

BIO-DATA



Dr. Bindu R

1.	Name	Dr. Bindu R			
2.	Designation	Associate Professor			
3.	Residential Address	AL-6-2-4, Ashiana Apartments, Sector-5, Airoli, Navi Mumbai-400708			
4.	Date of birth	23-03-1968			
5.	Total Experience	33			
i.	Teaching	33			
ii.	Industrial	--			
6.	Qualifications				
	Exam Passed	Year	Institution/ University	Branch/Specialization	Percentage/CGPI
	B.Tech.	1990	Univ. of Kerala	Electrical & Electronics Engineering	74.5%
	Qualified GATE 1990				
	M.Tech.	1992	REC (now NIT) Calicut	Electrical Engineering (Energetics)	64% + Dissertation-Excellent grade
	Ph. D. (Electrical)	2021	University of Mumbai (FCRIT)	Electrical Engineering	---
Additional Qualification:					
7.	Employment Record				
	Institution	Year (From To)	Designation		
	Fr. C. Rodrigues Institute of Technology, Navi Mumbai	08 Nov. 2023 to till date	Associate Professor & Asst. HOD.		
	Fr. C. Rodrigues Institute of Technology, Navi Mumbai	01 Sep. 2010 to 07 Nov. 2023	Associate Professor		
	Fr. C. Rodrigues Institute of Technology, Navi Mumbai	April 2006 to Sep.2010	Assistant Professor		
	Fr. C. Rodrigues Institute of Technology,	May 2002 to April 2006	Sr. Lecturer		
	Fr. C. Rodrigues Institute of Technology,	August 1996 to May 2002	Lecturer		
	Amrutvahini College of Engg.,Sangamner, Ahmed Nagar	Feb 1996 to 1996 Aug.	Lecturer		
	Pravara Rural Engg.College,Loni, Ahmed Nagar	July 1994 to Sep. 1995	Lecturer		

8.	Undergraduate / Postgraduate Teaching Experience and Subjects Taught					
	Subjects Taught at UG level					
	Sr.No.	Name of Subject			Semester	
	1	Drives and Control			VII	
	2	Electrical Machine Design			VII	
	3	Computer Application in Power System Analysis			VI	
	4	Protection and switchgear Engineering			VI	
	5	Electrical Machines III			VI	
	6	Power Transmission			V	
	7	Electrical Machines II			V	
	8	Element of Power System			IV	
	9	Electrical Machines I			III	
	10	Electrical Networks			III	
	11	Control System II			VII	
	12	Industrial controllers			VIII	
	13	Electrical Machines III			VI	
	14	Electrical AC Machines I			IV	
	Subjects Taught at PG level					
	Sr.No.	Name of Subject			Semester	
	1	Electrical Machine Modelling and Analysis			I	
	2	Advanced Machine Drives			II	
	3	Electrical Drives and Control			II	
	4	Electrical Drives and Applications			I	
	6	Digital Control of Electrical Drives			II	
9.	Research Experience:					
	Guided 18 M.E projects (17 completed and one in process).					
	Guided more than 30 B.E. projects.					
	Done Research work in Design and Control Aspects of Power Conversion System for Electric Vehicles					
	Approved M.E. and Ph. D guide of University of Mumbai					
	Organized ISTE approved short term training program on “Power Electronics and Drives” from 31/10/22 to 05/11/22 at Fr. C. Rodrigues Institute of Technology, Vashi.					
	Organized ISTE approved short term training program on “Workshop on Power Electronic Applications” from 16/04/2012 to 16/04/2012 at Fr. C. Rodrigues Institute of Technology, Vashi.					
	Organized ISTE approved short term training program on “MATLAB, ETAP and their Applications” from 07/01/2008 to 11/01/2008 at Fr. C. Rodrigues Institute of Technology, Vashi.					
	Organized ISTE approved short term training program on “PLC and Industrial Automation” from 07/08/2008 to 11/08/2006 at Fr. C. Rodrigues Institute of Technology, Vashi.					
	Research Grants:					
	Sr.No.	Name of Funding Organization	Type of Grant	Amount (Rs.)	Year	Name of Research Project
	01	University of Mumbai	Minor Research Grant APD/237/447 of 17th Nov. 2012	23000	2012	Hardware Implementation of Indirect Vector Control of Induction Motor with Flux Optimisation
	02	Institution of Engineers India	R&D (Doctoral) DR2017007	70000	2017	Design and Control of Power Conversion System for Electric Vehicles
	03	University of Mumbai	Minor Research Grant	23000	2018	Power Management in Battery Electric Vehicle

			APD/237/323 of 27th Mar. 2018			
10.	Professional Societies Fellowship / Membership ISTE membership, IEI Membership, IETE Fellow membership					
11.	Projects guided in UG/PG level: More than 20 in UG and 18 in PG Area - Electrical Drives and Control, Power System. Details of M.E Projects guided					
	Ser. No.	Name of Student	Title of the Project	Year	Status	
	01	Ruchi Harchandani	Automation of Motors for Cement Industry using PLC and SCADA	2011-2012	Completed	
	02	Divya M.	Performance Improvements in Distribution Systems	2011-2012	Completed	
	03	Deepa Vincent	Three Phase Induction Motor Design Software	2011-2012	Completed	
	04	Ramchandra Bhosale	Vector Control of Induction Motor using Fuzzy logic Controller	2012-2013	Completed	
	05	Juber Shaikh	Flux Optimization for Indirect vector control of Induction Motor	2012-2013	Completed	
	06	Amol Karpe	Multi-level Inverter for Large Induction Motor Drives Application	2012-2013	Completed	
	07	Shraddha Hule	Sensorless Vector Control of Three Phase Induction Motor	2013-2014	Completed	
	08	Mahesh Kumbhar	Design of Electric Release Brake	2013-2014	Completed	
	09	Shabin Thomas	Design and Analysis of Induction Motor based Drive for Hybrid Electric Vehicle Application	2014-2015	Completed	
	10	Rahul D. Patil	Modelling and Control of switched Reluctance Motor for Hybrid Electric Vehicle	2014-2015	Completed	
	11	Omkar Pawar	Direct Torque Control of Induction Motor using Four Switch Three Phase Inverter	2014-2015	Completed	
	12	Nereus Fernandes	Control of Switched Reluctance Generator in Wind Energy System	2015-2016	Completed	
	13	Dinesh Bhujade	DTC of Three Phase Induction Motor using Space Vector Modulation Technique	2016-2017	Completed	
	14	Khan Abdul Hakim	Sensorless Vector Control of Induction Motor with Slip Gain Tuning	2016-2017	Completed	
	15	Sujata Patil	Battery-Ultracapacitor based Power Conditioning Unit for Electric Vehicle Application	2017-2018	Completed	
	16	Salil Patwardhan	Modelling and Performance Analysis of Battery Electric Vehicle	2018-2019	Completed	
	17	Ann Raichel Mathew	Design and Development of a Power Electronic Drive for a Small Four-Wheeler Utility Electric Vehicle	2019-2020	Completed	
	18	Prathamesh Vichare			Ongoing	
12.	Short Term Training Programmes attended:					
	<ol style="list-style-type: none"> 1. Basic AC Drive, 05-06 Nov. 2001, Control and Automation Business Unit, L&T. 2. DSP hardware and software in Power Electronics, IIT, Mumbai, May 5-16, 2003. 3. Electric Power Quality, IIT, Kanpur, IEEE, UP section, 9-10 Nov 2004. 4. Power Plant Training, Tata Power Plant, Trombay and Dharavi Substation in Nov 2005. 5. PLC for Advanced AC motor Controls, Advanced Training Institute, Mumbai, 20-31 July 2009 					

	<ol style="list-style-type: none"> 6. Power plant familiarisation, Dahanu Thermal Power Station, Oct 17-19, 2011 7. Basic Drives, Sitrain, Siemens Ltd., Kharghar, 02-05 July 2012 8. Workshop on Control System Design with MATLAB by RAIT, Nerul, Jan 2-6, 2017. 9. STTP on “Electric and Hybrid Electric Vehicle Technology” organized by the Department of Electrical Engineering, FCRIT, Vashi during June 18-23, 2018. 10. Online Faculty Development Series on “Learning Pedagogy and Effective Use of Case Methodology” ASM Group of Institutes, May 17-21, 2020. 11. Online Workshop on “Education 4.0” organised by IQAC, Atharva College of Engineering, Mumbai, April 28-30,2020. 12. One-week online Faculty Development Program on “Outcome Based Education: A step towards Excellence”, Govt. Engineering College, Karad, Maharashtra, May 11-15, 2020. 13. AICTE Training And Learning (ATAL) Academy Online FDP on "Electric Vehicles" from 2-11-2020 to 6-11-2020 at Fr. C. Rodrigues Institute of Technology, Vashi. 14. One week online STTP on topic “DSP, Arduino, and C/Python” organized by Department of Electrical Engineering of FCRIT, Vashi from 10th May 2021 to 14th May 2021. 15. 3 days AICTE-Workshop (online) on Examination Reforms from 8th-10th July 2021 by Chitkara University and AICTE. 16. AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "FDP on Stress Management" from 2021-07-26 to 2021-07-30 at Government College of Engineering, Tirunelveli-627007. 17. AICTE Training and Learning (ATAL) Academy Online Elementary FDP on " Power Electronic Systems and its Real Time Control Implementation in DSP" from 08/11/2021 to 12/11/2021 at Fr. C. Rodrigues Institute of Technology. 18. One week International online FDP on topic “Trends and challenges in the development of EV and HEV-Series1” organized by Department of Mechanical Engineering of Lendi Institute of Engineering and Technology, Andhra Pradesh from 26th Sept. 2022 to 30th Sept 2022. 19. Faculty Development Program on the topic “Futuristic Electrical Power Systems” organized by Department of Electrical Engineering of Fr. C. Rodrigues Institute of Technology, Vashi from 10th-16th November 2022. 20. FDP on “Research Proposal and Academic Writing” organised by IQAC and Research Cell of Deviprasad Goenka Management College of media Studies, Mumbai from 03/07/23 to 08/07/23. 21. Seven Days “Ashtang Yoga” from 21st October 2023 to 31st October 2023 Organized by Department of Mechanical Engineering of Agnel Charities’ Fr. C. Rodrigues Institute of Technology, Vashi. 22. STTP on “Role of Machine Learning in Electrical Engineering” from 02-01-2024 to 06-01-2024, approved by Indian Society for Technical Education at Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai. 23. Six days STTP on “Research Proposal Writing and AI Tools in Education and Research” from 06-05-2024 to 11-05-2024, approved by Indian Society for Technical Education at P. R. Pote Patil College of Engineering and Management, Amravati. 24. Six days FDP on “Solar Vehicle: Design and Implementation (SVDI 2024)” from 23-09-2024 to 28-09-2024 by Professor from IIT, Roorkee, organized by Annant Gyan Knowledge and Skills Pvt. Ltd.
13.	<p>List of Papers Published in Journal (Bindu R)</p> <ol style="list-style-type: none"> 1. Bindu, R., Thale, S., Performance Analysis of Power Sharing Control Strategies for Battery/Ultracapacitor Hybrid Energy Storage Based Electric Vehicle, (2020) International Review of Electrical Engineering (IREE), 15 (5), pp. 382-393. doi: https://doi.org/10.15866/iree.v15i5.18404 2. R. Bindu and Sushil Thale, Power Management Strategy for an Electric Vehicle Driven by Hybrid Energy Storage System, IETE Journal of Research, Taylor & Francis, Mar 2020. https://doi.org/10.1080/03772063.2020.1729257 3. Divya M, Bindu R “Ant Colony Optimization method applied to Distribution Network Reconfiguration,” ‘International Journal of Advanced Research in Computer and Communication Engineering Vol 2 Issue 10, Oct.2013. 4. Deepa Vincent, Bindu R “Three Phase Induction Motor Design in Windows Programming Platform,” ‘International Journal of Engineering and Innovative Technology (Online) ISSN: 2277-3754 Volume 3, Issue 1, July 2013 5. Ram Bhosale, Juber Shaikh, Bindu R “Analysis of Inverter Modulation Strategies for

	<p>Vector controlled Drive,” ‘International Journal of Advances in Electrical and Electronics Engineering Vol.2, No.1, ISSN 2319-1112 Feb 2013</p> <p>6. Amol Karpe, Bindu R “A Comparison of Conventional and Multilevel Inverter for 2.3 kV Induction Motor Drives,” International Journal of Advances in Electrical and Electronics Engineering Vol.2, No.1, ISSN 2319-1112 Feb 2013</p> <p>7. Divya M, Bindu R “Simultaneous network reconfiguration and capacitor placement for loss reduction of distribution systems by Ant Colony Optimization algorithm,” ‘International Journal of Advances in Electrical and Electronics Engineering Vol.1, No.2. ISSN 2319-1112 Nov 10, 2012</p> <p>8. Bindu R, Mini N “Tuning of PID Controller for DC Servo Motor using Genetic Algorithm,” <i>International Journal of ETAE</i>, March 20, 2012, ISSN 2250-2459.</p> <p>9. Basha, A. M., P. Janardhanan, and R. Bindu. "PC-based protective relaying algorithms for transmission lines using digital filters." <i>Indian Journal of Power and River Valley Development</i> 44 (1994): 387-387.</p> <p>10. A. M. Basha, P Janardhanan, R Bindu, "PC-based protective relaying algorithms for generator using digital filters," <i>International Journal of Electrical Engineering Education</i>, Manchester U P, Great Britain, Volume: 31 issue: 1, page(s): 46-53, Issue published: January 1, 1994, https://doi.org/10.1177%2F002072099403100105</p>
16.	<p><u>List of Papers Published in National and International Conferences (Bindu R)</u></p> <ol style="list-style-type: none"> 1. R. Soni, Bindu R, D. Sajeesh and B. S, "Application of Python-based Machine Learning for Transformer Performance and Transmission Line Fault Prediction," 2024 International Conference on Artificial Intelligence and Quantum Computation-Based Sensor Application (ICAIQSA), Nagpur, India, 2024, pp. 1-6, DOI: 10.1109/ICAIQSA64000.2024.10882231. 2. S. Kaduskar, Bindu R et al., ""Revolutionizing Aviation and EV Industries: Advancements in Axial Flux Motors for Electric Propulsion Systems with ANSYS Electronics", " 2024 IEEE 9th International Conference for Convergence in Technology (I2CT), Pune, India, 2024, pp. 1-6, DOI: 10.1109/I2CT61223.2024.10543862 3. S. Kaduskar, A. Panda, P. Parab, M. Rajput and Bindu R, ""Performance Analysis of Outer Rotor Induction Hub Motors for Electric Vehicles: An ANSYS-based Study", " 2024 3rd International conference on Power Electronics and IoT Applications in Renewable Energy and its Control (PARC), Mathura, India, 2024, pp. 214-220, DOI: 10.1109/PARC59193.2024.10486345 4. S. Malpure, S. Bhivsane, S. Nair and Bindu R, "Design and Development of Toroidal Core Winding Machine with Digital Interface," 2022 International Conference on Futuristic Technologies (INCOFT), Belgaum, India, 2022, pp. 1-8, DOI: 10.1109/INCOFT55651.2022.10094478 5. Ann Rachel Mathew, Bindu R, Sushil Thale, Paper titled " Design of a Power Electronic Drive for a Small Utility Electric Vehicle" 2020 IEEE India Council International Sub-Sections' Conference (INDISCON 2020) 03– 04 October 2020, Visakhapatnam (DOI: 10.1109/INDISCON50162.2020.00027) 6. Salil Patwardhan, Bindu R, Sushil Thale, Paper titled "Modeling and Performance Analysis of Battery,” Electric Vehicle 2nd International Conference on Power and Embedded Drive Control (ICPEDC-2019), August 21-23, 2019, Chennai, INDIA (DOI: 10.1109/ICPEDC47771.2019.9036646). 7. Sujata Patil, Bindu R, Sushil Thale, Paper titled "Electric Vehicle Power Conditioner with Battery-Ultracapacitor Hybrid Energy Storage System" has been accepted for presentation in IEEE INDICON 2018 to be held at Amrita Vishwa Vidyapeetham, Coimbatore, India from 16-18 December 2018 in the TRACK: Power Electronics and Drives (DOI: 10.1109/INDICON45594.2018.8987191). 8. Bindu R, Sujata Patil, Sushil Thale, “Design and Control of Power Conversion System for Electric Vehicle Application,” 2017 IEEE International (biennial) Conference on “Technological Advancements in Power & Energy– TAP Energy 2017”, organized by the Department of Electrical & Electronics Engineering, Amrita Vishwa Vidyapeetham University, 21st to 23rd December 2017 (DOI: 10.1109/TAPENERGY.2017.8397264).

9. **Bindu R**, Sushil Thale, "Sizing of Hybrid Energy Storage System and Propulsion Unit for Electric Vehicle," International Transportation Electrification Conference India (ITEC India 2017), Pune, Dec 13-15 by ARAI, SAE India, IEEE (DOI: [10.1109/ITEC-India.2017.8333846](https://doi.org/10.1109/ITEC-India.2017.8333846))
10. Nereus Fernandes, **R Bindu**, "Maximum power point tracking of wind turbine using switched reluctance generator," International Conference on Nascent Technologies in Engineering (ICNTE), IEEE Xplore, 2017 (DOI: [10.1109/ICNTE.2017.7947907](https://doi.org/10.1109/ICNTE.2017.7947907))
11. Shabin, **Bindu R**, "Induction Motor based Drive for Hybrid Electric Vehicle Application", International Conference on Electrical and Electronics Engineering (ICEEE), WRFER, Pune, India, May 2017.
12. Nereus Fernandes, **Bindu R, Sincy George**, "Control of switched reluctance generator in wind energy system," International Conference on Green Engineering and Technologies (IC-GET), IEEE Xplore, Nov 2016 (DOI: [10.1109/GET.2016.7916835](https://doi.org/10.1109/GET.2016.7916835))
13. Rahul D Patil, **Bindu R**, "Modelling and Control of Switched Reluctance Motor for Hybrid Electric Vehicle", International Conference on Recent Trends and Innovations in Engineering and Technology," May 1, 2, PACE, A.P; Published in International Journal of Advance Electrical and Electronics Engineering (IJAEED), ISSN (Print): 2278-8948, Volume-4 Issue-2, 2015.
14. Omkar V Pawar, **Bindu R**, Rohit Chandan, "Direct Torque Control of Induction Motor using Four Switch Three Phase Inverter" International Conference on Recent Trends and Innovations in Engineering and Technology," May 1, 2, PACE, A.P: Published in International Journal of Advance Electrical and Electronics Engineering (IJAEED), ISSN (Print): 2278- 8948, Volume-4 Issue-2, 2015.
15. Shraddha Hule, **Bindu R**, Deepa Vincent, "Sensorless Vector Control of Three Phase Induction Motor" International Conference on Advances in Communication and Computing Technologies (ICACACT 2014), 978-1-4799-7319- 4/14/\$31.00 ©2014 IEEE, 10,11 August 2014 (DOI: [10.1109/EIC.2015.7230749](https://doi.org/10.1109/EIC.2015.7230749))
16. Mahesh Kumbhar, **Bindu R**, Abhilash Walavalkar, "Magnetostatic Analysis and Power Optimization of Electric Release Brake," International Conference on Magnetics, Machines & Drives (AICERA-2014 iCMMD);978-1-4799-5202- 1/14/\$31.00 ©2014 IEEE, 24th, 25th, 26th July 2014 (DOI: [10.1109/AICERA.2014.6908234](https://doi.org/10.1109/AICERA.2014.6908234))
17. Amol Shivnath Karpe, **Bindu R** "Design and Analysis of Space Vector Modulated Cascaded H-Bridge Multilevel Inverter for large IM Drives", 3rd International Conference on Global Technology Initiatives, Rizvi College of Engg., Bandra, March 29th,30th 2014
18. Ramchandra Bhosale, **Bindu R** "Indirect Vector Control of Induction motor using Fuzzy Logic Controller," 'International Conference on Advances in Engineering and Technology, ICAET-2014, Jan 8,9th 2014
19. **Ruchi Harchandani, Bindu R** "Automation of Kiln Motor Drive in cement Industry using PLC and SCADA", 'International Journal of Engineering Research & Technology (IJERT)ISSN: 2278-0181, Jan 2014
20. **Harshada C Bhosale, Bindu R**, "Review of DTC Scheme with Component Minimized VSI emulating the Operation of Six Switch Three Phase Inverter," National Conference on Technologies for Developing Nations at L.T.C.O.E, Koparkhairane, Oct 12th 2013
21. Mahesh Kumbhar, **Bindu R**, "Importance of Power Electronic Converters in Electric and Hybrid Electric Vehicles," National Conference on Technologies for Developing Nations at L.T.C.O.E, Koparkhairane, Oct 12th 2013
22. ShraddhaHule, **Bindu R**, RamchandraBhosale, "Review of Converter Topologies for Switched Reluctance Motor Drives," National Conference on Technologies for Developing Nations at L.T.C.O.E, Koparkhairane, Oct 12th 2013
23. Juber Shaikh, **Bindu R** "Flux optimization for Indirect Vector Control of Induction Motor," 'Published in International Journal of Global Technology Initiatives.ISSN

	<p>(Print); 2277-6591. ISSN (Online): 2320-1207. 2nd International Conference on Global Technology Initiatives, Rizvi College of Engg., Bandra, March 2013.</p> <p>24. Ruchi Harchandani, Bindu R “Automation of Raw mill Drive in Cement Industry using PLC and SCADA”, ‘National International Conference, RACEM 2013, Vidyalkar Institute of Technology, Mumbai Jan 11,2013</p> <p>25. Ruchi Harchandani, Bindu R “Efficient Speed Control of motors using variable frequency drive in cement industry”, ‘National level conference,OPTEST-12, BannariAman Institute ofTechnology’, April 20,2012</p> <p>26. Deepa Vincent, Bindu R “Design of Induction Motor in Windows Platform ”National Conference,NCNTE 2012, Feb 25,2012</p> <p>27. Divya M, Bindu R “Research on distribution network reconfiguration” National Conference,NCNTE 2012, Feb 24,2012</p> <p>28. Bindu R, Poornima Rao, Harshada Bhosale, Vipin Sawant “Protection of IM using PLC” NEEC 2011, Delhi Technical University, Dec 17,2011</p> <p>29. Bindu R and Deepa Vincent “Application of Fuzzy logic in Speed Control of Induction Motor- A case study” NCAPS 11,K.K. Wagh Institute of Technology, Nashik ,Dec 03,2011</p> <p>30. Bindu R and Divya M “Reactive Power Compensation and Harmonic mitigation in Distribution System,”Published in Zenith 2011,Nov 21,2011, by Agnel Polytechnic, pp. 302-310.</p> <p>31. Bindu R, and Ruchi Harchandani“Automation of Motors in Cement Industry using PLC,” Zenith 2011 by Agnel Polytechnic,Nov 21, 2011</p> <p>32. Bindu R ,Poornima Rao, Vipin Sawant “Closed loop control of slip ring IM using PLC,” NCAPS 09,K.K Wagh Institute of Technology, Nashik,2009</p> <p>33. Bindu R, Poornima Rao, Vipin Sawant “PLC based control of pole changing Induction Motor,” NCIEES 09,PSG college of Technology.Coimbatore,August 2009.</p> <p>34. Bindu R, Poornima Rao, Preetha.P.K, VipinSawant “PLC based master controller for slip ring Induction Motor,” NCAM 2007,Fr.CRCE, Bandra,Oct 2007</p>
<p>17.</p>	<p>Invited Lectures in FDP/ STTP: Speaker (Topic: Power Conversion system in EV Application with Hybrid Energy Storage System) for Short Term Training Programme on Power Electronics and Drives organized by the Department of Electrical Engineering, Agnel Charities’ Fr. C. Rodrigues Institute of Technology from 31st October to 5th November 2022. Speaker (Topic: Introduction to Electric Vehicle Technology) for Short Term Training Programme on “Electric and Hybrid Electric Vehicle Technology” organized by Department of Electrical Engineering, FCRIT, Vashi during June 18-23 of 2018. Hands on Training sessions are conducted for AICTE sponsored short term training program on “MATLAB, ETAP and their Applications” from 07/01/2008 to 11/01/2008 at Fr. C. Rodrigues Institute of Technology, Vashi. Hands on Training sessions are conducted for the short term training program on “PLC and Industrial Automation” from 07/08/2008 to 11/08/2006 at Fr. C. Rodrigues Institute of Technology, Vashi.</p>
<p>18.</p>	<p>International Conference Technical Program Committee Member / Reviewer: Reviewer in ICNTE 15, 17, 19, 21, 23, Tap Energy 15, 17, ITEC India 17, IETE, IEEE, Elsevier: Journal of Energy Storage, Energy, e-Prime: Advances in Electrical Engineering, Electronics and energy, Springer-TEEM, IACTM-2024, FUEE Electronics and Energetics.</p>