

## CURRICULUM VITAE

of

Dr. J. EEBENZAR

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### PRESENT POSITION

#### OFFICE:

Assistant Professor  
PG & Research Department of Physics  
Jamal Mohamed College (Autonomous)  
Tiruchirappalli – 620 020. Tamilnadu, INDIA.

#### RESIDENCE:

37/40, Highways Colony,  
Subramaniyapuram (post)  
Tiruchirappalli – 620 020  
Tamilnadu, INDIA.

### EDUCATION

Degree	Branch	Year of Passing	Institution /University
Ph.D.	Physics	November'2003	Anna University, Chennai.
M. Phil.	Physics	August'1996	Anna University, Chennai.
M. Sc.	Physics	April'1994	Jamal Mohammed College, Tiruchirappalli.
B. Sc.	Physics	April'1992	St. Joseph's college, Tiruchirappalli.

### PUBLICATIONS, RESEARCH AND TEACHING EXPERIENCE

Research Publications	Number of Article / Book Published	Research Experience	Teaching Experience
Peer-Reviewed International Journal	10	18 years	11 years and 3 months
International Conferences	07		
National Conferences	09		
Editor of the Book ( <i>Springer Publishers</i> )	01		
Book Chapter	01		

### RESEARCH INTEREST

BIOMEDICAL IMAGING & DIAGNOSTICS, ULTRAFAST LASER PHYSICS & NANOMATERIALS

### DISSERTATION TITLE

**Ph.D** : Optical Biopsy of Cancer using Native Fluorescence Spectroscopy.

**M. Phil** : Photodynamic activity on Human Erythrocytes by Dihematoporphyrin Ether.

**M.Sc.** : Therapeutic Ultrasound.

## DETAILS OF EMPLOYMENT / PROFESSIONAL EXPERIENCE

Name & address of the Institution	Post held	Description of Duties	Period of service	
			From	To
Department of Physics Jamal Mohamed College Tiruchirappalli.	Assistant Professor	Teaching B.Sc., M.Sc., & M.Phil., students.	16-08-2006	Till Date
Centre for Laser spectroscopy Manipal University, Manipal.	Senior Scientist	Development of Laser Induced Fluorescence (LIF) for oral cancer detection.	02-05-2006	14-08-2006
Laser Group, King Saud University Riyadh, Saudi Arabia.	Post Doctoral Fellow	Diagnosis of cancer based on spectral characterization of body fluids and tissues.	25-06-2005	28-12-2005
Division of Medical Physics/Lasers Anna University, Chennai.	Junior Research Fellow	Photonic pathology of neoplastic changes by native fluorescence spectroscopy.	20-05-1999	30-04-2002

## LIST OF PUBLICATION IN INTERNATION JOURNALS

1. **J. Ebenezar**, S. Ganesan, P. Aruna, " *Native fluorescence Spectroscopic Characterization of DMBA Induced Carcinogenesis in Mice Skin for the early detection of tissue transformation,*" **ANALYST**, 140, 4170-4181, 2015. **(Impact Factor: 3.885)**
2. **J. Ebenezar**, S. Ganesan, P. Aruna, R. Muralinaidu, K. Renganathan, and T.R. Saraswathy, " *Noninvasive Fluorescence Excitation Spectroscopy for the Diagnosis of Oral Neoplasia in vivo,*" **Journal of Biomedical Optics**, 17 (9), 097007(1-8), 2012. **(Impact Factor: 2.530)**
3. **J. Ebenezar**, Y. Pu, C.H. Liu, W.B. Wang, and R.R. Alfano, " *Stokes shift spectroscopy pilot study for cancerous and normal prostate tissues,*" **Applied Optics**, 51(16), 3642-3649, 2012. **(Impact Factor: 1.650)**
4. **J. Ebenezar**, Y. Pu, C.H. Liu, W.B. Wang, and R. R. Alfano, " *Diagnostic potential of Stokes Shift Spectroscopy of Breast and Prostate tissues – A preliminary pilot study,*" **Technology in Cancer Research and Treatment**, 10(2), 153-161, 2011. **(Impact Factor: 2.204)**
5. V.K. Unnikrishnan, R. Nayak, R. Bernard, K.J. Priya, A. Patil, **J. Ebenezar**, K.M. Pai, S.D. George, V.B. Kartha, and C. Santhosh, " *Parameter optimization of a laser-induced fluorescence system for in vivo screening of oral cancer,*" **Journal of Laser Applications**, 23(3), 032004-1 -7, 2011. **(Impact Factor: 1.492)**
6. **J. Ebenezar**, P. Aruna, and S. Ganesan, " *Synchronous Fluorescence Spectroscopy for Detection and characterization of Cervical cancer in vitro,*" **Photochemistry and Photobiology**, 86, 77-86, 2010. **(Impact Factor: 2.121)**
7. **J. Ebenezar**, N. Radhakrishnan, and A. John Peter, " *Polaronic excitons in an unstrained GaAs/AlGaAs quantum wire,*" **Physica B**, 405, 3350–3354, 2010. **(Impact Factor: 1.386)**

8. **J. Ebenezar**, N. Radhakrishnan, and A. John Peter, "Acceptor binding energies in a GaMnAs Quantum well," **Journal Computational and Theoretical Nanoscience**, 7, 1-5, 2010. (Impact Factor: 1.343)
9. A. John Peter and **J. Ebenezar**, "Diamagnetic Susceptibility of a Confined Donor in a Quantum Dot with Different Confinements," **Journal of Scientific Research** 1(2), 200-208, 2009. (Impact Factor: 0.46)
10. A.I. Al-Diab, V. Masilamani, R. Kalaivani, K. Sivaji, M. Al-Salhi, F. Habib, A. Al-Sagheir, **J. Ebenezar**, O. Al-Daghri, H. Raja, S.E. Sivanandam, and L. Anand, "Detection of cancer of pancreas by native fluorescence of blood components – A preliminary report," **Emirates Medical Journal** 25(1), 29-38, 2007. (Impact Factor: 0.07)

#### RESEARCH PAPERS PRESENTED IN INTERNATIONAL CONFERENCES

1. **J. Ebenezar**, S. Ganesan, P. Aruna, and R. Muralinaidu, "Noninvasive Diagnosis of Oral Cancer by Stokes Shift Spectroscopy," **Proc. SPIE**, 8940, 89400L-1- 89400L-7, 2014.
2. **J. Ebenezar**, Y. Pu, W.B. Wang, G.C. Tang, C.H. Liu, and R.R. Alfano, "Prostate precancer detection by Stokes shift spectroscopy," **Proc. SPIE**, 7895, 78950H-1-78950H-8, 2011.
3. **J. Ebenezar**, P. Aruna, and S. Ganesan, "Stoke Shift Spectroscopy for Breast cancer Diagnosis," **Proc. SPIE**, 7561,75610B-1- 75610B-10, 2010.
4. P. Aruna, **J. Ebenezar**, and S. Ganesan, "In-vivo characterization of Endogenous porphyrin fluorescence from DMBA treated Swiss albino mice skin carcinogenesis for measuring tissue transformation," **Proc. SPIE**, 4613, 118-124, 2002.
5. P. Aruna, S. Hemamalini, **J. Ebenezar**, and S. Ganesan, "Ultra-violet emission and excitation fluorescence spectroscopic characterization of DMBA treated Swiss albino mice skin carcinogenesis for measuring tissue transformation," **Proc. SPIE**, 4613, 1-7, 2002.
6. N. Vengadesan, T. Anbupalam, S. Hemamalini, **J. Ebenezar**, K. Muthuvelu, D. Koteeswaran, P. Aruna and S. Ganesan, "Characterization of cervical normal and abnormal tissues by synchronous luminescence spectroscopy," **Proc. SPIE**, 4613, 13-17, 2002.
7. **J. Ebenezar**, S. Ganesan, P. Aruna, and R. Muralinaidu, "Noninvasive Diagnosis of Oral Cancer by Stokes Shift Spectroscopy," Optical Biopsy XII **Proc. SPIE**, 8940, 89400L-1-89400L-7, 2014.

#### RESEARCH PAPERS PRESENTED IN NATIONAL CONFERENCES

1. **J. Ebenezar**, S. Ganesan, P. Aruna, and R. Muralinaidu, "Stokes Shift Spectral Discrimination of Normal and Cancerous Cervical Tissues, National Laser Symposium, held at S.V. University, Tirupati, during December 3-6, 2014.
2. **J. Ebenezar**, S. Ganesan, P. Aruna, and R. Muralinaidu, "Fluorescence excitation spectroscopy for the diagnosis of oral Cancer," held at National Laser Symposium, CAT, Indore, during January 8-11, 2014.
3. **J. Ebenezar**, P. Aruna, and S. Ganesan, "Synchronous fluorescence spectroscopic characterization of DMBA induced epithelial precancer in mice," National Laser Symposium, held at CAT, Indore. during, December 5-8, 2006.

4. **J. Ebenezar**, and P. Aruna, "*Optical biopsy of cancer using native fluorescence spectroscopy*," Ph.D Thesis Presentation, National Laser Symposium, held at IIT, Kharagpur, during Dec. 22-24, 2003.
5. **J. Ebenezar**, P. Aruna, T. Anbupalam, R. Muralinaidu, T.R. Saraswathy, and S. Ganesan, "*In situ native fluorescence spectroscopic characterization of Normal, High-risk smokers and Malignant*," National Laser Symposium, held at IIT, Kharagpur, during December 22-24, 2003.
6. **J. Ebenezar**, S. Ganesan, T. Anbupalam, S. Snekalatha, and P. Aruna, "*Optical Characterization of breast tissues by synchronous luminescence spectroscopy using multivariate statistical analysis*," National Laser Symposium, held at Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, during November 14-16, 2002.
7. **J. Ebenezar**, S. Hemamalini, P. Aruna, K. Muthuvelu, and S. Ganesan, "*Characterization of Normal and Cancerous Cervical tissues by FT-IR Spectroscopy*," held at National Laser Symposium, CAT, Indore, during December 19-21, 2001.
8. **J. Ebenezar**, G. Deva Shantha Kumari, P. Aruna, and S. Ganesan, "*Photodynamic activity on Human Erythrocytes by Xanthene Derivatives: Role of Scavengers*," National Laser Symposium, held at LASTEC, Metcalfe House, New Delhi, during on December 13-15, 2000.
9. **J. Ebenezar**, P. Aruna, Simi Pushpan, A. Srinivasan, M. Ravi Kumar, T.K. Chandrasekar, and S. Ganesan, "*Photohemolysis of Human Erythrocytes by S<sub>2</sub>TPPS*," National Laser Symposium, held at University of Hyderabad, during on December 15-17, 1999.

#### BOOK CHAPTER

1. E. Gunasundari, K. Senthilnathan, P. Ramesh Babu, **J. Ebenezar** and K. Nakkeeran, "Supercontinuum Generation in a Silicon Nanowire Embedded Photonic Crystal Fiber for Optical Coherence Tomography Applications," **Springer Proceedings in Physics**, 189, 71-88, 2017. [Springer Publishers]

#### EDITOR OF THE BOOK

Book Title : **Recent Trends in Materials Science and Applications**  
 Book Name : **Springer Proceedings in Physics, Volume 189**  
 Publisher : **Springer**  
 Website Link : <http://www.springer.com/in/book/9783319448893>

#### RESEARCH GUIDENCE

Degree	Completed	Pursuing
M.Sc.	32	02
M.Phil.	30	06
Ph.D.	---	01

#### Research Paper Communicated to International Journal

1. **Ebenezar Jeyasingh**, C. Kelvin Adaikalam, Mohamad S. AlSalhi, G. Vijayaprasath, C. Karthikeyan, and Sandhanasamy Devanesan, "**Structural, Optical, Magnetic properties and Antibacterial activity of Mn doped ZnO nanoparticles prepared by co-precipitation method**," communicated to Journal of Alloys and Compounds.

## HONOURS /AWARDS

- ❖ **Visiting Fellow**, IUSL, City University of Newyork, Newyork, USA, 2010 and 2014.
- ❖ **International Travel Grant**, awarded by Department of Science and Technology (DST), Govt. of India, 2010 and 2014.
- ❖ **Senior Scientist**, Centre for Laser Spectroscopy (CLS), Manipal University, Manipal, 2006.
- ❖ **Postdoctoral Fellow**, Laser Group, King Saud University, Riyadh, Saudi Arabia, 2005.
- ❖ **Junior Research Fellow**, awarded by Department of Science and Technology (DST), Govt. of India, New Delhi, 1999.

## JOURNAL REVIEWER

- ❖ Journal of Biomedical Optics
- ❖ Journal of Biophotonics
- ❖ PLOS One
- ❖ Oral Oncology
- ❖ Technology in Cancer Research and Treatment

## MEMBERSHIP IN SCIENTIFIC SOCIETIES

- ❖ Life Member, Indian Laser Association (ILA)
- ❖ Member, International Society for Optical Engineering (SPIE), USA.

## RECENT ABROAD VISIT

- ❖ Presented a research paper in **Optical Biopsy XII, SPIE, San Francisco, USA, during Feb' 2014.**
- ❖ Presented a research paper in **Optical Biopsy VIII, SPIE, San Francisco, USA, during Jan' 2010.**

## RESEARCH ACTIVITIES

My primary area of interest is in physics principles with basic and translational research. Specifically, I am interested in applying my area of expertise in optical biopsy (OB) of cancer and tumor therapy to better characterize and understand physiological and pathological processes toward the development of diagnostic and therapeutic solutions. To realize these efforts it is my aim to lead and participate in multidisciplinary areas such as Biomedical imaging & diagnostics, Ultrafast Laser Physics, Raman & Fluorescence spectroscopy, and Nano and biomaterials.

The primary focus of my research emphasizes the design, prototyping, and clinical testing of optical biopsy system to detect, diagnose, treat and monitor the molecular signatures of cancers of oral, breast, cervix and skin cancers. This includes: new OB and imaging instrumentation and molecular-specific optical contrast agents; experimental studies into the biophysical origins of measured optical signals; The fundamental basis of our work lies in the fact that optical signals arising from tissue are altered during disease progression, as the source of these signals originates in tissue microstructure and biochemical makeup. Currently, I am working on developing biocompatible nano-particles for combined diagnosis and therapy of cancers or other diseases.

## PERSONAL DETAILS

Name	: Ebenezar
Father's name	: Jeyasingh
Gender	: Male
Nationality	: Indian