FACULTY PROFILE

Name	**:**	**Dr. Ajayakumar C. Katageri**

Designation	**:**	**Assistant Professor**
Department	**:**	**Electronics and Communication Engineering**
Employee ID	**:**	**1-462211391**
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Orcid ID	**:**	**0000-0003-0924-2041**
Scopus ID	**:**	**35786019200**
Vidwan Id	**:**	**125003**
Researcher ID (Web of Science)	**:**	**AAS-6505-2021**
Google Scholar ID	**:**	**MkkvwAAAAJ**
Qualification	**:**	**Ph.D**
Professional Experience		
Teaching experience	**:**	**11 Years**

Administrative Responsibilities	**:**	1. *BoS Member* 2. *Department Association Coordinator* 3. *College Website coordinator* 4. *SSP coordinator* 5. *Anti-ragging Coordinator* 6. *Students Internship coordinator*

Teaching	**:**	UG and PG
No. of Projects Guided		
UG	**:**	27
PG	**:**	04
Research		

Interest Area	:	*Micro Electro-Mechanical Systems (MEMS)*

Publications :

Journals (with citations) :

1. Ajayakumar C. Katageri, J. D. Mallapur, "Overhead Reduction in Wireless Cellular Networks using Fuzzy Technology", Proceedings of International Conference on Advanced Computing, Communication and Networks (ICACCN'11), published in International Journal of Universal Association of Computer and Electronics Engineers (UACEE), Chandigarh, 2-3 June, **2011**.

2. Ajayakumar C. Katageri, Kirankumar B. Balavalad, Poornima M. Chanal, Gururaj Kori, "Energy Efficient Multipath Routing Protocol with Guaranteed Data Delivery for Wireless Sensor Networks", Presented at 3rd International Conference on Educational and Information Technology (ICEIT 2014), Published in International Journal of Information and Education Technology, Vol 4, No. 4, included in the Engineering & Technology Digital Library, Google Scholar, Crossref and ProQuest, Toronto, Canada, 10 -12 January **2014**. (**Awarded with Excellent Oral Presentation Certificate).**

3. Ajayakumar C. Katageri, Kirankumar B. Balavalad, Pritviraj Patil, Basavaraj M. Angadi, "A Privacy-Preserving Location Monitoring System for WSNs with Blocking Misbehaving Users in Anonymity Networks", Proceedings of 2014 International Conference on Communication Systems and Computational Intelligence (CCSCI 2014), Toronto, Canada, 10 -12 January **2014,** Published in Journal of Advances in Computer Networks,vol.2, No.4,December 2014.DOI-10.7763/JACN.2014.V2.121. **Citations:03**

4. Ajayakumar C. Katageri, Kirankumar B. Balavalad, Balaji Biradar, "Energy Efficient Multipath – LEACH protocol for Wireless Sensor Networks", Proceedings of 2014 International Conference on Communication Systems and Computational Intelligence (CCSCI 2014), Toronto, Canada, 10 -12 January **2014**, Published in Journal of Advances in Computer Networks,vol.2, No.4,December 2014.

5. Ajayakumar C. Katageri, Siddarud Bannikoppa, B. G. Sheeparamatti, "A Critical Review of Carbon Nanotube based MEMS Piezoresistive Pressure Sensor for Medical Application", Presented at International Conference on emerging trends in Electronics, Electrical and Computer Science (ICEECS 2015), Bengaluru, 9th August, **2015**, Published in International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE), vol.2, issue 6, June 2015, DOI-IJERECE-IFERP-DOI-2604. **Citations: 01.**

6. Ajayakumar C. Katageri, B. G. Sheeparamatti, "Carbon Nanotube based Piezoresistive Pressure Sensor for Wide Range Pressure Sensing Applications- A Review", Published in International Journal of Engineering Research and Technology (IJERT), pp. 665-671, volume 4, Issue 8, ISSN: 2278-0181, August, **2015**. **Citations: 06**

7. Shruti Goudar, **Ajayakumar C. Katageri**, Kirankumar B and B. G. Sheeparamatti, "Design and Simulation of SOI based Piezoresistive Pressure Sensor", International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE), ISSN (Online) 2394-6849, Vol 4, Issue 1, January **2017**.

8. Ajayakumar C. Katageri, Shivaleela Melennavar, "Theoretical Analysis of the Design of Different Shape Diaphragm for Piezoresistive Pressure Sensor", Published in International Journal of Engineering Research and Technology (IJERT), pp., volume 6, Issue 3, ISSN: 2278-0181, March, **2017**.

Conferences :

1. Ajayakumar C. K, J. D. Mallapur, C. H. Mathapati and B. B. Kirankumar, "QoS Based Route Selection for Multicast Group in Wireless Multimedia Networks", Proceedings of IEEE India Conference 2009 (INDICON 2009), pp.1-4,18-20 December **2009**, organized by IEEE Gujarat section in Ahmedabad at Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, India, isbn- 978-1-4244-4859-3. **Citations:01.**

2. Ajayakumar C. Katageri, J. D. Mallapur, Supriya B. Harlapur and Soumya S. Vastrad, "Speech Enhancement using Spectral Subtraction", Proceedings of International Conference on Recent Advancements in Electrical Sciences (ICRAES'10), organized by the Department of Electrical and Electronics Engineering and Electronics and Communication Engineering on 8-9

January **2010**, at K. S. Rangasamy College of Engineering Tiruchengode, Tamil Nadu, India, Vol.-II, pp.471-478.

3. Ajayakumar C. Katageri, J. D. Mallapur, Syed Abidhusain and Soumya S. Vastrad, "Fuzzy Based Bandwidth Management for Wireless Multimedia Networks", Proceedings of International Conference on Recent Trends in Business Administration and Information Processing (BAIP 2010), organized by the Association of Computer Electronics and Electrical Engineers (ACEEE)-a devision of Engineers Network, published by Springer Berlin Heidelberg- LNCS CCIS, archived in Springer Digital Library, book- Information Processing and Management, 26-27 March **2010**, at Teekey Palace, Trivandrum, Kerala, India, vol.-70, pp. 81-90,isbn- 978-3-642-12213-2, issn- 1865-0929, copyright- 2010, doi- 10.1007/978-3-642-12214-9. **Citations: 12**

4. Ajayakumar C. Katageri, J. D. Mallapur, S. S. Manvi and Renuka T. Ambiger, "QoS Based Scheduler in Wireless Multimedia Networks: A Fuzzy Approach", Proceedings of International Conference on Wireless Networks (ICWN'10), organized by the 2010 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'10), administered by Universal Conference Management Systems and Support (UCMSS) 12-15 July, **2010**, at Monte Carlo Resort, Las Vegas, Nevada, USA. **Citations:01.**

5. Ajayakumar C. Katageri, J. D. Mallapur, Kirankumar and Y. Bendigeri, "Heterogeneous Network Security", Proceedings of National Conference on Networking, Embedded and Wireless Systems (NEWS-2010), organized by Department of Electronics and Communication, BMS College of Engineering, Bangalore, 6th August, **2010**.

6. Ajayakumar C. Katageri, J. D. Mallapur, Supriya B. Harlapur and Virupakshreddy S. Patil, "Call Admission Control and Congestion Control for Integrated Packet Networks", Proceedings of IEEE International Conference on Methods and Models in Computer Science (ICM2CS'2010), New Delhi, 13-14 December **2010**.

7. Ajayakumar C. Katageri, B. G. Sheeparamatti, K. M. VinayakaSwamy and G. Ravi Prakash, "Electrostatic Chemical Sensor", Proceedings of the 9th Nanomechanical Sensing Workshop NMC 2012, held at IIT Bombay, Mumbai, on 6th -8th June **2012**, pp.84-85.

8. Ajayakumar C. Katageri, Kirankumar B. Balavalad, Supriya B. Harlapur, Poornima M. Chanal, "Optimization of LEACH Protocol for Effective Power Utilization in Wireless Sensor Networks", Proceedings of 3rd International Conference on Computational Intelligence and Information Technology (CIIT – 2013), pp.252-256, Mumbai, 18 – 19 October **2013**. doi: 10.1049/cp.2013.2599. **Citations:01.**

9. Ajayakumar C. Katageri, B. G. Sheeparamatti, "An ANN Model of Polymer based MEMS Structures: A Modal Analysis Approach", Proceedings of 2014 IEEE International Conference on Smart Structures and Systems (ICSSS 14), pp.112,117, Saveetha Engineering College, Chennai, 9th October **2014**. doi: 10.1109/ICSSS.2014.7006184. URL: http://ieeexplore.ieee.org/stamp/stamp.jsp? tp = & ar number = 7006184 & isbn number=7006170

10. Ajayakumar C. Katageri, B. G. Sheeparamatti, Veekshit B. Math "Design of MEMS based 4-bit Shift Register", Proceedings of 2014 IEEE International Conference on Smart Structures and Systems (ICSSS 14), pp.103-107 Saveetha Engineering College, Chennai, 9th October **2014**. doi:10.1109/ICSSS.2014.7006182.URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnum ber=7006182&isnumber=7006170. **(Won the best paper award)**. **Citations: 04**

11. B G Sheeparamatti, **Ajayakumar C Katageri**, Vasundhra. S. k, Poornima. J, Khyata Basavajayanti, Shruti V, "Modeling and optimization of two layered microcantilever using genetic algorithm" Seventh ISSS National Conference on MEMS, Smart Materials, Structures and Systems, Kochi, 23 September, **2015**. **Citations: 02.**

12. Siddarud Bannikoppa, **Ajayakumar C. Katageri**, Kirankumar Balavalad, B G Sheeparamatti. "Design of a Piezoresistive Pressure Sensor with Enhanced Sensitivity" published in International Conference on Energy Efficient Technologies for Sustainability (ICEETS 2016), 978-1-4673-9925-8/16, IEEE Nagercoil, Kanyakumari, 7-8 April, **2016**.

Citation:05.

13. Shwetha Meti, Kirankumar Balavalad, **Ajayakumar C. Katageri**, B G Sheeparamatti. "Sensitivity Enhancement of Piezoresistive Pressure Sensor with Meander Shape Piezoresistors" published in International Conference on Energy Efficient Technologies for Sustainability (ICEETS 2016), 978-1-4673-9925-8/16, IEEE Nagercoil, Kanyakumari, 7-8 April, **2016**. **Citations: 01.**

14. Ajayakumar C Katageri, B G Sheeparamatti, "Design and Simulation of Carbon Nanotube based Piezoresistive Pressure Sensor for Patient Monitoring Application" Proceedings of Eighth ISSS National Conference on MEMS, Smart Materials, Structures and Systems, 28-30 September, **2016**, IIT Kanpur, Kanpur. **Citations: 02.**

15. Ajayakumar C Katageri, Shweta Nayak K, B G Sheeparamatti, "Design of an Optimized Piezoresistive Pressure Sensor for a Pressure Range of 0 to 1 MPa", 3rd International Conference on Research Trends in Engineering, Applied Science and Management (ICRTESM-2017) at Institution of Electronics and Telecommunication Engineers, (IETE) , Erandwane, Pune, Maharashtra, India on 28th May **2017** ISBN: 978-81- 934083-1-5.

16. Ajayakumar C Katageri, B G Sheeparamatti, "Fabrication and Characterization of thin films of ZnO and MWNTs dispersed in DMF", Proceedings of IEEE International conference on Circuits and Systems in Digital Enterprise Technology (ICCSDET-2018), 21-22 December, **2018**, pp. 842-847, held at SAINTGITS college of engineering, Pathamuttam, Kottayam.

17. Ajayakumar C Katageri, B G Sheeparamatti, "Comparative Analysis of Diaphragm for the Design of High Sensitive Piezoresistive Pressure Sensor", Proceedings of IEEE International conference on Circuits and systems in Digital Enterprise Technology (ICCSDET-2018), 21-22 December, **2018**, pp. 848-853, held at SAINTGITS college of engineering, Pathamuttam, Kottayam.

18. Ajayakumar C Katageri, B G Sheeparamatti, "Sensitivity Enhancement of Piezoresistive Pressure Sensor using Carbon Nanotube as a Piezoresistor", Proceedings of IEEE International conference on Advanced Computational and communication paradigms (ICACCP-2019), to be held at SMIT, Sikkim during 25-28 February, **2019**. **Citations: 01.**

Invited Talks	:	Resource person HRD training programme held in BEC, Bagalkot, 15 – 16 September, 2012, 13 – 14 October, 2012, August, 2015, September, 2015, 20 – 21 January, 2018, 07 – 09 August, 2018.
Events Organized	:	1. Workshop for students on Entrepreneurship, 2011. 2. SDP on Embedded Systems Design, 2012. 3. Avishkaar 2012- A Project Exhibition for 3rd year Students, 30 March, 2012. 4. SDP on Campus to Corporate, 18 -19 May, 2013 funded by TEQIP –II. 5. FDP on "Soft and Evolutionary Computing Techniques and its Applications", 30 May – 2 June, 2013 funded by TEQIP –II. 6. FDP on "Recent Trends in Micro Pressure Sensors and RF MEMS", 20 – 22 October, 2016 funded by TEQIP-II. 7. e-Quiz titled "Braintronics", June 2020.
Conferences/ Symposiums/ Workshops/ Training Programs Attended	:	1. FDP on Wireless Sensor Networks at BEC, Bagalkot during 24-28 February, 2009 *2.* FPGA System Design using ALTERA tools at BEC, Bagalkot on 10 October, 2009 *3.* QualNet Training Program at Nihon Communication Solutions Pvt. Ltd, Bangalore during 26-30 October, 2009 *4.* FDP on Recent Advances in Wireless Sensor Networks at BEC, Bagalkot during 10- 12 February, 2011 *5.* FDP on Modeling, Simulation and Fabrication of MEMS Devices at BVB College of Engg. & Tech. Hubli during 10- 12 March, 2011. *6.* National User's workshop on LTCC Fabrication and Application at Centre for Materials for Electronics Technology (C-MET) Pune during 13-14 May, 2011 *7.* FDP on Effective Teaching Practices at BEC, Bagalkot during 03 – 05 March, 2012 *8.* FDP on Intelligent Instrumentation and Robotics at Dept. of IT, BEC, Bagalkot during 26 – 30 March, 2012

9. 7th INUP Familiarization Workshop on Nanofabrication Technologies at IIT Bombay, Mumbai during 04 – 05 June, 2012

10. 15th INUP Hands-on Training Workshop on Nanofabrication Technologies at IIT Bombay, Mumbai during 28 Jan – 01 Feb, 2013

11. FDP on Micro and Nano Technology at MSRIT, Bengaluru during 17 – 19 April, 2013

12. FDP on Recent Advances in Wireless Networks at BEC, Bagalkot during 16 – 18 May, 2013.

13. FDP on Implementation of signal processing algorithms using FPGA at BEC, Bagalkot during 21 – 23 May, 2013.

14. FDP on Technical Documentation using Latex at BEC, Bagalkot during 27- 29 May, 2013.

15. FDP on Design, Modeling and Simulation of MEMS devices at BEC, Bagalkot during 10 - 12 July, 2013.

16. Research Issues in Distributed Sensor Networks at BEC, Bagalkot during 22 -24 August, 2013

17. Workshop on Advanced network Computing and Simulation at Dept of CSE, BEC, Bagalkot during 22 – 24 November, 2013.

18. National Level Workshop on Intel Atom Processor based Embedded System Design and Development at BEC, Bagalkot during 28-30 May 2014.

19. Workshop on Research Methodology and Latex at VTU, Belgaum during 8 – 10 July, 2014.

20. Sustainable Energy Resources for Academic Campuses at BEC, Bagalkot during 5 – 6 June, 2015.

21. Signal, Image Processing and SDR using LABVIEW at JSS Academy of Technical Education, Bengaluru during 22 – 24 June, 2015.

22. Curriculum Development and Reforming at BEC, Bagalkot on 25th July, 2015.

23. Recent Trends in VLSI Signal Processing at NMIT, Bengaluru during 1 - 2 September, 2015.

24. Workshop on IEEE APS Region Distinguished Speaker Programme at BEC, Bagalkot on 11 September, 2015.

25. FDP Hands-on Training on Thin Film Coating & Lithography Techniques at BEC, Bagalkot on 6 November, 2015.

26. Workshop on Outcome based Education at BEC, Bagalkot on 18 December, 2015.

27. Thin Film and Nano Material Fabrication and Applications at NMIT, Bengaluru during 19 – 23 January, 2016.

28. Empowering Teachers to Enrich Students at BEC, Bagalkot during 2-4 December, 2016.

29. FDP on Biology for Engineers organized by BEC, Bagalkot and IITB, Mumbai at BEC, Bagalkot during 1 – 4 February, 2017.

30. Fabrication and Characterization of Thin Film Samples of Electronic and Opto-Electronic Materials at BEC, Bagalkot on 2 March, 2017.

31. Open Society Problems Computing Solutions in Python at BEC, Bagalkot during 29 – 31, March, 2017.

32. End to End Innovations at Tata Center, IITB, Mumbai during 19 – 23 February, 2018.

33. Digital Transformation in Teaching Learning Process an e-Certification course from IITB, Mumbai during 6-22 April, 2020.

34. AICTE- Examination Reform Policy an e-Certification course from BEC, Bagalkot during 29-30th April,2020.

35. FDP on MOODLE Learning Management Systems at Tagore Institute of Engineering and Technology, Deviyakurichi, under Spoken Tutorial, IITB, Mumbai during 4 – 9th May, 2020.

36. Electronics e-Quiz by PIT, Hospete on 2nd June, 2020

37. Electronics e-Quiz by BLDEA's VPDPGHCET, Vijayapura on 3rd June, 2020

38. FDP on Python by IIPS-DAVV with Spoken Tutorial, IITB, Mumbai during 1-5th June,2020

Awards and Honors	:	1. Received TEQIP-II financial assistance for presenting paper titled, "Energy Efficient Multipath Routing Protocol with Guaranteed Data Delivery for Wireless Sensor Networks" at 3rd International Conference on Educational and Information Technology (ICEIT 2014), Toronto, Canada, 10 -12 January 2014.

2. Won the **Excellent Oral Presentation award** for the paper titled "Energy Efficient Multipath Routing Protocol with Guaranteed Data Delivery for Wireless Sensor Networks" at 3rd International Conference on Educational and Information Technology (ICEIT 2014), Toronto, Canada, 10 -12 January 2014.

3. Won the **Best Paper Award** for paper titled "Design of MEMS based 4-bit Shift Register", at 2014 IEEE International Conference on Smart Structures and Systems (ICSSS 14), Chennai, 9th October 2014.