

Dr. JEGANSON DURAI L



Contact

Address:

2, Kamarajar Nagar, Kalugumalai -
628552, Thoothukudi District,
Tamilnadu, India

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jegansondurai@gmail.com

Education

B.Sc. Physics

St. Xavier's College, Tirunelveli,
Jun 2009 - Apr 2012

M.Sc. E & I

Bharathiar University, Coimbatore
Jun 2013 - Apr 2015

M.Phil. E & I

Bharathiar University, Coimbatore
Dec 2015 - Feb 2017

Ph.D. E & I

Bharathiar University, Coimbatore
Jul 2017 - Dec 2021

Awards

- ☞ University **2nd Rank Holder** in PG,
Bharathiar University
- ☞ **DST –PURSE** fellow in Ph.D.

Summary

Researcher with years of experience in Quantum Computation. Quantum Signal Researcher in the field of **Digital Signal Processing, Underwater audio signal transmission, Retinopathy, Melanoma Skin Cancer detection and Cotton leaf disease detection**. Persistent, adaptive, and hardworking investigator, having experience working in diverse areas of research like Quantum Information theory. Well-versed in numerous programming languages and Programming software **MATLAB**, Simulink and Quantum Information Toolbox.

Skill Highlights

- Research experience in **Digital Signal Processing**
- Familiarity with the QKD protocols (BB84)
- Probabilistic Machine Learning models
- Theoretical Knowledge in Quantum information processing
- Devolope the numerical algorithms in **MATLAB**

Research Experience

Ph.D. Research Work: Quantum Assisted and Automated Retinal Fundus Image Analysis using Entropy-Based Image Processing Techniques

M.Phil. Research Work: Rapid and Secure Identification of Underwater Sounds using Quantum Communication

M.Sc. Research Work: Numerical Simulations of Time-Resolved Quantum Electronics Using MATLAB

- Highly commented research work in M.Phil. work
- **8** Research papers have been published and **5** research works are presented in International and national conferences. As a co-author, worked in **6** collaboration project works.
- <https://scholar.google.com/citations?hl=en&user=ocCrB9oAAAJ>

- List has been enclosed –

Participations

UGC Sponsored Workshop conducted by UGC – HRDC

International Conferences: 06

National Conferences: 02

Faculty Development Program: 03

Software's Certificate Courses: Matlab, LabVIEW, PLC and SCADA

Educational Qualifications

Education Qualification	Specialization	Month and Year of Passing / Pursuing	% of Marks	Class / Division	Institution	University
SSLC	-	May 2007	86.2%	I	R C Susai Hr.Sec. School	State Board
HSC	Maths Biology	May 2009	66%	I	St. Xavier's Hr.Sec. School	State Board
B.Sc.	Physics	April 2012	62.55%	I	St. Xavier's College	Manonmaniam Sundaranar University
M.Sc.	Electronics and Instrumentation	April 2015	81.20%	I Class with Distinction	Bharathiar University	Bharathiar University
M.Phil.	Electronics and Instrumentation	March 2017	Highly Commented		Bharathiar University	Bharathiar University
Ph.D.	Electronics and Instrumentation	August 2021	Commented		Bharathiar University	Bharathiar University

Teaching Experience

Name and Place of the Institution	Designation / Department	Experience (Duration)		Experience (in years & Months)	
		From (Date)	To (Date)	Years	Months
National Engineering College, Kovilpatti	Assistant Professor in S&H	17.06.2026	To Date		
Infant Jesus College of Engineering, Vallanadu	Assistant Professor in S&H	01.10.2024	12.06.2026	1	8
Bharathiar University – CUIC, Coimbatore	Guest Lecturer in Manufacturing Science	01.06.2024	31.05.2024	1	-

Subjects Handled

- Signals and Systems
- Digital Signal Processing
- ✓ Engineering Physics
- ✓ Applied Physics

Publications

- ❖ **Quantum-Assisted Retinal Drusen Detection Algorithm using Entropy-based Image Processing Techniques**, International Journal of Engineering and Advanced technology (IJEAT), Volume-9 Issue-3, February 2020, ISSN No.: 2249-8958
- ❖ **Exudates Localization from Retinoblastoma Diseased Fundus Image**, International Journal of Advanced Engineering Research and Technology (IJAERT) Volume 6 Issue 3, March 2018, ISSN No.: 2348 – 8190.
- ❖ **An Entropy-Based Identification and Width Measurement System for Retinal Blood Vessels**, International Journal of Electrical, Electronics and Data Communication, ISSN (p): 2320-2084, Volume-7, Issue-1, Jan.-2019
- ❖ **Blood Vessel Extraction from Retinal Fundus Images Using DIP Techniques**, International Journal of Engineering Trends and Technology (IJETT) – Volume 67 Issue 6- June 2019
- ❖ **A Review and Performance Analysis of Image Edge Detection Algorithms**, International Journal on Future Revolution in Computer Science & Communication Engineering Volume: 3 Issue: 12, ISSN: 2454-4248
- ❖ **An Efficient Edge Detection Algorithm for Reducing the Limitations of Existing Operators**, International Journal of Engineering Trends and Applications (IJETA) – Volume 5 Issue 2, Mar-Apr 2018, ISSN: 2393-9516.
- ❖ **Representation of Diseased Retinal Images using Quantum Fourier Transform**, International Journal of Research, Volume 05 Issue 12, April 2018, e-ISSN: 2348-6848.
- ❖ **Performance Analysis for Secure Quantum Image Transmission Using BB84 Protocol**, International Journal of Advanced Engineering Research and Technology (IJAERT) Volume 6 Issue 3, ISSN No.: 2348 – 8190.
- ❖ **Certain Investigation on Cotton Plant Diseases and Identification Methods using DIP Techniques**, South Asian Journal for Engineering and Technology 1 (1), 218-222

Conference Presentations

- ❖ **An Entropy-based identification and width measurement system for Retinal Blood Vessels**, International Conference on Electrical, Electronics & Communication Engineering (ICEECE), South Asian Research Center, Goa.
- ❖ **Mathematical Modeling and Simulation of MCFC Powered Electric Bike in MATLAB**, International Conference cum Workshop on The Techniques of nanomaterials Characterization, Hydrogen Energy and Fuel Cells, St. Xavier's Colleg, Palayamkottai.
- ❖ **Optic Disc Extraction and Localization from Retinal Images using Entropy-based System**, International Conference on Recent Trends in Electronics, Computing and Communication Engineering, ICRTECC 2019, Saveetha School of Engineering , Chennai. Page No: 453-460
- ❖ **Localization of Exudates from Retinal Fundus Image using Gray-Scale Morphological Algorithms**, International Conference on Recent Trends in Electronics and Instrumentation ICRTEI-2019, Bharathiar University, Coimbatore-46.
- ❖ **Illustration of Quantum images using Quantum Fourier Transform**, Recent Trends in Electronics (NCRE - 2018), Organized by Department of Electronics, St. Joseph's College (Autonomous), Trichy– 02
- ❖ **Study of Cotton Plant Diseases and Methods of Disease Identification Using Digital Image Processing**

Personal Details

Post applied for	Assistant Professor
Name of the Candidate	Jeganson Durai L
Father name	Lourdhu Samy S
Gender	Male
Date of Birth	02. 03. 1992
Languages Known	Tamil and English
Marital Status	Married
Software Skills	MATLAB with DSP toolbox
Highest qualification attained	Ph.D.
Address	2, Kamarajar Nagar, Kalugumalai - 628552, Thoothukudi District, Tamilnadu, India
Mobile No.	+91 9003313733
Email	jegansondurai@gmail.com

Declaration

I hereby declare that the above mentioned particulars are true to the best of my knowledge and belief.

Date: 17. 06. 2026

Dr. Jeganson Durai L

Place: Kalugumalai

