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46. 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

47. 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

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50. 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

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52. 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.

53. 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

54. 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).***

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56. 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**).

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60. 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**)

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B. Papers Published in Journals and Conference Proceedings with Peer Review (Non-Indexed)

1. Valentina E. Bălaș, 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. Bălaș, *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. Bălaș, 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. Patents Obtained Throughout the Entire Activity - NONE

F. Research Contracts

Director of International Grants/Projects

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 competitive 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 of National Grants/Projects

Over 25 projects completed at CCSIT Vagoane Arad as a project leader for the electrical/electronic part, projects obtained through competition within the group of companies producing rolling stock.

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**

Member of International Grant/Project Teams

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

Member of National Grant/Project Teams

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

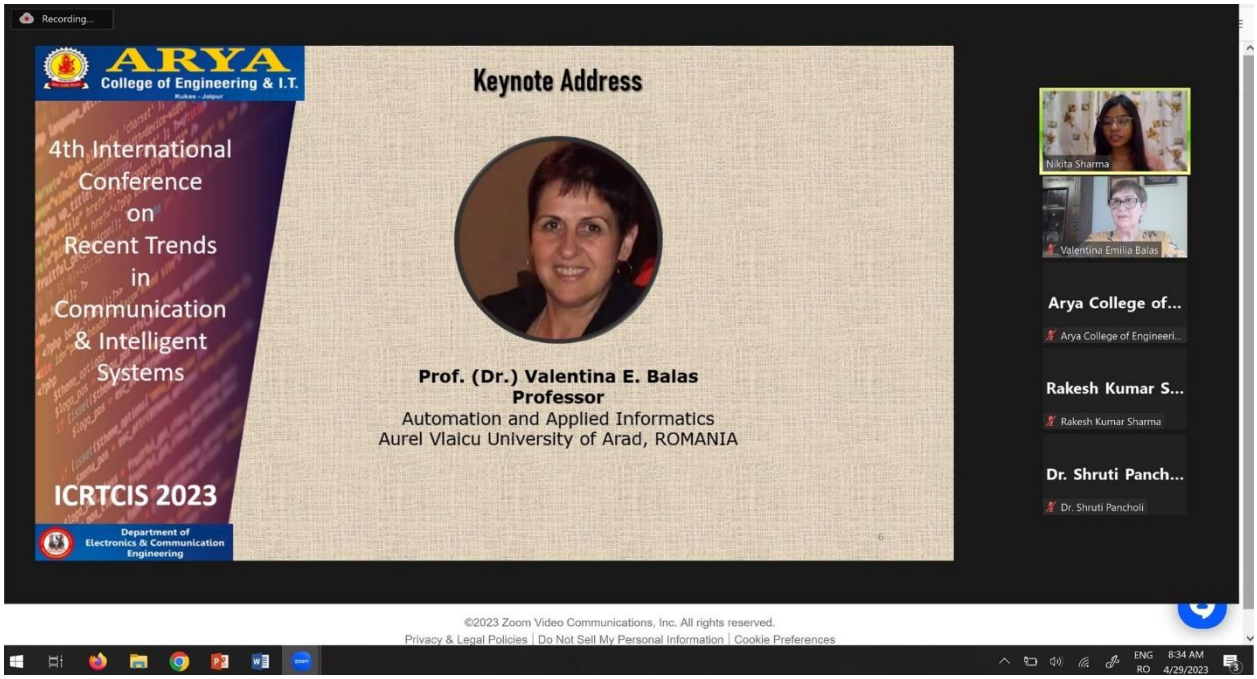
2. **Keynote Speaker** - ***Soft Computing Methods for Greenhouse Control*** to the 3rd International Conference on Innovations in Energy Management and Renewable Resources, IEMRE, 2023, on February 17, 2023, organized by Institute of Engineering & Management, Kolkata, INDIA, https://solarenergy.smartsociety.org/

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.

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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

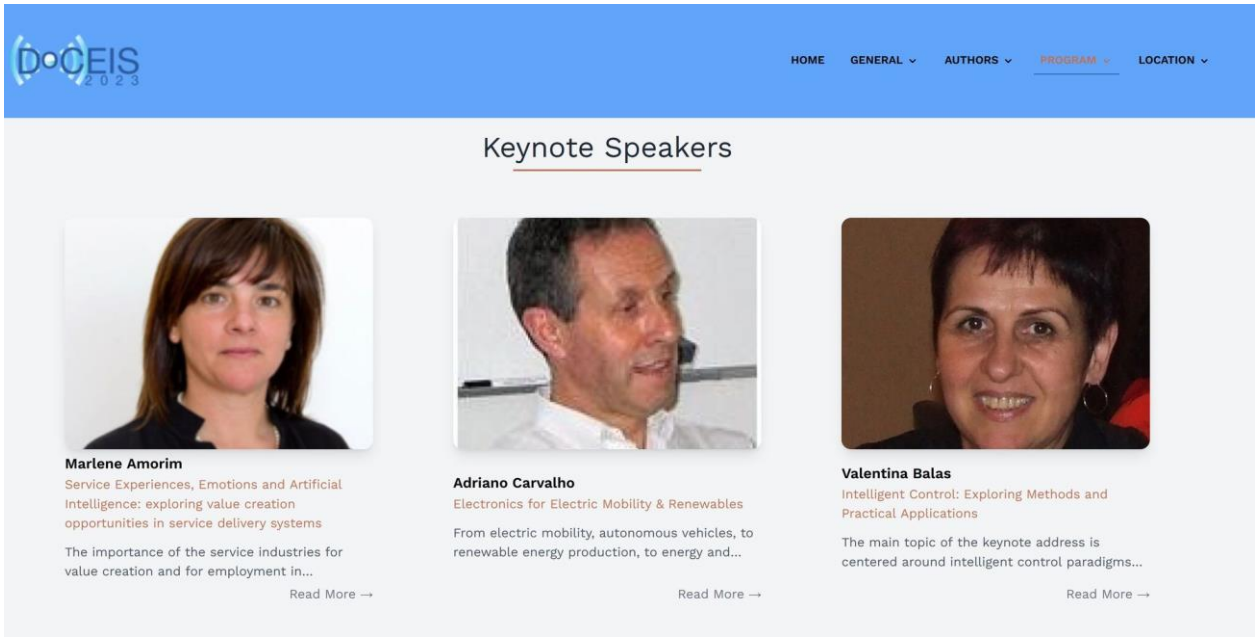
Prof. (Dr.) Rakesh Kumar
Convener & Conf. Organizing Chair
AD-CSE, Chandigarh University, Punjab, India

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

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

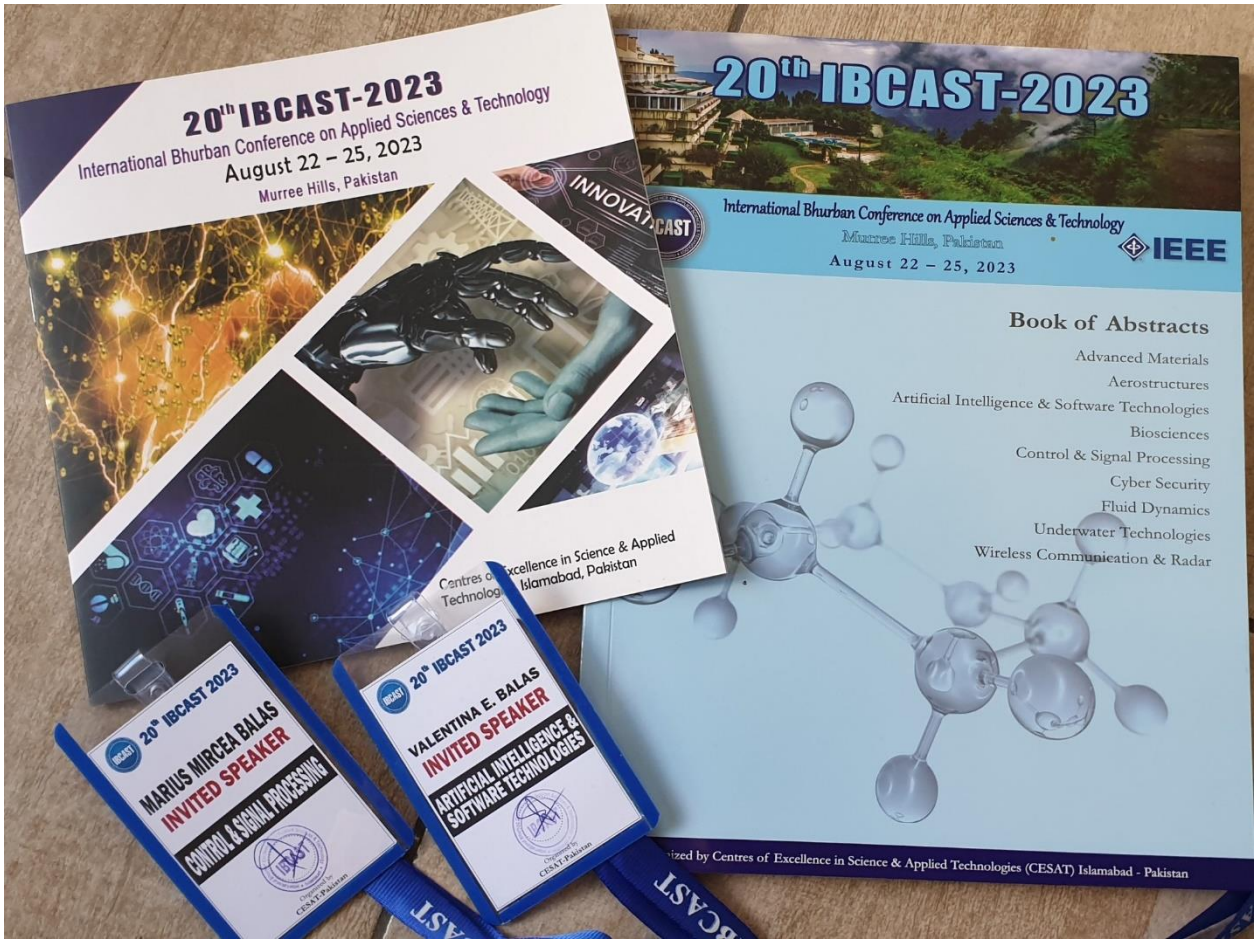
12. **Keynote Speaker** - ***Intelligent Control. Exploring Methods and Practical Applications*** to 14th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, 5-7 July, 2023, Caparica, Portugal, The Advanced Doctoral Conference on Computing, Electrical and Industrial Systems 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-methodology/index.html?fbclid=IwAR2o5HaagVMJmEFSfusXz7pjP2fIKNRXhky9b-5clH8rYiCwJNGD8BD6KFw

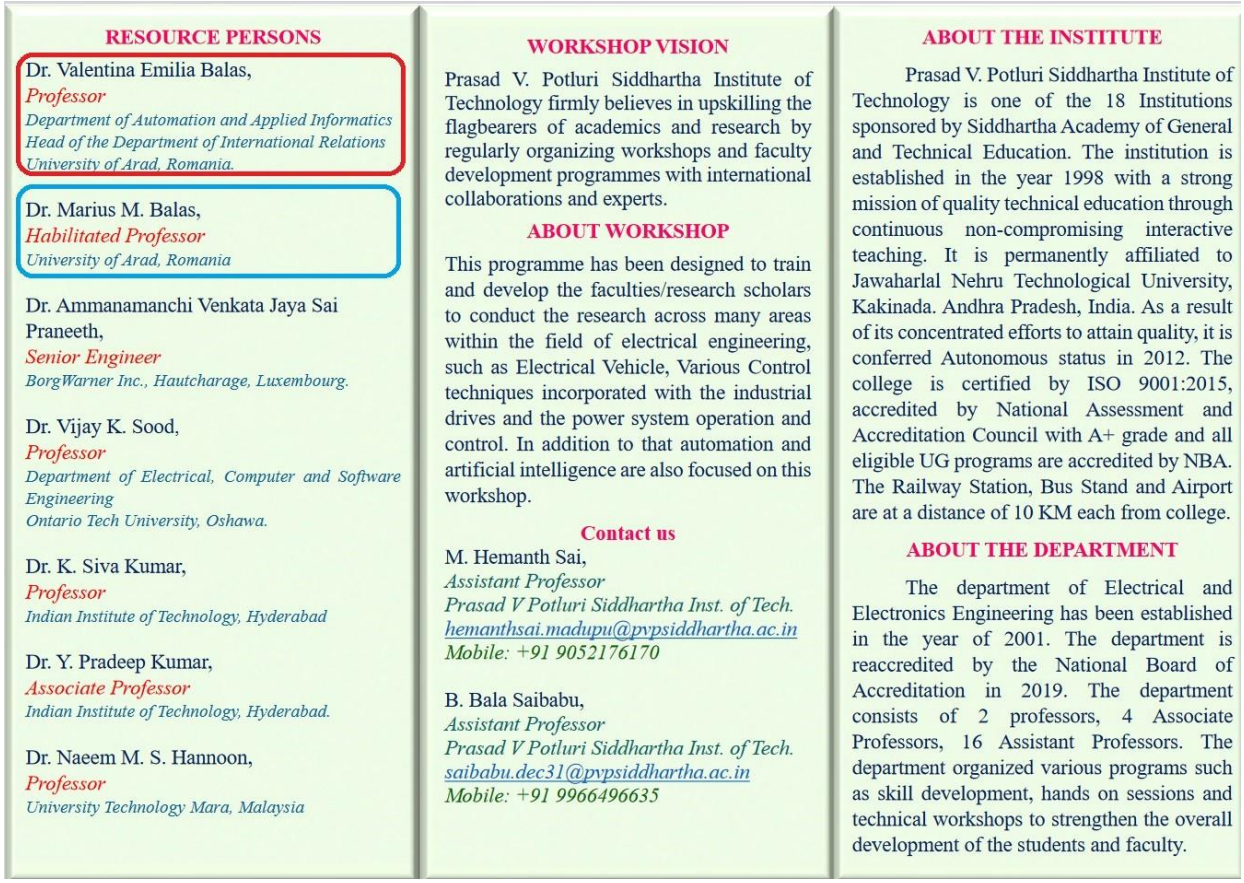
IEEE
Student Branch
Shoolini University, Himachal Prades
Association of Indian Universities and
Shoolini University
Shoolini University
CERTIFICATE OF APPRECIATION
This Certificate is proudly presented to
Prof. Valentina E. Balas
Aurel Vlaicu University of Arad, Romania
For addressing a session in 7 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

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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.

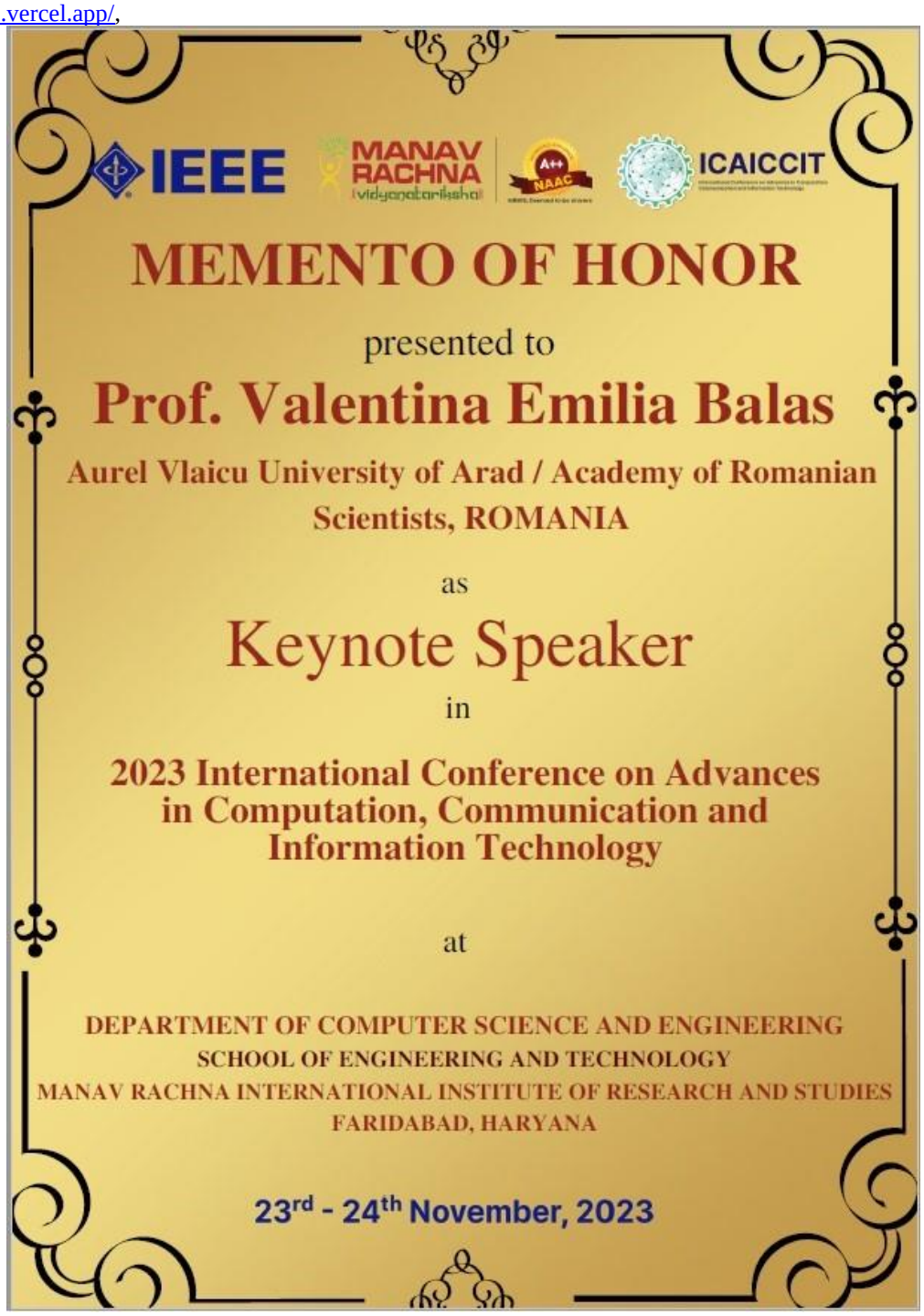
ABOUT THE DEPARTMENT

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

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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

Awards

2019 - Romanian Academy Award: Tudor Tănăsescu, Valentina Emilia Balas as part of the team

Academy of Scientists of Romania - Bucharest - Awards Gala for the year 2021 - "ȘTEFAN ODOBLEJA" Award and affiliation as an ASSOCIATE MEMBER of AOSR, Section XII - Information Science and Technology, in May 2023

AGIR Award 2023

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

Arad, 24.09.2024 **Prof.univ.habil.dr.ing. Valentina E. Balas**