Scientist and Entrepreneur Internationally to encourage their engagement with the institutes of higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.
   IIT Kharagpur- the nationsl coordinator for India
   Valentina E. Balas – responsible Romanian partner
   Funding of GIAN: **12.000 USD**,
   Proiect câştigat prin competitie in India - Mai 2016, derulat in septembrie 2016, singurul professor selectat din Romania.
   http://www.sici.org/programmes/details/global-initiative-for-academic-network-gian-programme/
   http://www.nits.ac.in/gian/Brochure_Fuzzy_Interpolative_Controller_and_Appln_V_Balas.pdf
4. Proiectul de mobilitati cu codul PN-III-P3-3.1-PM-RO-CN-2018, pozitia 10 din lista celor 29 de proiecte aprobate: https://www.uefiscdi.ro/https./resource-84873:// - **PN3-P3-554/16.07.2018 -** Competiţia de cooperare bilaterală România – Republica Populară Chineză, directori de proiect Oana Geman, Universitatea Stefan Cel Mare din Suceava si Guojun Wang, Guangzhou University, Guangzhou, Guangdong, China, partener Universitatea Aurel Vlaicu din Arad cu director Valentina E. Balas avand titlul TEHNICI INTELIGENTE PENTRU APLICATII MEDICALE UTILIZAND RETELE DE SENZORI, acronym GUSV, Domeniul Tehnologii informationale si de comunicatii, valoare 79.488 lei, durata 2 ani.
5. **Un numar de 40 Travel granturi a cate 3000 EURO** fiecare pentru sustinerea de conferinte invitate si demararea de cercetari comune in India, Japonia, Taiwan, China, Singapore, USA, Ungaria, Azerbaijan, Pakistan, Iran, Rwanda.

Director granturi/proiecte naționale

Peste 25 de proiecte realizate la CCSIT Vagoane Arad in calitate de şef de proiect pentru partea electrică/electronică, proiecte obtinute prin competitie in cadrul grupului de intreprinderi producatoare de material rulant.

6. *Masă de poziţionare şi rotire 1000 Kg pt. programul nuclear (responsabil - partea electrică* **V. E. Balas***).* Cod: 291-**84** MPR.Beneficiar: ISIM Timişoara. Executant: C.C.S.I.T.V.A. Valoare: 100.000 ROL.
7. *Masă de poziţionare şi rotire 4000 Kg, pentru programul nuclear (responsabil - partea electrică* **V. E. Balas***).* Cod: 292-**84**MPR. Beneficiar: ISIM Timişoara. Executant: C.C.S.I.T.V.A. Valoare: 150.000 ROL.
8. *Instalaţie pentru debitarea tablei din rulou (responsabil - partea electrică* **V. E. Balas***).* Cod: 2-**85** ISP. Beneficiar: I.V.Caracal. Executant: C.C.S.I.T.V.A. Valoare: 140.000 ROL.
9. *Boghiu metrou generaţia a II-a (responsabil - partea electrică* **V. E. Balas***)*Cod: 5-**85**-BMG II. Beneficiar: I.V.ARAD. Executant: C.C.S.I.T.V.A. Valoare: 200.000 ROL.
10. *Maşina de roluit corpul cilindrului de frână (responsabil - partea electrică* **V. E. Balas***).* Cod: 6-**85**MUS. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 1.000.000 ROL.
11. *Maşina de roluit capace cilindru de frână (responsabil - partea electrică* **V. E. Balas***).* Cod: 16-**85**MUS. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 700.000 ROL.
12. *Agregat de găurit multiax taler tampon (responsabil - partea electrică* **V. E. Balas***).* Cod: 47-**85**AG. Beneficiar: I.V.Drobeta Tr.Severin. Executant: C.C.S.I.T.V.A. Valoare: 300.000 ROL.
13. *Agregat de găurit placa de bază tampon PKP-Polonia (responsabil - partea electrică* **V. E. Balas***).* Cod: 52-**85**AG. Beneficiar: I.V.Drobeta Tr.Severin. Executant: C.C.S.I.T.V.A. Valoare: 250.000 ROL.
14. *Agregat de găurit leviere (responsabil - partea electrică* **V. E. Balas***).* Cod: 6-**86**AG. Beneficiar: I.V.Caracal. Executant: C.C.S.I.T.V.A. Valoare: 250.000 ROL.
15. *Maşina de bordurat şi retăiat cilindrul de frână (responsabil - partea electrică* **V. E. Balas***).* Cod: 16-**86**MBR. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 400.000 ROL.
16. *Stand derulat cabluri (responsabil - partea electrică* **V. E. Balas***).* Cod: 25-**86**ST. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 270.000 ROL.
17. *Cercetări privind realizarea unei instalaţii complexe pentru efectuarea încercărilor dinamice tip AAR (SUA), (responsabil - partea electrică* **V. E. Balas***).* Cod: 51-**87**STC. Beneficiar: C.C.S.I.T.V.A. Executant: C.C.S.I.T.V.A. Valoare: 1.200.000 ROL.
18. *Stand complex pentru încercat cuple metrou (responsabil - partea electrică* **V. E. Balas***).* Cod: 6-**88**STC. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 300.000 ROL.
19. *Vagon dinamometric (responsabil - instalaţia TV prin cablu, interfon, sonorizare* **V. E. Balas***).* Cod: 207. 1988, Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 2.500.000 ROL.
20. *Tehnologie de sudare a stâlpilor de la vagoanele tip Gondolă cu comandă program în mediu protector tip CO_2 (responsabil - partea electrică* **V. E. Balas***).* Cod: 24-**89** ISR. Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 1.000.000 ROL.
21. *Troliu pentru deplasat longitudinal la nituire (responsabil - partea electrică* **V. E. Balas***).* Cod: 4-**90** D.

Beneficiar: I.V.Arad. Executant: C.C.S.I.T.V.A. Valoare: 150.000 ROL.

22. *Instalaţie pentru vopsit vagoane în câmp electrostatic (responsabil - partea electrică* **V. E. Balas***).* Cod: 6-**91** ISR. Beneficiar: M.E.V.A. Dr. Tr.- Severin. Executant: C.C.S.I.T.V.A. Valoare: 700.000 ROL.
23. *Vagon transport agabaritic pe 24 osii (responsabil - partea electrică* **V. E. Balas***).* Cod: 653.36-36., 1991, Beneficiar: ElectroputereCraiova. Executant: C.C.S.I.T.V.A. Valoare: 1.500.000 ROL.
24. *Vagon comandă personal (responsabil - instalaţii electrice speciale* **V. E. Balas***).* Cod: AAP., 1992, Beneficiar: Ministerul Apărării Naţionale. Executant: C.C.S.I.T.V.A. Valoare: 200.000 ROL.
25. *Vagon clinic şi radiologic (responsabil - instalaţii electrice speciale* **V. E. Balas***).* Cod: AAT., 1992, Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 220.000 ROL.
26. *Vagon farmacie (responsabil - instalaţii electrice speciale* **V. E. Balas***).* Cod: AAV., 1992**,** Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 200.000 ROL.
27. *Vagon uzină (responsabil - instalaţii electice speciale* **V. E. Balas***).* Cod: AAW., 1992**,** Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 300.000 ROL.
28. *Vagon sală de operaţii (responsabil - instalaţii electrice speciale* **V. E. Balas***).* Cod: AAR, 1992**,** Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 175.000 ROL.
29. *Vagon reanimare şi transport răniţi (responsabil - instalaţii electrice speciale* **V. E. Balas***).*, 1993**,** Cod: AAS. Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 200.000 ROL.
30. *Vagon sală pansamente (responsabil - instalaţii electrice speciale* **V. E. Balas***).*, 1993**,** Cod: AAU. Beneficiar: M. Ap. N. Executant: C.C.S.I.T.V.A. Valoare: 200.000 ROL.

26. Grant CNCSU Nr. 107, obtinut prin competitie- *Dispozitive, Circuite si Microsisteme" in cooperare cu Universitatea „Politehnica" Bucureşti prin Banca Mondială.* Cod: CNCSU, Nr. 107. Executant: Universitatea Politehnica Timişoara. Bursa - **V. E. Balas** luna noiembrie 1999, Senzori inteligenţi fuzzy, in cadrul laboratorului LAMII, Annecy, Franţa. Valoare: 2000$.

27. ***Grant CNCSU Nr. 107, obtinut prin competitie-*** *Dispozitive, Circuite si Microsisteme" in cooperare cu Universitatea „Politehnica" Bucureşti prin Banca Mondială.* Cod: CNCSU, Nr. 107. Executant: Universitatea Politehnica Timişoara. Bursa - **V. E. Balas**, luna ianuarie 2001, Senzori inteligenţi fuzzy, in cadrul laboratorului LAMII, Annecy, Franţa, Valoare : 2000$.

28. Proiect obţinut prin competiţie*: Organizarea Şcolii de Vară – „Soft Computing" – ediţia a II-a, cu participare internaţională, în limba engleză.* Iulie **2003**. Universitatea „Aurel Vlaicu" din Arad. **Director** - **V. E. Bălas**, colaborator – Consiliul Judeţean Arad, Centrul Cultural. Valoare: 2.000 RON.

29. Proiect obţinut prin competiţie*: Organizarea Şcolii de Vară – „Soft Computing" – ediţia a III-a, cu participare internaţională, în limba engleză.* August 2004. Universitatea „Aurel Vlaicu" din Arad. **Director** - **V. E. Bălaş**, colaborator – Consiliul Judeţean Arad, Centrul Cultural. Valoare: 2.500 RON.

30. Proiect obţinut prin competiţie*: Organizarea Şcolii de Vară – „Soft Computing" – ediţia a IV-a, cu participare internaţională, în limba engleză.* Iulie 2005, Dispozitia 228/18.05 2005, Universitatea „Aurel Vlaicu" din Arad. **Director** - **V. E. Bălaş**, colaborator – Consiliul Judeţean Arad, Centrul Cultural. Valoare: 8.000 RON.

31. Proiect obţinut prin competiţie*: Organizarea Şcolii de Vară – „Soft Computing" – ediţia a V-a, cu participare internaţională, în limba engleză.* Iulie 2006. Universitatea „Aurel Vlaicu" din Arad, **Director** - **V. E. Bălaş**, colaborator – Consiliul Judeţean Arad, Centrul Cultural. Valoare: 3.000 RON.

32. Contract de cercetare obtinut prin competitie de la SC TAKATA SA: *Laborator automatizari cu Echipament Mitzubishi PLC,* septembrie 2007, Universitatea „Aurel Vlaicu" din Arad, **Directorde contract** - **Valentina E. Bălaş**, 1600 EURO.

33. Contract de finantare UEFISCDI - **48/29.11.2016** - Subprogram 1.1 - Resurse Umane - Proiecte de mobilitate pentru cercetatori cu experienta din diaspora – cod **depunere PN-III-P1-1.1-MCD2016-0108**, **Responsabil – Valentina E. Balas**, Cercetator din diaspora – Dan Ralescu, Universitatea Cincinnati, USA, Valoare - **2100 EURO**, proiect obtinut prin competitie nationala.

34. Proiect obtinut prin competitie, Centrul Municipal de Cultura Arad - CMCA, Contract nr. 4862/10.08.2016, 23.000 **lei**,
Director de proiect – **Valentina E. Balas**, Soft Computing and Applications.

35. Contract de cercetare *obtinut prin competitie cu SC CONTACT PLUS SRL Arad. „ Cercetari privind dezvoltarea unor noi metode de fuzionare a cunostinţelor si aplicatii",* Mai 2005, Nr. 1570/11.05 2005, Universitatea „Aurel Vlaicu" din Arad. *Şef de contract* - **V. E. Balas**. Valoare: 5.000.000 ROL.

36. Contract de cercetare *obtinut prin competitie* Nr. 05/12.12.2007 cu SC Ovidiu Nicola SRL *„Cercetări privind realizarea unui senzor pentru ploaie"*, Universitatea „Aurel Vlaicu" din Arad, *Responsabil de contract* - **Valentina E. Balas,** 1.000 RON

37. Contract de cercetare *obtinut prin competitie* Nr. 2726/22.05.2008 *cu SC Ready SRL „Cercetări privind aplicaţii ale inteligenţei artificiale în tehnică"*, Universitatea „Aurel Vlaicu" din Arad, *Responsabil de contract* - **Valentina E. Balas**, 1.000 Ron

38. Contract de cercetare *obtinut prin competitie* Nr. 433/19.02.2010 *cu SC Ready SRL „Cercetări privind aplicaţii in domeniul sistemelor inteligente"*, Universitatea „Aurel Vlaicu" din Arad, *Responsabil de contract* - **Valentina E. Balas**, 500 Ron.

39. Contract de cercetare *obtinut prin competitie* Nr. 5095.05.11.2010 *cu SC Computer Voice Systems Romania SRL „Cercetări privind Studiul oportunităţii utilizarii tehnologiei GWT pentru aplicaţiile web cu flux de date real time"*, Universitatea „Aurel Vlaicu" din Arad, *Responsabil de contract* - **Valentina E. Balas**, 1000 Ron.

40. Competitia Premierea rezultatelor cercetarii in Universitatea Aurel Vlaicu Arad, martie 2016, 2100 Euro – **Valentina E. Balas**.
41. **Proiect obtinut prin competitie** cu Centrul Municipal de Cultura Arad - CMCA, Programul Tineret, Învăţământ şi Recreative 2017, pozitia 20, 12.200 lei, **Director de proiect – Valentina E. Balas**, Cercetari in domeniul Pancreasului Artificial.
42. **Contract de cercetare stiintifica** obtinut prin competitie nr. 9542/22.12.2017, cu SC Contact Plus SRL Arad, „Modelarea, simularea, experimentarea si validarea unor noi metode avansate de soft computing in domeniul controlului cladirilor inteligente", **Director de proiect – Valentina E. Balas**, Valoare 40.000 lei (10.000 $).
43. **Cod proiect:** PN-III-P1-1.1-MCD-2019-0133, **Contract nr.**: 23/24.09.2019 – mobilitate cercetatori din diaspora – Prof. Stefan Bratosin, **Director de proiect – Valentina E. Balas**

Membru in colective de granturi/proiecte internaţionale

44. Program Internaţional, **Proiecte de Cooperare Bilaterală/Multilaterală, Programul: Capacităţi /Modul III, Cooperare Bilaterală între România şi Bulgaria**, Titlu: *"Electronic Health Records for the Next Generation Medical Decision Support in Romanian and Bulgarian National Healthcare Systems"*, Acronim: ***NextGenElectroMedSupport***, Instituţia conducătoare în ţară este Universitatea Petru Maior din Târgu Mureş, universitatea conducătoare din Bulgaria este Universitatea Tehnică din Sofia. Directori de proiect: Bulgaria - Prof. dr. Roumen Kountchev Technical University from Sofia, Bulgaria, Romania - director general - Barna Iantovics, Membri /cercetători în echipă: **Valentina E. Bălaş,** Marius M. Bălaş, **august 2010-august 2012.**

45. Program Internaţional, **Planul Naţional pentru Cercetare Dezvoltare şi Inovare 2007-2013-PN II, Capacităţi /Modul III, Proiecte de Cooperare Bilaterală/Multilaterală**, Cooperare Bilaterală între România şi Slovacia
Titlu: *"***Hybrid Medical Complex Systems***",*
Acronim: ComplexMediSys
CO: Universitatea Petru Maior din Targu Mureş
CO: Academia Slovaca de Ştiinte, Bratislava
Directori. Ladislav Hluchý (Slovacia) si Barna Iantovics (Romania)
Membri /cercetători în echipă: **Valentina E. Bălaş,** Marius M. Bălaş,
ianuarie 2011-ianuarie 2013.
46. National Science Foundation (NSF), Agency Contract Number: 0948297, Project type: Basic Research, Period: 07/20/2009 to 10/15/2010, Principal Investigator: Pamela McCauley-Bush, The objective of this grant is to establish an international collaboration with two female engineering faculty members in Romania to further the research being conducted bu the Human Factors and Simulation in Distaster Management Research Team at the University of Central Florida. The UCF HFDM Research is led by Dr. Pamela McCaulry Bush and the collaborative partners are Dr. Valentina Balas and Mihaela Albu.
https://argis.research.ucf.edu/index.cfm?fuseaction=detail.view_proposal_detail&rec_id=1049585&rec_type=research

Membru in colective de granturi/proiecte naţionale

47. ***Grant CNCSIS*** *„Cercetări pentru implementarea strategiilor bazate pe logica fuzzy şi reţele neuronale destinate detecţiei şi diagnosticării defectelor, cu aplicaţie la sistemele de conducere a acţionărilor electrice".* Iulie 2004. Executant principal: Universitatea „Politehnica" Timişoara. **membri UAV** – M.M. Balas si **V. E. Bălaş**. Valoare: 800 EURO.

48. **Grant PN – II WE Cod CNCSIS : 47**, Contract de cofinanţare cu Autoritatea Naţională pentru Cercetarea Ştiinţifică Nr. 316 / 09.04.**2008**, Workshop Exploratoriu „ *De la limbaj natural la soft computing: noi paradigme ale inteligenţei artificiale*", Responsabil Institutul de Cercetari pentru Inteligenta Artificiala al Academiei Romane – Acad. Dan Ioan Tufiş, 30.000 Ron, **Colaborator** – **Valentina E. Bălaş**,
49. **POSDRU/89/1.5/S/56287,** *Programe postdoctorale în avangarda cercetării de excelenţă în Tehnologiile Societăţii Informaţionale şi dezvoltarea de produse şi procese inovative*, Proiect cofinanţat din Fondul Social European prin Programul Operaţional Sectorial Dezvoltarea Resurselor Umane 2007-2013, Proiect implementat de Institutul Naţional de Cercetare-Dezvoltare pentru Textile şi Pielarie – INCDTP în parteneriat cu Academia de Studii Economice Bucureşti - Centrul de Cercetări Analize şi Politici Regionale, Universitatea din Oradea şi ASSOCIATION GROUPE ESSEC, **Membru al grupului ţintă – Valentina E. Bălaş,** Activitatea 4 – Formarea şi perfecţionarea în cadrul programelor pilot de pregătire postdoctorală prin cursuri susţinute de ESSEC Bussines School – Franţa.

50. Membru în colectivul grantului, **Responsabil WP 3** din Programul Operaţional Competitivitate 2014-2020, Axa prioritară 1 – Cercetare, deszvoltare tehnologică şi inovare (CDI) în sprijinul competitivităţii economice şi dezvoltării afacerilor, Acţiunea 1.1.4 – Atragerea de personal cu competenţe avansate din străinătate pentru consolidarea capacităţii de CD. Titlul Proiectului: *Noi nano-arhitecturi de inspiraţie biologică de tip cellular – pentru circuite integrate, Nano-ART-BioCell – P_37_744,*
valoare 8.502.600 lei, 2016-2019
Responsabil la pachetul WP 3 – Valentina E. Balas

51. **Contract de cercetare** *obtinut prin competitie* Nr. 03 din 10.10.2013 *cu SC* **S.C MBB S.R.L** *"Modelarea si simularea proceselor de tratament termic"*, Universitatea „Aurel Vlaicu" din Arad, *Responsabil de contract* – Marius M. Balas, Membru în echipa de cercetare - **Valentina E. Balas**, 1000 Ron
52. **Contract de cercetare** stiintifica obtinut prin competitie nr. 10/16.07.2019, cu numar de intrare la UAV: 4693/16.017.2019, cu SC Contact Plus SRL Arad, „Promovarea agriculturii în mediul urban: modele matematice și soluții concrete", Membru in colectivul de proiect – **Valentina E. Balas**, Valoare 42.000 lei (10.000 $).

Keynote Speaker

1. **Keynote Speaker** - ***Challenges in Green Computing Technologiesn and New AI Regulations*** to 2023 3rd International Conference on Electronics, Circuits and Information Engineering (ECIE 2023), 6th to 8th, January 2023, Suzhou, CHINA.

ECIE 2023

6th - 8th, January 2023 Online

Certificate of Keynote Speaker

THIS CERTIFICATE IS PROUDLY AWARDED TO

Prof. Valentina Emilia Balas

Aurel Vlaicu University of Arad, Romania

This is to certify that **Prof. Valentina Emilia Balas** has delivered a keynote speech titled ***Challenges in Green Computing Technologies and New AI regulations*** for the 2023 3rd International Conference on Electronics, Circuits and Information Engineering (ECIE 2023) on 7th January 2023.

The Committee of ECIE 2023

7th January 2023

Academic Exchange Information Center AEIC

1. **Invited Speaker** - ***Green Computing Challenges*** to the 2nd International Conference on Advanced Information Science and Computing Systems, ICAISCS 2023, January 28th, organized by Christ Nagar College, MARANALLOOR, TRIVANDRUM, KERALA, INDIA.

CHRIST NAGAR COLLEGE
MARANALLOOR, TRIVANDRUM
ICFOSS
COMPUTER SOCIETY OF INDIA
ESTD. 1965
Certificate of Appreciation
This certificate is presented to
Dr VALENTINA E. BALAS
Professor of Automation and Applied Informatics, Aurel Vlaicu University of Arad, Romania for sharing her valuable knowledge as the Keynote Speaker at the 2nd International Conference on Advanced Information Science and Computing Systems (ICAISCS) organised by the Department of Computer Science & Applications, Christ Nagar College, Maranalloor, Trivandrum in collaboration with International Centre for Free and Open Source Software (ICFOSS) and Computer Society of India (CSI) on 28th of January 2023.
Ms ARATHI CHANDRAN R. I.
Coordinator
Ms AYSWARIYA V. J.
Coordinator
Ms LIBI KURIAN
Head of the Department
Dr JOLLY JACOB
Principal
www.christnagarcollege.com

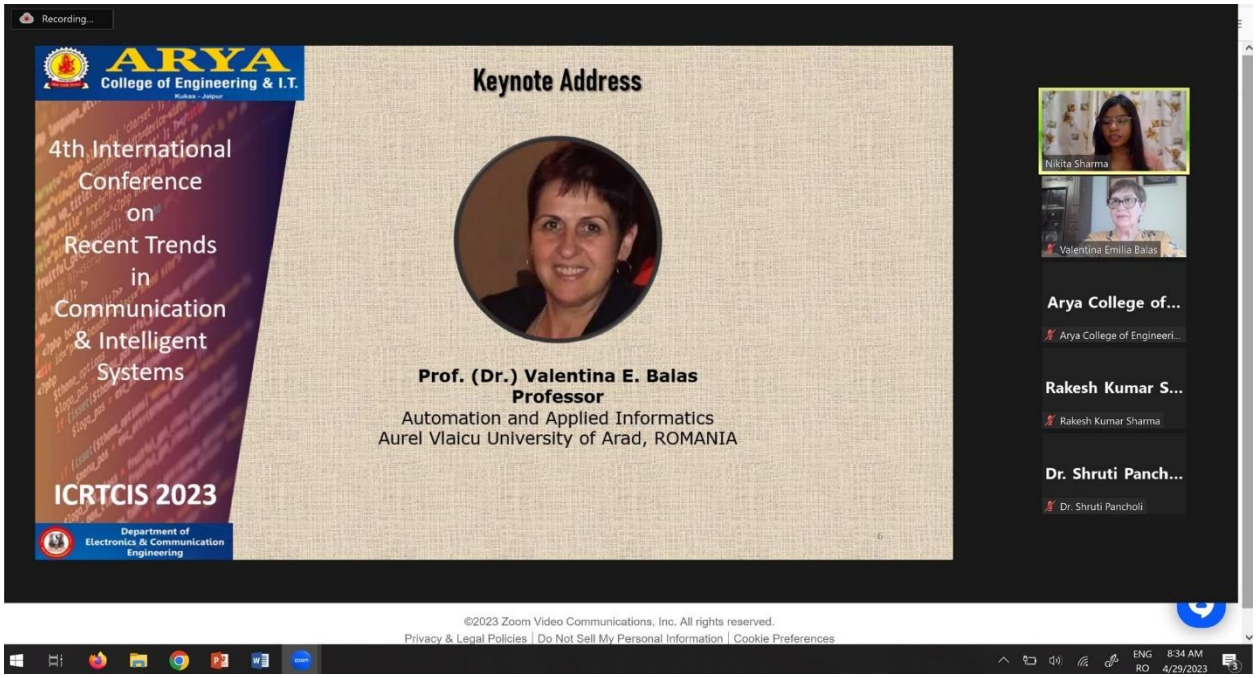
2. **Keynote Speaker** - ***Soft Computing Methods for Greenhouse Control*** to the 3rd International Conference on Innovations in Energy Management and Renewable Resources, IEMRE, 2023, on February 17, 2023, organized by Institute of Engineering & Management, Kolkata, INDIA, https://solarenergy.smartsociety.org/

3. **Invited Speaker** to The 1st International Conference on Innovating Technologies & Intelligent Systems, on 24.02.2023, organized by the Department of Computer Application & Information Technology, Centre for Vocational Studies of Yogoda Satsanga Mahavidyalaya College, Dhurwa, Ranchi, INDIA.
https://sites.google.com/view/icitis2023/home
4. **Invited Speaker** - ***Artificial Intelligence in Applications.The European AI Strategy*** to The Third International Conference on Artificial Intelligence and Signal Processing, organized by the Vellore Institute of Technology, Andhra Pradesh in

Coordination with IEEE Guntur Subsection and Technical Co-sponsorship approved by IEEE Hyderabad section, INDIA, 18 March 2023.

5. **Invited Speaker** - ***Lotfi Zadeh and his Romanian Friends*** to the International scientific seminar dedicated to the scientific legacy of Professor Lotfi Zadeh, organized by the Department of Communication and Organizing Research Centers, UNEC Digital Economy Research Center and the Faculty of Digital Economy and by Shahnaz Shahbazova, professor of the Department of Digital Technologies and Applied Informatics UNEC, March 29, 2023, Baku, AZERBAIJAN.

6. **Invited Speaker** - ***Recent Trends in Intelligent Systems*** to The 4th International Conference on Recent Trends in Communication & Intelligent Systems (ICRTCIS 2023), organized by Arya College of Engineering and Information Technology and hosted by the Department of Electronics & Communication Engineering, 29 April 2023, Jaipur, INDIA, 29 April 2023, https://www.icrtcis.in/speakers-and-sessions/



7. **Keynote Speaker and Publication Chair** - ***Computational Intelligence Paradigms in Switching Techniques*** to the The second IEEE-International Conference on Computational Intelligence and Sustainable Engineering (CISES-2023), 29 April, 2023, organized by G.L. Bajaj Institute of Technology & Management Greater Noida, U.P. INDIA, https://www.glbitm.org/cises2023/Keynote-Speakers.html

8. **Guest of Honor and Invited Speaker** - ***Next Generation Computing Paradigms*** to International Conference on Advancement in Computation & Computer Technologies + InCACCT-2023 organized by Department of Computer Science and Engineering, with the technical sponsors IEEE Delhi Section, 05th – 06th May 2023 at Chandigarh University, Campus – Gharuan, Mohali, Punjab, INDIA.

CHANDIGARH UNIVERSITY
Discover. Learn. Empower.

NAAC GRADE A+ Accredited University

QS UNIVERSITY RANKINGS 2023 ASIA RANKED 2ND AMONGST PRIVATE UNIVERSITIES IN INDIA

InCACCT

IEEE DELHI SECTION

Certificate of Appreciation

This is to certify that Prof./ Dr./ Mr./ Ms. Valentina E. Balas

of Aurel Vlaicu University of Arad, Romania has

delivered a **Keynote Address** in **1st International Conference** on **Advancement in Computation & Computer Technologies (InCACCT-2023)** organized by the Department of Computer Science & Engineering, with the technical sponsor **IEEE Delhi Section (IEEE Conference Record No.: 57535X)** held on **05th – 06th May 2023** at Chandigarh University, Gharuan, Mohali, Punjab, India.

Dr. Meenu Gupta
Convener & Conf. Organizing Chair
Chandigarh University, Punjab, India

Prof. (Dr.) Rakesh Kumar
Convener & Conf. Organizing Chair
AD-CSE, Chandigarh University, Punjab, India

9. **Keynote Speaker** - ***Optimal Traffic Control*** to 2023 3rd International Conference on Robotics and Control Engineering (RobCE 2023) organized by Southeast University, , supported by Hong Kong Society of Mechanical Engineers (HKSME), media supported by MDPI-Robotics, Nanjing, May 12-14, 2023, CHINA, https://www.robce.org/

10. **Invited Speaker** - ***Intelligent Control Design and Practical Applications***.to 2023 2nd International Conference on Innovations and Development of Information Technologies and Robotics (IDITR 2023), co-organized by University of Electronic Science and Technology of China and Hong Kong Society of Mechanical Engineers (HKSME), technical sponsored by IEEE Chengdu Section and York University media supported by Journal of Electronics & Information Technology, May 27, 2023, Chengdu, CHINA

HONG KONG SOCIETY OF MECHANICAL ENGINEERS

CERTIFICATE

THIS CERTIFICATE IS PROUDLY AWARDED TO

Prof. Valentina Emilia Balas

Aurel Vlaicu University of Arad, Romania

In honor of your excellent work as Keynote Speaker and your significant contribution to the success of 2023 2nd International Conference on Innovations and Development of Information Technologies and Robotics (IDITR 2023), Chengdu, China, from May 26 to 28, 2023.

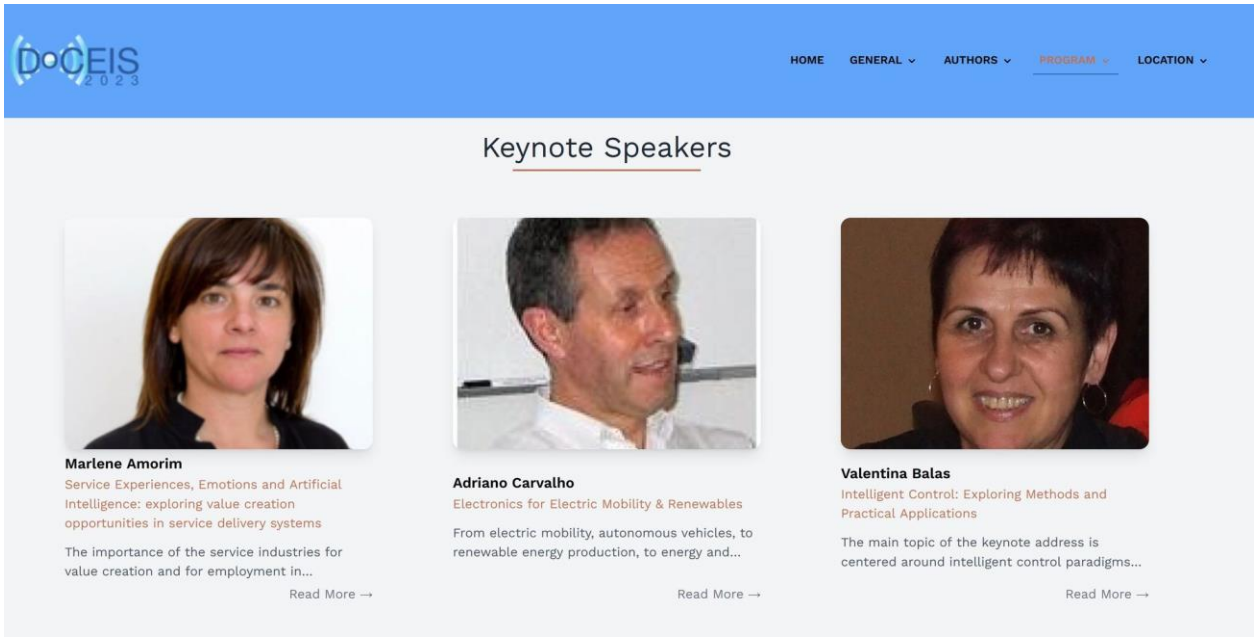
IDITR 2023

Conference Committee Chair

Hong Kong Society of Mechanical Engineers

11. **Keynote Speakers** - ***Advanced Soft Computing Methods. Design and Practical Applications*** to the 6-th edition of the International Conference on Space Launching Systems- SLS 2023 and 18-th edition of the International Conference on Artificial Intelligence in the fields of Aerospace, Astronautics, Robotics, Mechanical Engineering, Manufacturing Systems, New Technology of Materials, Non Conventional Energy, Human motricities and Neurorehabilitation- OPTIROB 2023, 29 june - 3 July 2023, Jupiter, Hotel Majestic, Romania, https://www.uastro.space/keynore-speakers

12. **Keynote Speaker** - ***Intelligent Control. Exploring Methods and Practical Applications*** to 14th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, 5-7 July, 2023, Caparica, Portugal, The Advanced Doctoral Conference on Computing, Electrical and Industrial Systems is celebrating its 14th edition (DoCEIS 2023) with a focus on Technological Innovation for Connected Cyber Physical Spaces, https://doceis.dee.fct.unl.pt/



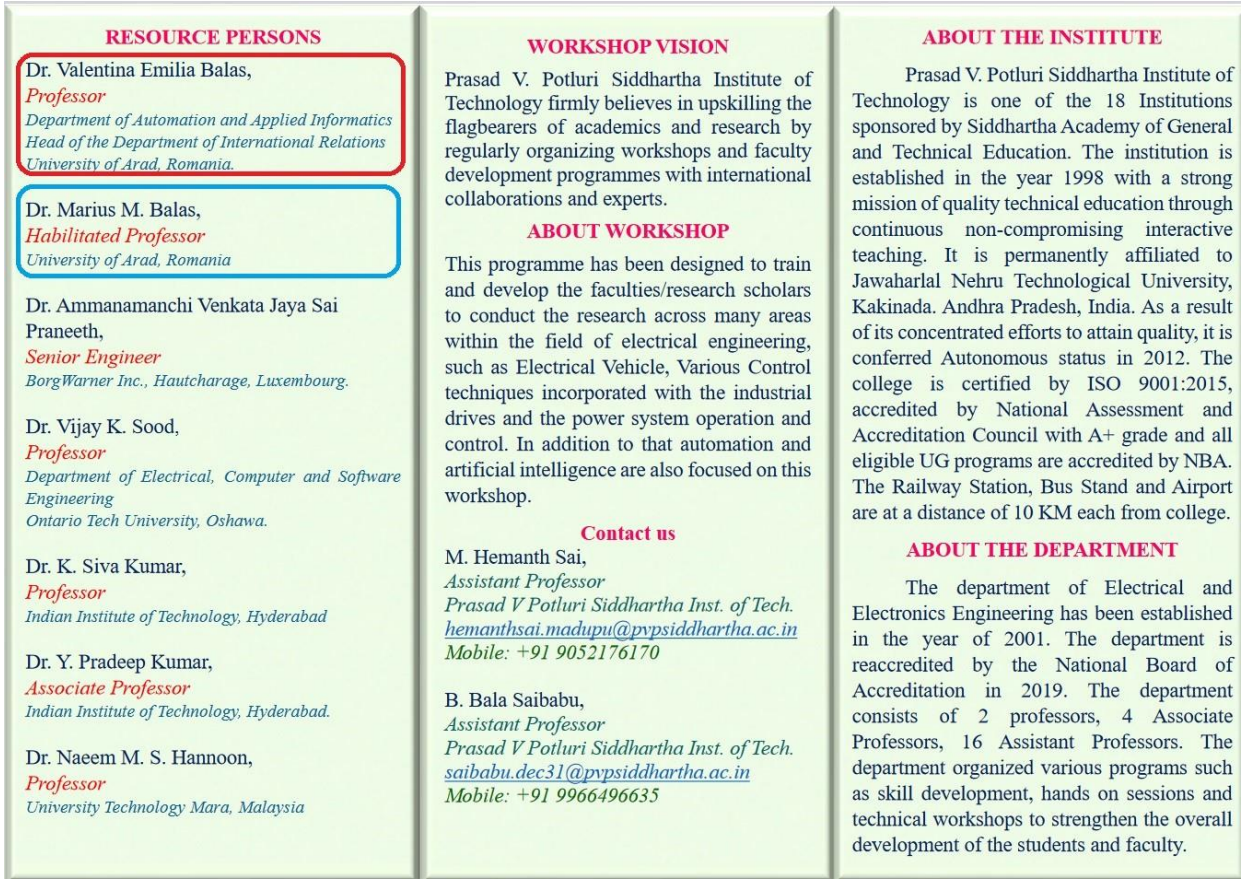
13. **Invited Speaker** - ***Introduction to Research Perspective. Definitions and Objectives of Research***to 7-Days workshop on Research Methodology for Engineering, dated 24th - 30th July, 2023, organized by Shoolini University and IEEE SU Student Branch, Himachal Pradesh, INDIA, https://shooliniuniversity.com/media/research-methodlogy/index.html?fbclid=IwAR2o5HaagVMJmEFSfusXz7pjP2fIKNRXhky9b-5clH8rYiCwJNGD8BD6KFw

IEEE
Student Branch
Shoolini University, Himachal Prades
Association of Indian Universities and
Shoolini University
Shoolini University
CERTIFICATE OF APPRECIATION
This Certificate is proudly presented to
Prof. Valentina E. Balas
Aurel Vlaicu University of Arad, Romania
For addressing a session in 7 Days workshop on Research Methodology, held from 24th - 30th July 2023 in Shoolini University, Himachal Pradesh, India.
Anitya Gupta
Mr. Anitya Gupta
(CHAIR, IEEE STUDENT BRANCH)
Dr. Pankaj Mitta
SECRETERY GENERAL AUI

14. **Invited Speaker –** ***Adaptive Fuzzy Systems*** at the IEEE co-sponsored event of 20th International Bhurban Congress of Applied Sciences and Technology (IBCAST-2023), August 22-25, 2023, Bhurban, Murree Hills, Pakistan.
https://www.ibcast.org.pk/

15. **Resources Persons-** ***Computational Intelligence.Techniques and Practical Applications*** for A TWO-WEEK Online International Workshop on EMERGING TRENDS IN ELECTRICAL ENGINEERING, Sponsored by Siddhartha Academy of General & Technical Education, organized by Department of Electrical & Electronics Engineering Prasad V. Potluri Siddhartha Institute of Technology (Autonomous), Kakinada, Kanuru, Vijayawada, INDIA, 14th August 2023 – 26th August,

www.pvpsiddhartha.ac.in



RESOURCE PERSONS

Dr. Valentina Emilia Balas,
Professor
Department of Automation and Applied Informatics
Head of the Department of International Relations
University of Arad, Romania.

Dr. Marius M. Balas,
Habilitated Professor
University of Arad, Romania

Dr. Ammanamanchi Venkata Jaya Sai Praneeth,
Senior Engineer
BorgWarner Inc., Hautcharage, Luxembourg.

Dr. Vijay K. Sood,
Professor
Department of Electrical, Computer and Software Engineering
Ontario Tech University, Oshawa.

Dr. K. Siva Kumar,
Professor
Indian Institute of Technology, Hyderabad

Dr. Y. Pradeep Kumar,
Associate Professor
Indian Institute of Technology, Hyderabad.

Dr. Naeem M. S. Hannoon,
Professor
University Technology Mara, Malaysia

WORKSHOP VISION

Prasad V. Potluri Siddhartha Institute of Technology firmly believes in upskilling the flagbearers of academics and research by regularly organizing workshops and faculty development programmes with international collaborations and experts.

ABOUT WORKSHOP

This programme has been designed to train and develop the faculties/research scholars to conduct the research across many areas within the field of electrical engineering, such as Electrical Vehicle, Various Control techniques incorporated with the industrial drives and the power system operation and control. In addition to that automation and artificial intelligence are also focused on this workshop.

Contact us

M. Hemanth Sai,
Assistant Professor
Prasad V Potluri Siddhartha Inst. of Tech.
hemanthsai.madupu@pvpsiddhartha.ac.in
Mobile: +91 9052176170

B. Bala Saibabu,
Assistant Professor
Prasad V Potluri Siddhartha Inst. of Tech.
saibabu.dec31@pvpsiddhartha.ac.in
Mobile: +91 9966496635

ABOUT THE INSTITUTE

Prasad V. Potluri Siddhartha Institute of Technology is one of the 18 Institutions sponsored by Siddhartha Academy of General and Technical Education. The institution is established in the year 1998 with a strong mission of quality technical education through continuous non-compromising interactive teaching. It is permanently affiliated to Jawaharlal Nehru Technological University, Kakinada. Andhra Pradesh, India. As a result of its concentrated efforts to attain quality, it is conferred Autonomous status in 2012. The college is certified by ISO 9001:2015, accredited by National Assessment and Accreditation Council with A+ grade and all eligible UG programs are accredited by NBA. The Railway Station, Bus Stand and Airport are at a distance of 10 KM each from college.

ABOUT THE DEPARTMENT

The department of Electrical and Electronics Engineering has been established in the year of 2001. The department is reaccredited by the National Board of Accreditation in 2019. The department consists of 2 professors, 4 Associate Professors, 16 Assistant Professors. The department organized various programs such as skill development, hands on sessions and technical workshops to strengthen the overall development of the students and faculty.

16. **Keynote Speaker** - ***Advanced Research in Soft Computing*** to The International Symposium on Design Studies and Intelligence Engineering (DSIE2023), October 28-29, Hangzhou, CHINA, http://www.dsieconf.org/

18**. Chief Gust and Keynote Speaker** - ***Moore's Law in Higher Education*** to the1st International Conference on Artificial Intelligence, Advanced Materials, and Mechatronics Systems (AIAMMS-2023), November 3-4, 2023, Organised by: School of Engineering and Technology, JECRC University, Jaipur, INDIA. https://conference.jecrcuniversity.edu.in/aiamms23/index.html?fbclid=IwAR3e8zq5yTZL3L5nURbSODcn3-pO4sVYEzoCCf4OwWyAQd_akONSdjtKPRY,

19. **Keynote Speaker** - ***Current and Future Trends in Soft Computing and Applications*** to The International Conference on Advances in Computation, Communication and Information Technology ICAICCIT - 2023, organized by Manav Rachna International Institute of Research and Studies (MRIIRS), November 23-24, 2023, Faridabad, INDIA,
https://aiccit2023.vercel.app/,

20. **Guest of Honour** - ***Computing Paradigms and Practical Applications*** at 1st DMIHER(DU) International Conference on "Artificial Intelligence in Education and Industry 4.0" (IDICAIEI), 27th - 28th, November 2023, organized by Faculty of Engineering and Technology [FEAT] Datta Meghe Institute of Higher Education and Research (Deemed to be University), Sawangi (Meghe), Wardha, Maharashtra, INDIA. ***Soft***
https://dmiher.edu.in/IICAIEI/

21. **Keynote Speaker** - ***Recent Trends in Control Systems,*** at the "10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics, and Computer Engineering" (UPCON-2023), December 1st to 3rd, 2023, Amity University Greater Noida, INDIA,
https://amity.edu/upcon2023/

Ref. # UPCON/23/A/4

AMITY UNIVERSITY
GREATER NOIDA CAMPUS

UPCON

IEEE
UP SECTION (INDIA)

10th IEEE UP SECTION INTERNATIONAL CONFERENCE

ON

ELECTRICAL, ELECTRONICS AND COMPUTER ENGINEERING (UPCON-2023)

1st – 3rd December, 2023

Certificate of Acknowledgement

We acknowledge the participation of **Dr. Valentina Emilia Balas** from **Aurel Vlaicu, University of Arad, Romania** as **Keynote Speaker** during 10th IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023) held during 1st - 3rd December, 2023.

Prof. (Dr.) Ajay Rana
General Chair, UPCON-2023
Director General, AUUP, Greater Noida

Dr. Satish K. Singh
General Chair, UPCON-2023
Chair, IEEE UP Section

22. **Keynote Speaker** - ***Empowering Industrial Control: Soft Computing Paradigms and Practical Applications*** to the 14th Conference on Data Analysis Methods for Software Systems, November 30 - December 2, 2023, Druskininkai, LITHUANIA, https://www.mii.lt/damss/

damss_2023_final_program.pdf (mii.lt)

DAMSS DATA ANALYSIS METHODS FOR SOFTWARE SYSTEMS

Event Schedule
Friday, December 1

9^{00}–10^{00}	**Plenary Session (Room A)**

Alfred Bruckstein "An Overview of Holographic Data Representations" (Technion Israel Institute of Technology, Israel)

Valentina E. Balas "Empowering Industrial Control: Soft Computing Paradigms and Practical Applications" (Aurel Vlaicu University of Arad, Romania)

10^{00}–11^{00}	**Oral Session (Room A)**

1. ***Stefano Bonnini*** "Nonparametric Tests on the Adequacy of Models for Count Data" (University of Ferrara, Italy)
2. ***Jurgita Markevičiūtė***, *Zenonas Norkus* "Regional GDP Disparities in the Interwar Lithuania" (Vilnius University)
3. ***Rokas Puišys***, *Jonas Šiaulys* "Survival With Random Effect" (Vilnius University)

10^{00}–11^{00}	**Oral Session (Room C)**

1. ***Olga Karelkina*** "Loop Decomposition-Based Integer Programming Model for RNA Secondary Structure Prediction" (Systems Research Institute of the Polish Academy of Sciences, Poland)
2. ***Marco Marcozzi***, *Ernestas Filatovas, Remigijus Paulavičius* "Cluster-Based Classification of Consensus Protocols for Decentralized Ledger Technology" (Vilnius University)
3. ***Jan W. Owsiński*** "Back to the Roots: on the Use and Principles of Clustering under Various Circumstances" (Systems Research Institute of the Polish Academy of Sciences, Poland)

7

PREMII

2019 - ***Premiul Academiei Romane: Tudor Tanasescu,*** **Valentina Emilia Balas,** (in colectiv)

Academia Oamenilor de Știința din România - Bucuresti - Gala premiilor pentru anul 2021 - **Premiul "ȘTEFAN ODOBLEJA"** și afilierea ca MEMBRU ASOCIAT AOSR, Secția XII -Stiinta si Tehnologia Informației, in mai 2023

Premiul AGIR 2023 pentru anul 2022

ASOCIAŢIA GENERALĂ A INGINERILOR DIN ROMÂNIA

DIPLOMA AGIR 2022

Secțiunea ***Tehnologia informației***

Se acordă autorilor: **Anirudh NATH, Rajeeb DEY, Valentina Emilia BĂLAȘ**

Pentru lucrarea

Nonlinear Control for Blood Glucose Regulation of Diabetic Patients: An LMI Approach

Editura ELSEVIER ACADEMIC PRESS, 2022

14 septembrie 2023

Președinte,
Mihai MIHĂIȚĂ

2022 – Premiul "Stefan Odobleja" al Academiei Oamenilor de Stiinta din Romania

Academia Oamenilor de Ştiinţă din România

acordă

Premiul „ŞTEFAN ODOBLEJA" 2022
Ştiinţa şi Tehnologia Informaţiei
D-nei Valentina Emilia BALAŞ
pentru lucrarea
Nonlinear Control for Blood Glucose Regulation of Diabetic Patients: An LMI Approach
Editura Elsevier, 2022

Președinte
Prof. univ. dr. ing. Adrian BADEA

Data: 24 mai 2024

Arad, 14.10.2025 **Prof.univ.habil.dr.ing. Valentina E. Balas**