

PROFILE

Name	Dr. A Chrispin Jiji
Position & Affiliation	Associate Professor, Department of ECE
Areas of Interest	Image Processing, Artificial Intelligence, ML/DL. IOT, VLSI Design
Email	chrispin.ece@cambridge.edu.in
LinkedIn ID	https://www.linkedin.com/in/dr-chrispin-jiji-0845ab111/
Google Scholar ID	https://scholar.google.com/citations?user=ZfsijxIAAAAJ&hl=en
Orchid ID	0000-0001-5267-788x
Vidwan ID	347637
Scopus ID	57202987275
Professional Webpage (if any)	https://faculty.cambridge.edu.in/dr-a-chrispin-jiji/

Educational Qualifications:

Ph.D	VTU	India	2020
ME	Karunya University	India	2006
BE	Manonmanium Sundaranar University	India	2004

Areas of Research:

Image Processing, Artificial Intelligence, Machine Learning/Deep Learning, IOT, VLSI Design

Brief Profile: (write about yourself)

Dr. A Chrispin Jiji received my B.E degree in Electronics and Communication Engineering from The Rajaas Engineering College, Tamilnadu, M.E in Applied Electronics from Karunya Institute of Technology, Karunya University, Tamilnadu and Ph.D. from Visvesvaraya Technological University, Karnataka. I am currently working as an Associate Professor in Department of Electronics and Communication Engineering, Cambridge Institute of Technology, Bangalore.

I have 19.7 years of experience in teaching and 10 years of research experience. I have received AICTE sponsored ATAL FDP 2024 grant entitled “Research Problems, Recent Trends and Future Perspectives of Artificial Intelligence in Image Processing-Tools, Techniques and applications: An industry Perspective” worth of Rs.350000/-. I am actively working on ongoing VGST-RGSF 2023 funded project entitled “Bite Force Recording Device for Clinical Evaluation of Dental Problems” worth of Rs.300000/- for a period of two years, VTU sponsored project entitles “Smart Assistive device for Quadriplegic Patient” worth of Rs.5000/- and KSCST sponsored project entitles “RISC-V Enabled Automated Oscillometric Pressure Monitoring Device For Supine Pressor Test” worth of Rs.5000/-.

I have received 2 granted patent and also published 8 Patents to my credit. I have published 60 papers in reputed Journals and conferences. Out of which 8 papers in SCI indexed Q2 journal, 21 papers in Scopus

indexed journals, 8 papers in WOS and others. I have authored 8 Books entitled Advances in VLSI Physical Design and Verification, VLSI Testing and Design for Testability, Research Methodology & Intellectual Property Rights: Basic and Fundamental concepts, Digital Image processing: Practical Implementation with MATLAB, Electronic Circuits Analysis & its Simulation with PSPICE, Electronic Devices and Instrumentation Laboratory Practice, Analog Integrated Circuits with PSPICE and Analog Circuits and its Simulation in PSPICE. I have delivered special lecturers in International/National conferences, FDPs and Webinars. My recognition includes Uttama Adhyapika Award 2025 from Bharat Education Excellence Awards (BEEA) and BrainOVision Solutions Pvt. Ltd, Women Researcher Award 2021 and Young Achiever Award 2020. I have served as a reviewer for several Scopus indexed journals and have organized and participated in numerous International/National conferences, FDPs, Workshop, Webinars, Quiz, and also acted as a session chair for paper presentation sessions in International/National Conferences. I holds professional membership in IEEE, IEEE Photonic Society membership, and life member of InSc. My research interest includes Optical Imaging, Underwater Image Processing, Medical Image Processing, Artificial Intelligence, Machine Learning/Deep Learning, IOT and VLSI Design. I have guided many B.E and M.E projects and currently guiding two Ph.D scholars.

Awards/Achievements/Others:

- [1]. Uttama Adhyapika Award 2025 from Bharat Education Excellence Awards (BEEA) and BrainOVision Solutions Pvt. Ltd
- [2]. Women Researcher Award from International Scientist Awards 2021 on Engineering, Science and Medicine
- [3]. Young Achiever Award 2020 from Institute of Scholars (InSc)
- [4]. Sub group-coordinator of Machine Learning and a speaker for Memorandum of Understanding between The Oxford College of Engineering, Bangalore, India. Amity School of Engineering & Technology, Amity University, Lucknow Campus, India and Research Group "Information Technologies applied to Data Science" - ITDTA, Universidad Nacional Mayor de San Marcos UNMSM, Perú to establish academic and research efforts
- [5]. Received NPTEL certificate on Computer vision and image processing Fundamentals and applications, 2021
- [6]. Expert Talk on “Certification Process and Procedures”, MSME MDP on Quality Management System and Product Certification, Cambridge Institute of Technology, 2025
- [7]. Expert Talk on “Research Challenges and opportunities of Underwater Image Processing”, 5 Days FDP on Gen-AI, Quantum Computing, 2D Imaging and Underwater image using Machine Learning, Cambridge Institute of Technology, 2025
- [8]. Guest Lecture on “Fundamentals of Image Processing”, National University Mayor de San Marcos, Lima Peru, 2021
- [9]. Guest Lecture on “Artificial Intelligence for Image Processing”, The Oxford College of Engineering, 2021
- [10]. Hands on Image Processing Algorithms, The Oxford College of Engineering, 2021

[11]. Expert Talk on “Optical Imaging Extended Depth of Field Platform”, St. Xaviers Catholic College of Engineering, Tamilnadu, 2020

[12]. Expert Talk on “Optical Imaging in Underwater Images”, IEEE Photonic Society Bangalore Chapter, 2020

Courses Taught: Digital Image Processing, Advances in Image Processing, Wireless Communication Systems, Computer Organization and Architecture, Analog Circuits, Electronic Devices, Advances in VLSI Design, VLSI Design, Verilog HDL, VLSI Testing, Digital VLSI Design, Analog Electronics, Principles of Communication Systems, Wireless and Cellular Communication, Satellite Communication, Basic Electronics, Digital Switching System, DSP algorithm & Architecture, Antennas & Wave Propagation, High Performance Computer Network, Computer Communication Network, Wireless and Mobile network

Publications/Patents:

Publications

[1]. Chrispin Jiji, Iffat Fatima & Adarsha. DWFUIR: Deep Weighted Least Square Filter for Underwater Image Restoration, Journal of Optics, 2025, **Springer Publisher, ESCI, Scopus, (Q3 Journal)**

<https://doi.org/10.1007/s12596-025-02926-x>

[2]. Selvan, Balaji, Sai Geetha & **Chrispin Jiji**, Brain Tumor Detection from MRI Images Using Window-Aware Hierarchical Auto-Associative Polynomial Network with Great Wall Construction Algorithm, Biomedical Materials & Devices, 2025 **Springer Publisher, Scopus, (Q2 Journal)**

<https://doi.org/10.1007/s44174-025-00558-0>

[3]. Chrispin Jiji, Annie, Martin, Aamir, Linh Dinh & Hien Dang “Efficient Model using Deep Convolutional Neural Networks for modelling underwater images”, Evolutionary Intelligence, **Springer Publisher, 2025 (Q2 Journal)**

<https://doi.org/10.1007/s12065-025-01036-8> **ESCI, Scopus**

[4]. Chrispin Jiji, Maraia Seraphine Sujitha, Annie Bessant, Indumathi G “REOUN: Restoration and Enhancement of Optical Imaging Underwater based on Non-Local Prior”, Journal of Optics, **Springer Publisher, 2024**

<https://doi.org/10.1007/s12596-024-02097-1> **ESCI, Scopus**

[5]. Chrispin Jiji, “Optical Lens modeling and Optimization with Machine Learning algorithm for Underwater Imaging”, Journal of Optics, **Publisher: Springer, 2023**

<https://doi.org/10.1007/s12596-023-01549-4> **ESCI, Scopus**

[6]. Chrispin Jiji, “Extended Depth of Focus Imaging using Optics and Image Processing”, International Journal of Information Technology, **Publisher: Springer,**

2023

<https://doi.org/10.1007/s41870-023-01586-z> **Scopus**

[7]. Chrispin Jiji, Annie, Martin, Aamir, Hatira & Alponse, “A new model to detect Covid-19 patients based on convolution neural network via l1 regularization”, Applied Mathematics in Science and Engineering, **Publisher: Taylor & Francis, 2023 (Q2 Journal)**

<https://doi.org/10.1080/27690911.2023.2220872> **SCI, Scopus, WOS**

[8]. Chrispin Jiji, Vivek Maik, “ASAD: Adaptive Sparse Augmented Lagrangian Deblurring of Underwater Images with Optical Prior”, Imaging Science Journal, **Publisher: Taylor & Francis, 2023 (Q2 Journal)**

<https://doi.org/10.1080/13682199.2023.2173546> **SCI, Scopus, WOS**

[9]. Chrispin Jiji, Vivek Maik, “IOT based Automatic Forest Fire Detection based on Machine Learning Approach”, Annals of Forest Research, **2022**

<https://www.e-afr.org/article/view/1792.html> **Scopus**

[10]. Chrispin Jiji, Vivek Maik, & Vijay Kumar “A Novel technique for enhancing underwater visibility using Non-Local Stretch Directional Gradient”, Journal of Physics: Conference Series, IOP Publishing, **2022**

<https://doi.org/10.1088/1742-6596/2335/1/012024> **Scopus**

[11]. Chrispin Jiji, & Nagaraj R, “Hybrid Technique for improving Underwater image”, 3C Technologia, **2021**

<https://doi.org/10.17993/3ctecno.2021.specialissue8.645-665> **ESCI, Scopus, WOS**

[12]. Chrispin Jiji, “Novel Method to Reconstruct an Image using Hybrid Decomposition”, Design Engineering, **2021**

<https://www.scopus.com/sourceid/28687> **Scopus**

[13]. Chrispin Jiji, & Nagaraj R, “Enhancing Underwater images using Piecewise Linear Smoothing Gradient Guided Filter”, 3C Technologia, **2020**

<https://ojs.3ciencias.com/index.php/3c-tecnologia/article/view/951> **ESCI, Scopus, WOS**

[14]. Chrispin Jiji, & Nagaraj R, “A Novel imaging system for Underwater Haze Enhancement”, International Journal of Information Technology, Publisher: **Springer, 2019**

<https://doi.org/10.1007/s41870-019-00312-y> **Scopus**

[15]. Chrispin Jiji, & Nagaraj R, “Hybrid Technique for Enhancing Underwater Image in blurry conditions”, Advances in Science, Technology and Engg Systems Journal, **2019**

<https://doi.org/10.25046/aj040243> **Scopus**

[16]. Chrispin Jiji, & Nagaraj R, “An Underwater Image Enhancement via Wavelet domain Gradient Guided Filter”, International Journal of Engg and Technology, **2018**

<https://doi.org/10.14419/ijet.v7i4.38.27614> **Scopus**

[17]. Chrispin Jiji, & Nagaraj R, “A Novel Technique for Enhancing Color of Undersea Deblurred Imagery”, Advances in Science, Technology and Engg Systems Journal, **2018**

<https://doi.org/10.25046/aj030610> **Scopus**

[18]. Vivek Maik, Stella Daniel & Chrispin Jiji, “A Novel Imaging System for Removal of Underwater Distortion using Code V”, IEIE Transactions on Smart Processing & Computing, **2017**

<https://doi.org/10.5573/IEIESPC.2017.6.3.141> **Scopus**

[19]. Chrispin Jiji, & Nagaraj R, “Enhancement of Underwater Deblurred Images using Gradient Guided Filter”, 3rd IEEE ICR EICT, **2018 Scopus**

[20]. Chrispin Jiji, & Vivek M, “Underwater Turbidity Removal through Ill-posed Optimization with Sparse Modeling”, IEEE International Conference on PCSIE, **2017 Scopus**

[21]. Chrispin Jiji, “Improving Low Illumination Image Based on Multi-Scale Retinex Via Bilinear Interpolation”, Journal of Emerging Technologies and Innovative Research, **2021**

<https://www.jetir.org/papers/JETIR2109429.pdf> **UGC approved**

[22]. Shivaram Dhikshith M **Chrispin Jiji**, “Artificial intelligence based Covid 19 detection”, Journal of Emerging Technologies & Innovative Research, **2022**

<https://www.jetir.org/papers/JETIR2209238.pdf> **UGC approved**

[23]. **Chrispin Jiji**, et.al “Extraction of Blood Vessels from Retinal Image and its classification”, International Journal of Science & Engg, **2021**

<https://doi.org/10.51397/OAIJSE07.2021.0019> **UGC approved**

[24]. **Chrispin Jiji**, et.al “Enhancement of Pencil Sketch of Underwater Images”, IJIRCCE, **2021**

	https://doi.org/10.15680/IJIRCCE.2021.0907218
Patents	[1]. Chrispin Jiji, et.al “Foldable Keyboard for Portable devices” 383905-001, 01/08/2023, Indian Patent Granted [2]. Chrispin Jiji, et.al “Automated Solar Panel Cleaning System” 387576-001, 11/01/2024, Indian Patent Granted [3]. Chrispin Jiji, et.al “Smart Home Automation System for Quadriplegic Patients” 202241050128, 09/09/2022, Indian Patent Published [4]. Chrispin Jiji, et.al “Smart temperature and Face mask detection to prevent Covid-19 using Image Processing” 202141052930, 03/12/2021, Indian Patent Published [5]. Chrispin Jiji, et.al “Advanced Image Processing techniques for Early Detection of Eye Disease” 202141042343, 01/10/2021, Indian Patent Published [6]. Chrispin Jiji, et.al “Smart Heart Rate and Blood Oxygen Concentration Monitoring Device for Asthma and Heart Failure Patient” 202141036920, 20/08/2021, Indian Patent Published [7]. Chrispin Jiji, et.al “Modern Device and Method for an Extended Depth of Field Camera” 202141031309, 16/07/2021, Indian Patent Published [8]. Chrispin Jiji, et.al “A New Model for Investigation of marine world using Optical Simulation Extended Depth of Field Platform” 202041041346, 09/10/2020, Indian Patent Published [9]. Chrispin Jiji, “LCD Screen Cleaning Machine” 202041036434, 11/09/2020, Indian Patent Published
Book	[1]. Chrispin Jiji, et.al “Advances in VLSI Physical Design and Verification” Booksclinic Publishing, Nov 2025, ISBN: 978-93-7254-866-2. [2]. Chrispin Jiji, et.al “VLSI Testing and Design for Testability” Booksclinic Publishing, 07/02/2025, ISBN: 978-93-5823-568-5 [3]. Chrispin Jiji, et.al “Research Methodology & Intellectual Property Rights: Basic and Fundamental concepts” Booksclinic Publishing, 21/08/2024, ISBN: 978-93-5823-800-6 [4] Chrispin Jiji, et.al “Digital Image Processing: Practical implementation with MATLAB” Booksclinic Publishing, 29/12/2023, ISBN: 978-93-5823-73-51 [5]. Chrispin Jiji, et.al “Electronic Circuits Analysis & its Simulation with PSPICE” Booksclinic Publishing, 30/05/2023, ISBN: 978-93-5535-950-6 [6]. Chrispin Jiji, “Electronic Devices and Instrumentation Laboratory

	Practice” Selfypage Developers Pvt. Ltd, 21/04/2022, ISBN: 978-93-92591-28-0
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	[7]. Chrispin Jiji , “Analog Integrated Circuits with PSPICE” BFC Publication Pvt. Ltd, 23/10/ 2021, ISBN: 978-93-5509-051-5
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	[8]. Chrispin Jiji , “Electronic Devices and Instrumentation Laboratory Practice” BFC Publication Pvt. Ltd, 25/05/2021, ISBN: 978-93-91329-46-4
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Research and Consultancy:

[1]. Received AICTE sponsored ATAL FDP 2024 grant entitled “Research Problems, Recent Trends and Future Perspectives of Artificial Intelligence in Image Processing-Tools, Techniques and applications: An industry Perspective” worth of Rs.350000/-.

[2]. Received VGST-RGSF 2023 funded project entitled “Bite Force Recording Device for Clinical Evaluation of Dental Problems” worth of Rs.300000/- for a period of two years

[3]. Received KSCST sponsored project 2023 entitles “RISC-V Enabled Automated Oscillometric Pressure Monitoring Device For Supine Pressor Test” worth of Rs.5000/-.

[4]. Received VTU sponsored project 2022 entitles “Smart Assistive device for Quadriplegic Patient” worth of Rs.5000/-

VTU GUIDESHIP

- Recognition as Research Supervisor/ Research Co-Supervisor under Visvesvaraya Technological University (VTU) 07/08/2023
- Currently guiding 2 Ph.D Scholars at J.C Bose Research Center, Cambridge Institute of Technology, K R Puram, Bangalore.