

FACULTY PROFILE

Name : **Dr. Vijaylakshmi S. Jigajinni**



Designation : **Assistant Professor**
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Scopus ID : **57191430168**

Vidwan Id : **125048**

Researcher ID (Web of Science) : **AAH-9636-2021**

Google Scholar ID : **wIv2ZQ0AAAAJ**

Qualification : **PhD**

Professional Experience
Teaching experience : **19**

Administrative Responsibilities :

1. NAAC department coordinator
2. IEEE WIE faculty advisor
3. Member of IIC-BEC
4. Coordinator of IIT Bombay Spoken tutorial program

Teaching : **UG and PG**

No. of Projects Guided
UG : **18**

Research
Interest Area :

1. Control system and Instrumentation
2. Artificial Intelligence and Machine Learning
3. Aircraft Health Management
4. Fault Diagnosis and Prognosis

- Publications**
Books/Chapters
- : 1. Vijaylakshmi S. Jigajinni (September 10th 2021). Health Monitoring of an Aircraft Fuel System Using Artificial Intelligence Techniques [Online First], IntechOpen, DOI: 10.5772/intechopen.99665. Available from: <https://www.intechopen.com/online-first/78533>
 - 2. Vijaylakshmi S. Jigajinni and Vanam Upendranath, **“ANFIS based fault diagnosis tool for a typical small aircraft fuel system,”** Chapter 45, Advances in Intelligent Systems and Computing Springer book series (AISC), Vol.479) Book ID: 393445, 2016, pp 708-745.
- Journals (with citations)**
- : 1. Vijaylakshmi S. Jigajinni and Vanam Upendranath, **“Comparison of ANFIS and ANN techniques in the simulation of a typical aircraft fuel system health management”**, Int. J of Artificial Intelligence and Applications (IJAA), Vol. 9(4), 2018, pp 41-53.
 - 2. **“Simulation of Incipient Fault Detection, Confirmation and Diagnosis Using Kalman Filter”** published in International Journal of Science and Research (IJSR), vol.3, issue 8, ISSN (Online): 2319-7064, Impact Factor (2012): 3.358
- Conferences**
- : 1. Vijaylakshmi Jigajinni and Vanam Upendranath, **“Health management of a typical small aircraft fuel system using an adaptive technique”**, in proc. of 25th IEEE Int. Conf. on High-Performance Computing, Data and Analytics to be held in Bangalore, India during December 17-20, 2018, pp 104-112.
 - 2. Vijaylakshmi S. Jigajinni and Vanam Upendranath, **“Simulation and modeling of ANN-based prognosis tool for an aircraft fuel system health management”**, Proc. Of 7th Int. Conf. of AI & Soft Comp, Chennai, CS & IT-CSCP, July 14-15, 2018, pp 83-93.
 - 3. Vijaylakshmi S. Jigajinni and Vanam Upendranath, **“ANFIS based fault diagnosis tool for a typical small aircraft fuel system,”** in the proceeding of International Conference on Intelligent Communication, Control and Devices, 2016.
 - 4. Vijaylakshmi Jigajinni, **“Modelling of incipient fault detection and diagnosis in DC motor using simulink”** at ICCICN-14 organised by Dept. of Information Technology, RCC Institute of Information Tech., Kolkata, India during Nov 14-16 2014
 - 5. S.M. Jigajinni and Vijaylakshmi Jigajinni **“Combined effect of electrical signal and accumulator in hydraulic cylinder”** at National conference FMNP-2013 organized by NIT, Hamirpur, H P, during 12th to 14th Dec 2013
 - 6. Vijaylakshmi Jigajinni, **“Simulation of Visible Watermarking Algorithm for a Secured Digital Camera using Verilog HDL”** at National Conference CISCON-10 MIT Manipal on 8th Nov 2010.
- Invited Talks**
- : 1. Delivered a guest lecturer on **“Nano-Electronics”** organized by Basaveshwar PU science College, Bagalkot on 17.09.2018
 - 2. Delivered a technical talk on **“Sensors-interfacing to real world”** organized by Basaveshwar International Public School (BIPS) at Atal Tinkering lab, Bagalkot on 11.01.2019
 - 3. Presented a webinar on **“E-waste Management”** on 18th Oct. 2020 for the awareness on electronics waste management for the Inner-wheel Club members of Bagalkot district.
 - 4. Session on **“Creative Practices”** for ECE dept students in the Induction program for first years (Online) on 16th Dec 2020, at BEC, Bagalkot
 - 5. Session on **“Harmony in self and body”** in the Induction program for first year students (Offline) on 3rd and 4th Feb. 2021, BEC, Bagalkot.
 - 6. Webinar on **“Effective Resume writing”** organized by BEC-IEEE for IEEE members on 22nd May 2021.
 - 7. Webinar on **“Digital Image Watermarking and its Implementation using MatLAB”** on 9th July 2021 at 12 noon to the final and prefinal year Computer students of Sri Vijay Vittal College of Engineering

Bengaluru.

8. Seminar on “**E-waste Management**” was delivered on the eve of National Science day on 28th Feb 2022 organized by ACME in association with IEEE and IIC of Basaveshwar Engineering College, Bagalkot

Events Organized

1. Organized three days teachers training program on “**Effective Teaching practices**” for young teachers during 28th to 30th January 2010 in Basaveswar Eng. College, Bagalkot.
2. **Organized Short Term Training Programme sponsored by TEQIP World Bank on “SCADA and PLCs in Industrial Automation”**. from 23-25th December 2006 (Three Days) for Engineering College teachers by dept of instrumentation technology in the Basaveshwar Engineering College, Bagalkot.
3. Organized three days teachers training program on “**Effective Teaching practices**” for young teachers during 3rd to 5th March 2012 in Basaveswar Engg College, Bagalkot.
4. **Organized five days Short Term Training Programme sponsored by VTU-VGST (Rs. 2 Lakhs) on “Intelligent Instrumentation and Robotics”**, from 26-30th March 2012 for Engineering College teachers by Dept. of Instrumentation Technology in the Basaveshwar Engineering College Bagalkot.
5. Organized under TEQIP Phase-II sponsored 3 days Student Development Programme (SDP) on “**Soft Skills Development Programme**” from 8th to 10th Oct 2013 by dept. of Instrumentation Technology in Basaveshwar Engg. College, Bagalkot
6. Organized 3 days Student Development Programme (SDP) under ACME on “**Labview and its Application**” from 1st to 3rd March 2019 by Dept. of Electronics and Communication Engg. in Basaveshwar Engg. College, Bagalkot
7. Organized 3 days Student Development Programme (SDP) on “**Modeling, Simulation and Implementation using Matlab/Simulink**” sponsored by TEQIP-III during 3rd to 5th October 2019 Basaveshwar Engg. College, Bagalkot for final year students of ECE .
8. Organised one day workshop on “**Modern software development skills using open source**” Equity action plan (EAP) TEQIP phase -III on 16th January 2021 by Mr. Veeresh Katageri Software Developer ECS, Germany for faculty, UG/PG final year students both in online and offline mode.
9. Coordinated a Webinar on “**Role of faculty in implementation of NEP**” jointly organized by Basaveshwar Engineering College(A) with Bharatiya Sikshan Mandal (BSM) and NITI Aayog on 20th Feb, 2021.
10. “**What you believe you can achieve**” was organized on 26th Sept. 2020 by Dr. R.G. Allagi under Personality Development Cell of ECE department for the students.
11. “**Aspire to IAS**” was organized by BEC-IEEE on 26th Jan.2021 by Mr. Rajashekhar Kalayankar Govt. of India, coordinated as IEEE student branch counsellor.
12. “**Career aspects of full stack developer**” was organized by BEC-IEEE on 27th Feb.2021 by Mr. Pavan Wadawadagi, Senior Engineer III, Full stack developer, Vocera Communications, coordinated as IEEE student branch counsellor.
13. “**Virtual tour to VLSI Industry**” was organized by Dept. of ECE student’s association ACME on 16th June 2021 by Mrs. Pooja Melinamani, Intel India Pvt. Ltd (Alumni 2006 batch) for final and prefinal students of BEC, Bagalkot
14. “**AI and ML using Python**” under TEQIP phase-III organized a

- Future Skill Student Training Program of 65hrs duration during 29th July to 30th August 2021 for second year and third students of BEC, Bagalkot.
15. Organized two-week National level FDP on “**Latex and Moodle Learning Management System**” during 19th July to 30 July 2021 in association with IIT Bombay Spoken Tutorial.
 16. Hosted and celebrated “**National Flay day**” on 27th Nov. 2021 under Gymkhana Cultural club of BEC, Bagalkot in association National Foundation for Communal Harmony.
 17. Hosted and celebrated “**International Women’s Day**” on 16th March 2022 under Gymkhana.
 18. Hosted and compered IEEE North Karnataka Sub-Section AGM on 16th Jan 2022

Conferences/ Symposiums/ Workshops/ Training Programs Attended : Short Term Training Programmes Attended

1. ‘**Induction Programme for Young Teachers**’ organized by BEC, Bagalkot during of two weeks 19-31 Jan. 2004
2. ‘**Embedded Systems and Applications**’, organized by BEC Bagalkot of one week during 22-27 Mar. 2004
3. ‘**Advanced Electronics Laboratories (on VHDL, DSP and Microcontrollers)**’ organized by R. N. S. Institute of Technology, Bangalore of one week during 14-19 Feb. 2005
4. ‘**Instructional Design and Delivery**’ organized by BEC, Bagalkot during of one week 08-13 Aug. 2005
5. ‘**Applied Mathematics**’ organized by BEC, Bagalkot of one week during 03-08 Apr.2006
6. ‘**Digital Signal Processor and its Applications**’ organized by BEC, Bagalkot of one week 25-30 Sept. 2006
7. ‘**Signal Processing and its Applications**’ organized by BEC, Bagalkot of three days 09-11 Oct. 2006
8. ‘**SCADA and PLCs for Industrial Automation**’ organized by BEC, Bagalkot of three days 21-23 Dec. 2006
9. ‘**Embedded Systems**’ organized by BEC, Bagalkot of one week 5-10 Feb. 2007
10. ‘**Real Time Operating Systems (A case study on Vxworks)**’ organized by BEC, Bagalkot of one week 26-31 Mar. 2007
11. ‘**Computer Network Simulation**’ organized by BEC, Bagalkot of three days 21-23 Feb. 2008
12. ‘**VLSI Design**’ organized by Global Education Center of Infosys Technologies, Mysore of five days during 07-11 July 2008
13. ‘**High impact Teaching skills Mission 10x**’, organized by Wipro at Bagalkot of two days during 02-03 Aug. 2010
14. ‘**Soft computing approaches to image processing and pattern recognition**’ organized by Dept. of computer science, BEC Bagalkot of five days during 20 -24 March 2010
15. ‘**Teaching Engg. Using Matlab & Simulink**’ organized by R. V. College of Eng. Bangalore of three days during 12-14 July 2011
16. ‘**Technical Documentation Using Latex**’ organized by Dept. of E&C, BEC, Bagalkot of three days organized 27-29 May 2013
17. ‘**Soft and Evolutionary computing Techniques and its Applications**’ organized by Dept. of E&C, BEC, Bagalkot of three days 30- 1 June 2013
18. ‘**Advances in Signal Processing and Pattern Recognition**’ organized by M S Ramaiah Institute of Technology, Bangalore of five days 29 July –3 August 2013
19. ‘**Research Methodologies & Latex**’ organized Ghousia, College

- of Engg., Ramanagar, Bengaluru of three days during 27-29 July 2013
20. **'Research avenues in the information technology'** organized by BEC, Bagalkot of five days during 3-7 June 2019
 21. **'Machine Learning, Deep learning and computational Intelligence for wireless communication'** organized by Dept. of Electronics and Communication Engg., NIT, Trichy of five days during 16-20 Sept 2019.
 22. TEQIP online certification on **'Digital transformation in teaching learning process'** SWAYAM course offered by IIT Bombay of two weeks during 16 Feb-16 March 2020
 23. **'Effective Engineering Teaching Practices'** NPTEL course offered by IITR Madras of four weeks during 27 Jan-21 Feb 2020
 24. FDP on **'Universal Human Values for DEEKSHARAMBH'** (Student Induction Program) organized by NIT Patna of five days online 21-25 Sept 2020
 25. **'Artificial Intelligence'** organized by AICTE Training and Learning (ATAL) Academy at CSIR- Advanced Materials and Processes research Institute, Bhopal of five days during 16-20 Nov 2020
 26. **'Control system and sensor technology'** from AICTE Training and Learning (ATAL) Academy organized by MIT, Manipal of five days 19-23 Jan 2021
 27. **Artificial Intelligence using Matlab'**, organized by CoreEL technologies of three days (Online) during 23-25 Feb 2021
 28. **'Fuzzy logic and Neural Networks'** NPTEL course offered by IIT Kharagpur of eight weeks during 15 Feb.- 25 April 2021

Seminar/Workshops Attended

29. Three-days workshop on "VLSI Design Labs" from 7-9 Aug. 2004 organized by Bangalore Institute of Technology, Bangalore.
30. National Seminar on "Intelligent Instrumentation for Biological Science" from 26-27 Nov. 2004 organized by B. V. Bhoomaraddi College of Engineering and Technology, Hubli.
31. A special Lecture series on "Mathematical Modeling for Digital Image Processing" from 9-14 Jan. 2006 organized by Basaveshwar Engineering College, Bagalkot.
32. Three-days workshop on "Medical Applications of Signal and Image processing, MASIP' 06" from 23-25 Jan. 2006 organized by Manipal Institute of Technology, Manipal.
33. One day workshop on "Counseling Techniques" on 25th Aug. 2006 organized by Basaveshwar Engineering College, Bagalkot.
34. Two-days National seminar on "Modern sensors & their applications" from 17-18 Nov. 2006 organized by Basaveshwar Engineering College, Bagalkot.
35. Three-days workshop on "Real Time operating system-Vx Works" from 28-30 Mar. 2007 organized by Basaveshwar Engineering College, Bagalkot.
36. Three- days workshop on "Matlab and simulink" from 12-14 July 2011 organized by IUCEE at RV Engg college Bangalore.
37. Three- days workshop on "IVHM" from 9th – 11th Jan 2012 organized by Indo-US collaboration and NAL, Bangalore at Oberoi Hotel Bangalore.
38. One day seminar on 'Matlab & Simulink' for Engineering Education on 20th June 2013 at Hubli.
39. Three days National level workshop on 'Implementation of signal processing Algorithms using FPGAs' from 23rd -25th May 2013.
40. Workshop on: 'Advanced signal processing and pattern Recognition' at M.S. Ramaiah, College of Engg. Bangalore during 29th Sept. to 3rd

Aug. 2013

41. Three days seminar on “Technical Documentation using Latex” at BEC, Bagalkot during 27th to 29th May 2013.
42. Workshop on: ‘Soft and evolutionary computing techniques and its applications’ at BEC, Bagalkot during 30th May to 1st June 2013.
43. Workshop on: ‘Modern Aspects of Intellectual Solutions on Publications, patents and Personal management’ at BEC, Bagalkot on 7th Dec. 2013.
44. On day workshop on: ‘Sustainable Innovation an End to End Approach’ at BEC, Bagalkot during 29th to 30th Jan. 2014.
45. One day seminar on “Control system design using Simulink” on 13th Feb 2014 at Park Plaza, Bengaluru.
46. Two days workshop on “ANN, Fuzzy logic and ANFIS for pattern recognition” on Oct 3rd and 4th 2015 at Dhe leadership center Bangalore, organized by SCS-India.
47. Workshop on “Outcome Based Education” organized under TEQIP-II on 18th Dec 2015 at Basaveshwar Engg. College, Bagalkot.
48. Workshop on “Research Methodologies” organized under TEQIP-II on 19th Dec 2015 at Basaveshwar Engg. College, Bagalkot.
49. Indo-Us Workshop on “Essential Algorithms for Integrated Vehicle Health Management for Aerospace Applications” held during 23-26 May 2016 at Indian Institute of Science, Benaglore.
50. One day NPTEL workshop on “Awareness of NPTEL courses” on 29th Nov 2019 at BEC, jointly organized by IIT Madras and BEC, Bagalkot.
51. One day workshop on “Publishing Research paper in high quality journals” on 19th Dec 2019 organized by dept. of Management studies, BEC, Bagalkot.
52. Two days’ E-workshop on “AICTE- examination reform policy” first virtual workshop organized by BEC, Bagalkot on 29th and 30th April 2020.
53. Participated in India’s first Artificial Intelligence virtual fest 2020 on 2nd and 3rd May 2020
54. Two week FDP on ”R Language” organized by Cambridge Institute of technology Bengaluru in collaboration with IIT Bombay spoken tutorial during 22/06/2020 to 5/07/2020.
55. One Week Online Faculty Development Programme on “Concepts, Methods, Challenges and Future directions in Medical image analysis using Machine learning”, organised by the Department of Electronics and Instrumentation, SJCE , JSS S&TU, Mysuru, from 10 th to 14 th August 2020, under TEQIP Phase III.
56. Two week online FDP on “AI, ML and DL using Python “ by IIT Kanpur under TEQIP during 14th June to 24th June 2021.
57. Five days FDP on “Applications of AI in research and development” by AICTE-ATAL CSIR Bhopal from 22nd Nov. to 26th Nov. 2021
58. Five days FDP on “IIoT using Labview “ by AICYE ATAL KLE. Dr. M.S. Shesgiri College of Engg. and Technology Belagavi, Karanataka during 3rd Jan to 9th Jan 2022.

Industry Internship

1. Attended online Industrial Internship on “Industries IOT-(IIOT), Machine learning and Deep Learning using LabVIEW” during May and June 2020 organized by VI solutions Bengaluru

Webinar Attended

1. On “AI and Data science” organized by IEEE circuits and systems

(CAS) society Bangalore chapter in association with IEEE Bangalore section on 30th May 2020.

2. On "" IEEE webinar series by women leaders" organized by WIE-IEEE Bangalore section during 25th to 29th May 2020.
3. On "Machine learning, digital twins and self-organized methods" organized by Cambridge Institute of Technology Bengaluru on 29th May2020.
4. On 'Innovation in Antenna Design Analysis' organized by Altair India on 8/07/2020.
5. IEEE CAS regional activity and how to run CAS chapter organized by IEEE CAS with IEEE Bengaluru section on 12/09/2020.
6. Cancer in female: Screening, Awareness and Prevention organized by CIT Bengaluru under the aegis of IQAC on 17/06/2020.
7. E-workshop on 'Sexual Harassment at workplace' organized by MBA dept. of BEC under EAP-TEQIP phase-III on 27/06/2020.
8. On 'Architecting Digital transformation Journey' organized by Vijay Vittal Institute of Technology Bengaluru on 24/07/2020.

Awards

- : • Under IEEE North Karnataka Sub Section (NKSS) received outstanding IEEE student branch (35261) for the year 2021 (Branch Counsellor)
- Received Best faculty award by INSO for the year 2022 by INSO awards organized by VDGGOOD professional committee.