

CURRICULUM VITAE

| | | |
|----------------------------------|--|---|
| Full Name | Dr. IBRAR JAHAN M A |  |
| Total Teaching Experience | 20.6 years | |
| Date of Birth | 04/07/1980 | |
| Contact Number | 9008085384, 9611319869 | |
| E-mail ID | ibrarjahan20@gmail.com ibrar.ec@gmail.com | |
| Address | HIG-B-5, House No. 30, Building No. 55, Shirke Apartment, Kengeri Satellite Town, Bangalore – 560060 | |
| Nationality | Indian | |
| Religion | Islam | |
| Languages Known | English, Urdu, Kannada & Hindi | |

Education Details

- PhD (Integrated Photonics) from Visvesvaraya Technological University, Bangalore, Karnataka, 2022
- M.Tech in VLSI Design and Embedded Systems from UTL Technologies, VTU Extension Center, Bangalore with FCD (7.95) completed in the year 2009
- B.E in Medical Electronics from MS Ramaiah Institute of Technology, Bangalore with FCD (78%) completed in the year 2002
- 12th (PUC) from Amanni Pre-University College, Bangalore with 45.2% completed in the year 1998
- 10th from Cluny Convent High School, Jalahalli, Bangalore with 72.4% completed in the year 1996

Employment Details

| Sl. No | Employer | Position held | Subjects taught | Date of joining | Date of leaving |
|---------------|---|----------------------|---|----------------------------|------------------------|
| 1 | RNS Institute of Technology, Channasandra, Bangalore | Assistant Professor | Basic Electronics, GSM, Wireless Communication, 8086 Microprocessor, 8051 Microcontroller, Field Theory, Electromagnetic Waves, MWA, AEC, VLSI Design M.Tech Subjects: VLSI Testing, Low Power VLSI Design, Hardware & Software Co-design, Research Methodology | 19 th July 2010 | Currently Working |
| 2 | UTL Technologies Ltd, VTU Extension Centre, Bangalore | Sr. Lecturer | Embedded Systems, VLSI Design | September 2009 | July 2010 |
| 3 | Ghousia College of Engineering, Mysore Road, Ramanagaram, Bangalore | Lecturer | Basic Electronics, AEC, VLSI Design, Mixed Mode VLSI Design | September 2006 | August 2009 |
| 4 | Islamia Institute of Technology, Bannerghatta Road, Bangalore | Lecturer | Basic Electronics, AEC, Electronics & Instrumentation, Network Theory | September 2005 | September 2006 |
| 5 | B.S.V.P ITI College, Kommagotta, Kengeri Satellite Town, Bangalore | Lecturer | Basic Electronics, Basic Electrical, General Maths | November 2002 | August 2005 |

Publication Details

1. Ibrar Jahan M A “Design of 1 GHz VCO for Frequency Synthesizer using 0.18 μ m Technology” at National Conference on VLSI & Multimedia Communication-2009 (NCVM_09) held at R.V.College of Engineering, Bangalore Sponsored by IETE.
2. Ibrar Jahan M A, Aruna M “Digital System Design & Implementation for FPGA based System-on Chip” at National Conference on Recent Advances in Electronics & Communication, Rajiv Gandhi Institute of Technology, 2013.
3. Ibrar Jahan M A, Dr. Rajini V Honnunar, Versha R, “Analysis and Sensitivity Improvement of FBG Sensor”, IEEE International Conference on Recent Advances in Electronics & Communication Technology, ICRAECT-2017 held at SJBIT, Bangalore on 16th to 17th March 2017.
4. Ibrar Jahan M.A, Dr. Rajini V Honnunar, Versha R, “Analysis of FBG sensor for Accurate pressure sensing with improved sensitivity”, 7th International conference on Materials Processing & Characterization, ICMPC-2017 held at GRIET, Hyderabad on 17th to 19th March 2017.
5. Ibrar Jahan M.A, Vannalu Aruna, Design and FPGA Implementation of HDLC Framer/De-framer for High Speed Telecommunication Application”, 2nd International Conference on Circuits, Controls & Communication-CCUBE held at RNSIT, December 15-16, 2017.
6. Ibrar Jahan M A, Rajini V Honnunar, Versha, “Analysis of FBG sensor for accurate Pressure sensing with improved sensitivity,” Materials Today Proceedings, Vol. 5, Issue 2, pp. 5452-5458, 2018.
7. Ibrar Jahan M A, Rajini V Honnunar, Anup Upadhya “Sensitivity Improvement and Opto Mechanical Analysis of Composite Material Using Fiber Bragg Grating,” International Journal of Engineering and Technology, Vol. 7, no. 4, Issue 36, pp. 204-211, 2018.
8. Chethana K, Rajini V Honnunar, Ibrar Jahan M A, Asokan S, ”Comparison Studies on Hand Grip Measurement Techniques using FBG Sensor and sEMG,” 2020 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), July 2-4, 2020.
9. Chethana K, Rajini V Honnunar, Ibrar Jahan M A, Bhargava N, Haripriya and Asokan S,” Design and Calibration of Fiber Bragg Grating Sensor for Analysis of Real Time Skeletal Hand Muscle Strength,” IEEE International Conference for Innovation in Technology (INOCON), November 6, 2020.
10. Chethana K, Rajini V Honnunar, Ibrar Jahan M A, Asokan S, “Computational Analysis of Fiber Bragg Grating Based Hand Grip Measuring Device for Assessment of Post Surgical Rehabilitation,” European Journal of Molecular and Clinical Medicine, Vol. 7, Issue 8, pp. 2842-2848, 2020.
11. Ibrar Jahan M A, Bhoomika, Malathi Sathish,” Waveguide Bragg Grating Bio-sensor for Early detection of cancer and blood disorder,” National Conference on Recent Trends on Engineering, Science and Technology, 2020 (**Received Best Paper Award**).
12. Ibrar Jahan M A, Bhargava Narayana, Vishwas, “Fiber Bragg Grating Sensor to measure Hand Grip Strength,” National Conference on Recent Trends in Engineering, Science & Technology”, 2021 (**Received Best Paper Award**).
13. Ibrar Jahan M A, Rajini V Honnunar, Chethana K, Asokan S, “Design and Development of Optical Fiber Bragg Grating based Device for Measurement of Handgrip Force,” Optical and Quantum Electronics Journal, Vol. 54, Issue 1, pp.1-13, 2022.
14. Chethana K, Rajini V Honnunar, Ibrar Jahan M A, T Srinivas, S Asokan, “Experiments and Modeling of Hand Grip Strength Measurement for Musculoskeletal Parameters Monitoring,” International Conference on Computing Sustainable Global Development, INDIACom 2022.
15. Ibrar Jahan M A, Venkatesha M, Lalit Singh, Malathi Sathish, Rajini V Honnunar, “Design and Modeling of Ultra-compact and Highly-sensitive Silicon Bragg Grating Sensor for Biochemical Sensing Applications,” Silicon Journal, Vol. 54, 2022.
16. Ibrar Jahan M A, Ciro Rodriguez Rodriguez, Rajini V Honnunar, “Modeling and Simulation of FBG Based Pressure Sensor for Micro Level Strain Measurement,” IEEE International Conference on Electronics, Computing and Communication Technologies, CONECCT 2022.

17. Ibrar Jahan M A, Nandhini V L, Harpreet Vohra, Rajini V Honnungar, "A Comparison of Strain Measurement Methods Using a Strain Gauge and an FBG Sensor," INDIACom 2023, IEEE Conference [submitted to BJIT Journal under review].
18. Ibrar Jahan M A, Venkatesha M, Ciro Rodriguez, Rajini V Honnungar, "Bragg Grating based Nanophotonic Biochemical Sensor with Enhanced Light Matter Interaction," Optoelectronics and Advanced Materials- Rapid Communications Journal, Vol. 7, pp. 99-105, 2023.
19. Balaji V R, Ibrar Jahan M A, "Square Ring Resonator based Photonic Crystal for Pressure Sensing," IEEE International Conference on Electronics, Computing and Communication Technologies, CONECCT 2023 [Accepted].
20. Balaji V R, Shanmuga Sundar Dhanabalan, Ibrar Jahan M A, "Photonic Crystal Based 2D Demultiplexer for DWDM Systems," Springer Tracts in Electrical and Electronics Engineering Book Series, pp. 113-130, 2023.
21. Ibrar Jahan M A, Balaji V R, Jeswanth Sugesh, Richards Joe S, Sangeetha G, "2D Photonic Crystal for the Detection of Infectious Virus and Bacterial Diseases," Photonics 2023 Conference, July 5-7, 2023.
(Presented it will be published in Springer Lecture Notes in Electrical Engineering)
22. Ibrar Jahan M A, Balaji V R, Shanmuga Sundar Dhanabalan, T Sridarshini, "Integrated Photonic Device for Cancer Detection," IOP Institute of Physics Book Chapter [under review].
23. Balaji V R, Ibrar Jahan M A, "Silicon Rod Cavity based 2D Photonic Crystal for Multi-Analyte," submitted to Laser Physics Journal (under review).
24. Balaji V R, Ibrar Jahan M A, "Machine Learning enabled 2D Photonic Crystal biosensor for Early Cancer Detection," Submitted to Measurements Journal (under review).
25. Balaji V R, Ibrar Jahan M A, "Silicon Photonic Modulators for high-speed applications – A review," submitted to IOP (under review).
26. Balaji V R, Ibrar Jahan M A, "2D Photonic crystal nano biosensor with IoT intelligence," submitted to Wiley (under review).

FDP/Workshops Attended

1. Three days FDP on "Automotive Infotonics" from 27th to 29th January 2011 at SJBIT, Bangalore.
2. One day Workshop on "Bio-Medical Applications of Optical Sensors" held on 23rd September 2014 at Sai Vidya Institute Of Technology, Bangalore.
3. Two weeks AICTE Sponsored FDP on "Advance Communication Technologies" from 15th to 27th July 2013 at RNSIT, Bangalore.
4. Two Days workshop on "Research, Statistics & BCI Application" from 28th to 29th September 2011 at Ghousia College of Engineering, Ramanagaram.
5. Five days FDP on "Matlab & its Applications to DSP, DIP & Power Electronics" from 25th to 29th July 2011 at RNSIT, Bangalore.
6. Two days workshop on "Antenna Design & Simulation Techniques" from 16th to 17th June at RNSIT, Bangalore.
7. Three days FDP on "Python Programming & Application" from 18th to 20th June, 2018 at RNSIT, Bangalore.
8. Four days workshop on "Analog and Digital VLSI Design", from 21st to 25th June, 2018, at RNSIT, Bangalore.
9. Three days workshop on "Computer Networks Laboratory using NS3, NCTUNS and C/C++ from 23rd to 25th January, 2018, at RNSIT, Bangalore.
10. One day workshop on "Optical Communication Systems and Photonics", on 11th May 2019 at RNSIT, Bangalore.
11. FDP on Advancement in Signal and Image Processing from 8th to 12th February, 2021, Atria Institute of Technology, Bangalore.
12. FDP on Essential Skills and Technologies for Quality Research, April 30, 2021, PES college of Mandya.
13. FDP on Recent Trends in Photonics from 14th to 19th June, 2021, Oxford College of Engineering, Bangalore.

14. ATAL FDP on Recent Trends in the World of Photonics from 26th to 30th July, 2021, RNSIT, Bangalore.
15. ATAL FDP on Smart Sensors Based Industrial Automation and Healthcare Technology, from 7th to 11th June, 2021, PSR Engineering College, Tamil Nadu.
16. Short Term Training Program on Emerging Tools and Techniques in VLSI, MEMS and MOEMS, from 25th to 29th January, 2022, Swami Keshvanand Technogy and Management, Jaipur.
17. FDP on Research Trends in Optical Technologies and its Applications from 5th to 9th January, 2023, Vellore Institute of Technology, Chennai.
18. FDP on Recent Advancements in Science and Technology, from 6th to 10th March, 2023, Alliance University, Bangalore.
19. FDP on Analog VLSI Design using EDA Tools, from 20th to 25th March, 2023, AICTE VTU from 20th to 25th 2023, Bangalore.
20. Participated in one month course on “Quantum Computing using Indigenous Quantum Simulator QSim” jointly organized by IIT Roorkee and C-DAC Hyderabad with the support of Ministry of Electronics and Information Technology, Government of India, 6th to 28th May, 2023.
21. Participated in Online Introductory Sessions on Optiwave Photonic Design & Simulation Tools Conducted by HR Universal Systems Inc., Delhi-NCR on 15th, 16th, 22nd, 23rd, 29th & 30th June, 2023.

Projects Guided

| Sl. No. | Name of the student | Title of the thesis | BE Or Master's level | Year of completion | Co-Guides (if any) |
|---------|---------------------|---|----------------------|--------------------|--------------------|
| 1 | Group of 4 students | Design and Sensitivity Improvement of FBG based Sensor | BE | 2016 | No |
| 2 | Group of 3 students | Modeling and Simulation of FBG as a Humidity Sensor for Structural Health Monitoring of Aircrafts. | BE | 2017 | No |
| 3 | Group of 4 students | Design and Modeling of Integrated Optic Temperature Sensor using Mach-Zehnder Interferometer. | BE | 2017 | No |
| 4 | Group of 2 students | Design, Modeling and Simulation of FBG Sensor for Pressure Sensing Application. | BE | 2018 | No |
| 5 | Group of 3 students | Health Monitoring of Composite Structures using FBG Sensor. | BE | 2019 | No |
| 6 | Bhoomika | Modeling and Analysis of Waveguide grating based Bio-sensor. | M.Tech | 2020 | No |
| 7 | Group of 2 students | Guided project on topic Design and Analysis FBG Sensor for Measurement of Hand Grip Strength (Received Best Project Award) . | BE | 2021 | No |
| 8 | Group of 4 students | Design and Analysis of Slab based Waveguide Bragg Grating Sensor for Measurement of Temperature. | BE | 2022 | No |
| 9 | Group of 2 students | Real Time Manhole Gas detection System | BE | 2022 | No |
| 10 | Group of 4 students | A Biomechanical Device for Acquisition and Assessment of Plantar Pressure. | BE | 2023 | No |
| 11 | Group of 4 students | Cancer Detection using Photonic Crystal based Biosensor. | BE | 2023 | No |
| 12 | Group of 4 students | Design and Modeling of Photonic Crystal based Sensor for detection of chemicals. | BE | 2023 | No |

| | | | | | |
|----|---------------------|--------------------------|----|------|----|
| 13 | Group of 4 students | Health Monitoring System | BE | 2023 | No |
|----|---------------------|--------------------------|----|------|----|

Academic & Administrative Responsibilities

1. Handled the responsibility of set up of Microprocessor Lab & VLSI Lab, lab in-charge and time table officer for 2 years.
2. Labs Handled: Logic Design, VLSI, Microprocessor and Microcontroller & Advance Communication Lab, Embedded Systems.
3. Co-ordinator of Internal Quality Improvement Committee (IQIC) of first year students.
4. Session Chair and Reviewer in National Conference on Recent Trends in Engineering, Science and Technology held in the ECE Department, RNSIT during 2019, 2020 and 2021.
5. Co-ordinator of National Conference on Recent Trends on Engineering, Science and Technology, held on June 22nd 2022, department of ECE, RNSIT.
6. Organizing committee member of ATAL FDP on Recent Trends in Photonics from July 26th to July 30th 2021, department of ECE, RNSIT
7. Co-ordinator of Criteria 5 of NBA document.
8. Co-ordinator of Criteria 3 of NAAC document.
9. Member of IPR Cell, RNSIT.

Books Published

1. Published a Text Book on “**Basic Electronics**”, in 2015, Publication: IK International, Authors Dr. Uma Rao, Ibrar Jahan M A
2. Fundamentals of Semiconductor Devices, Dr. Gaurav Kumar Bharati, Nudrat Sufiyan, Dr. P R Yashaswini, Dr. Ibrar Jahan M A, Scientific International Publishing House, 2023 (under review).

Invited Talks

1. Presented a talk on FBG Sensors-Principles and Applications on International Light Day at Sir M. Visvesvaraya Institute of Technology, Bangalore on 2nd July 2021.
2. Presented a talk on Design of FBG Sensor for Sensing Application at RNSIT, Bangalore on 27th September 2021.
3. Presented a talk on Silicon Photonics & Applications at RNSIT, Bangalore on 10th October 2022.
4. Presented a talk in Faculty Development Program (FDP) on “Research Trends in Optical Technologies and its Applications (RTOTA-2023)” held during at Vellore Institute of Technology, January 05th -09th, 2023.
5. Presented a talk in AICTE sponsored Faculty Development Program (FDP) on “Analog VLSI Design” held at VTU, Mudenahalli Campus, March 20-25, 2023.

Project Proposal Submitted

1. Submitted a project proposal to Karnataks State Council for Science and Technology under STI scheme, project title “A Biomechanical Foot Balancing Platform to Measure Plantar Foot Pressure”, for funding of Rs. 1,91,900/-.
2. Submitted to Indian Council of Social Science Research, project title “A study on the Socio-economic impact of Pradhan Mantri Fasal Bima Yojana (PMFBY) in Karnataka,” for a funding of Rs. 14,95,000/-.
3. Submitted proposal for AORP under VGST, 2023.

Other Achievements

1. Participated in Synergy State Level Project Exhibition organized by IEEE Atria Institute of Technology jointly with Amrita Vishwa Vidyapeetham on 28th June 2022. Received certificate of Appreciation for developing a low cost device for Manhole Gas Detection System.
2. A Biomechanical Foot Balancing Platform to Measure Plantar Foot Pressure, received 2nd prize of cash award of Rs. 20,000/ and Rs. 60,000/ Free Incubation at AIC-DSU Innovation Foundation, 2022.

3. Received Padmashri Dr. S K Shivkumar Innovative Project Award in under graduate level for the project title “Biomedical foot balancing platform to measure plantar foot pressure” by Karnataka Science and Technology Academy (KSTA) 2022-23.
4. Sanctioned an amount of Rs. 5000/- from KSCST for a project “A biomechanical device for acquisition and assessment of plantar pressure” and the project has been selected for state level Exhibition by Karnataka State Council for Science and Technology, 2023.
5. Received Fellowship in 7th Edition of IEEE International Test Conference, India (Fellowship to attend the conference and tutorials), 2023, Bangalore.
6. Received 1st prize for best paper presentation for a project entitle “Enhanced pressure sensing with square wave resonator in 2D photonic crystal,” at Symposium on Photonic Technology and its Applications held in Hybrid Mode at RNSIT, Bangalore on 10th June, 2023.

Membership in Professional Organizations

| Sl. No | Name of the Body | Status of Membership Life /Annual |
|--------|--|-----------------------------------|
| 1 | MISTE | Life Time |
| 2 | Senior IEEE Member | Annual |
| 3 | Joint Secretary of Photonic Society chapter, IEEE Bangalore section | Annual |
| 4 | EXECOM Member of IEEE Prakash Bharthi, Photonic Society of India and Chair of Prakash Bharathi Scholar Group | Annual |

I hereby certify that all information provided in this document along with the certificates / testimonials are true and accurate to the best of my knowledge and belief.

Date: 14/07/2023

IBRAR JAHAN M A