

<p align="center">Name:</p> <p align="center">Dr. E. Brindha</p>					
<p>Designation:</p>	Associate Professor				
<p>Qualification:</p>	M.Sc., Ph.D.,				
<p>Area of specialization:</p>	Laser Spectroscopy, Biophotonics, Imaging, Cancer Diagnosis				
<p>Experience:</p>	<p align="center">Industrial Experience</p> <p align="center">-</p>	<p align="center">Postdoctoral Experience</p> <p align="center">-</p>	<p align="center">Teaching Experience</p> <p align="center">7 years 2 months</p>		
<p>Number of workshops / FDP attended:</p>	<p align="center">Number of Workshops</p> <p align="center">3</p>		<p align="center">Number of FDPs</p> <p align="center">10</p>		
<p>Publications:</p>	<p align="center">Conference</p> <p align="center">National</p> <p align="center">3</p>		<p align="center">International</p> <p align="center">1</p>	<p align="center">Journal</p> <p align="center">National</p> <p align="center">-</p> <p align="center">International</p> <p align="center">13</p>	
<p>Books / Book Chapters</p>	-				
<p>Patents:</p>	<p align="center">National</p> <p align="center">3</p>		<p align="center">International</p> <p align="center">-</p>		
<p>Research Guidance</p>	<p align="center">Completed</p> <p align="center">-</p>		<p align="center">Ongoing</p> <p align="center">1</p>		
<p>Professional Body Membership</p>	<ol style="list-style-type: none"> 1. Indian Laser Association (ILA)-Life Time Member 2. Institute of Electrical and Electronics Engineers (IEEE) (Senior member) 				

Research	Google Scholar ID: tjL00AYAAAAJ Researcher ID: AAC-2261-2022 Orcid ID: 0000-0002-7122-6512 Scopus ID: 56626089900 Anna University Guideship: 4170004
Staff Achievements	Research Assistant-BRNS sponsored project "Setting up of laser facility for medical and technological applications" at Anna University, Chennai, India during 2010 – 2013.

Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc.,	Physics	2008	Quaid-E-Millath Government College for Women (Autonomous)	Madras University	80%	First class
PG	M.Sc.,	Physics	2010	Ethiraj college for women (Autonomous)	Madras University	78.1%	First class
Doctorate	Ph.D.	Physics	2016	Anna University	Anna University, Chennai	Highly Commented	

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sairam Engineering College, Chennai	Associate Professor	01.09.2022	Till date	3	6	28
Sri Sairam Engineering College	Assistant Professor	02.12.2020	31.08.2022	1	8	29
Dire Dawa University, Ethiopia	Assistant Professor	09.04.2018	28.02.2020	1	10	19
Total				7	2	14

Workshops/Seminars attended:

1. Indo-Italian Workshop on Molecular Nanophotonics held on 24th – 26th July, 2013, Dept. of Physics, Anna University, Chennai, India.

2. International Workshop on Biomedical Sciences and Technologies (IWMST-2011) held on 2nd - 4 th March 2011, Anna University, Chennai 25, Tamilnadu, India.
3. Workshop on Recent Trends in Medical Physics, sponsored by Board of Research in Nuclear Sciences – DAE, held on 25th – 26th March 2010, Dept. of Physics, Anna University, Chennai 25, Tamilnadu, India.

FDP/STTP Attended:

1. FDP on “Photonics” organized by Central University of Jharkhand from 18-01-2021 to 22-01- 2021.
2. FDP on “Photonics” organized by KKR and KSR Institute of Technology of sciences from 08-02- 2021 to 12-02-2021.
3. FDP on “Energy Storage” organized by KPR Institute of Engineering and Technology from 22- 02-2021 to 26-02-2021.
4. FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 12 July, 2021 to 16 July, 2021. 11.
5. FDP on “Fundamentals of Artificial Intelligence” from 13/09/2021 to 17/09/2021 at College of Technology and Engineering, Udaipur.
6. ATAL FDP on " Photonics & LASER" from 20/09/2021 to 24/09/2021 at M E S COLLEGE OF ENGINEERING, KUTTIPPURAM.
7. ATAL FDP on “Your Signature is your Identity - Exclusive for Women” from 27/12/2021 to 31/12/2021 at National Institute of Technology, Tiruchirapalli.
8. ATAL FDP on “Artificial Intelligence In Contemporary Biomedical & Healthcare Applications: Fundamentals & Hands On MATLAB” from 21/02/2022 to 25/02/2022 at Gautam Buddha University, Greater Noida, U.P.
9. Professional Development Program (PDP) –“INDIAN KNOWLEDGE SYSTEMS” during the period 20-11-2023 24-11-2023, organised by NITTTR, Chennai.
10. Seven-Day National level Interdisciplinary FDP on “Emerging Teaching and Research Through Emerging Technology”,Department of Physics,Ethiraj College for Women,22-26 && 29-30July 2024.
11. Seven-Day International FDP on “Frontiers in Physics from Fundamental to Emerging Technologies”,Department of Physics,Ethiraj College for Women,12th May to 18th May 2025.

Papers presented/participated in International / National Conferences/Symposium:

1. Participated and Presented a paper titled “Optical Characterization of Oral Tissues using High Wavenumber Raman Spectroscopy” in the IEEE Photonics Conference (IPC), held from November 9–13, 2025, in Singapore
2. Participated and Presented a paper titled “NEAR INFRARED RAMAN SPECTROSCOPIC CHARACTERIZATION

OF ORAL TISSUES OF NORMAL SUBJECTS, PREMALIGNANT AND MALIGNANT PATIENTS” in the Internal Conference on Research for Sustainable Development (ICRSD-2024)-organised by St.Joseph’s Arts and Science College, Kovur Chennai on 27 th March 2024.

3. Participated and Presented a paper titled “Raman Spectroscopy: A Novel approach for Cervical Cancer Diagnosis” in the International Virtual Conference on Materials Research (IVCMR-22) held on 15th-16th September 2022,Easwari Engineering College,Chennai.
4. Participated in the 1st Global Web Forum Series on Science &Technology –Raman Spectroscopy and its Applications in Solving Crystal Structure organized by Department of Physics, Surana College Autonomous, Bangalore held on 20th September 2023.
5. Participated and Presented a paper titled “Characterization of Urine of Normal Subjects and Oral Cancer Patients by Raman Spectroscopy” Proc. of 22nd National Laser Symposium, sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy was organised at Manipal Institute of Technology during January 8 to 11, 2014.
6. 18th State Annual Conference on Association of Medical Physicists of India (TN & PY Chapter) – (AMPI TN & PY CON 2013) held on 18th -19th October 2013, Organized by Dept. of Medical Physics,Anna University, Chennai 25, Tamilnadu, India.

Completed / Ongoing Projects:

1. Research Assistant-BRNS sponsored project “Setting up of laser facility for medical and technological applications” at Anna University, Chennai, India during 2010 – 2013.

Program Organized:

1. Organised Guest Lecture Topic “Biomedical Applications of vibrational Spectroscopy” Sri Sai Ram Engineering College, 11th October 2021.
2. One day National level Internship Program to Explore New Research Insights, Sri Sai Ram Engineering College, 24th August 2023.
3. Organised Student’s visit to Bio-Photonics Laboratory, Anna university,Chennai, 23rd February 2024.
4. Research Internship Training Program organized by Functional Materials Research Laboratory, Department of Physics, Sri Sairam Engineering College between 2.05.2024-16.05.2.24

Resource Person:

1. Resource person for a National Science day event and delivered the talk on From Light to Life, The Past, Present and Future of Optical Cancer Diagnosis, in Sri Muthukumaran Arts and Science College,Mangadu, Chennai.
2. Resource person for the Faculty Development Programme on the topic of "From Light to Insight: The Role of Lasers in Modern Diagnostics" organized by the Department of Physics with Computer

Applications, St. Joseph's College (Arts & Science), Kovur, Chennai which was held on 05h August 2025.

3. Career Guidance Program on "Mapping your Journey to Professional Growth" organized by Department of Physics with Computer Applications, St. Joseph's Arts and Science College, Kovur, Chennai on - 05-03-25
4. Career Program on Career Prospects in Physics, organized by PG department of Physics, Ethiraj College for Women, Chennai, on 17.12.2024
5. Guest lecture on "Vibrational Spectroscopy & its applications in Medical diagnosis" organized by St. Joseph's Arts and Science College, Kovur, Chennai on 12-01-2023

Patents:

1. Development of multilayered graphene nanostructures for selective gas sensing in hazardous environments, Dr. Neeraj Mohan Gupta, Dr. Pranjit Kumar Bhuyan, Dr. Nellore Manoj Kumar, Dr. R. Rajasekaran, Dr. E. Brindha, Dr. M. Kalyana Raju.
2. High-Resolution Mass Spectrometry System for Rapid and Accurate Protein Identification in Complex Biological Samples. Dr. M. Rajeshwari 2. Dr. R. Rajasekaran 3. Dr. E. Brindha 4. Dr. Nellore Manoj Kumar
3. Nanotechnology based biosensor array for multiplexed detection of biomarkers in cancer diagnosis, Mrs. Arinapalli Santhi Latha, Dr. E. Brindha, Dr. R. Rajasekaran, Dr. Nellore Manoj Kumar, Dr. K. Sundaresan, Dr. J.A. Baskar, Dr. Subash Chandra Sahu

Journal Publications:

1. "A comprehensive review on the effect of synthesis, doping, and composites on bismuth ferrite properties and applications", Priya A.S, Henry J, Indhumathi R, Brindha E, Aepuru R, Ceramics International, Volume 51, Year 2025, Pages 29877-29908. DOI:10.1016/j.ceramint.2025.04.298
2. "Optical Characterization of Oral Tissues using High Wavenumber Raman Spectroscopy", Elumalai Brindha, Ramu Rajasekaran, Malini Madhavan, Ganesan Bharanidharan, Prakasarao Aruna, Singaravelu Ganesan, 10.1109/IPC65510.2025.11282340, ISSN: 2575-274X, IEEE IPC proceedings 2025.
3. "Emerging silver-doped strontium titanate nanostructures as photocatalysts for the degradation of organic pollutants under visible light", Shanmugam M, C Jayashree, Rajasekaran R, Brindha E, Saeedah M A, Govind Raj M, J Kim, Abinaya S, Senthil B, Atchudan R, J. of Molecular Structure, Volume 1306, Year 2024, Pages 137854 DOI: <https://doi.org/10.1016/j.molstruc.2024.137854>.
4. Raman and Fluorescence spectroscopic characterization of Pteridines in the blood of normal subjects and oral cancer patients, Elumalai Brindha, Ramu Rajasekaran, Ganesan Bharanidharan, Biniyam Girma Manaye, Prakasarao Aruna, Singaravelu Ganesan, SPIE-Optical Biopsy XXII: Toward Real-Time Spectroscopic Imaging and Diagnosis, Volume 12836, Year 2024.
5. Optical characterization of riboflavin as a potential biomarker in the diagnosis of cervical cancer, Ramu

Rajasekaran, Elumalai Brindha, Ganesan Bharanidharan, Biniyam Girma Manaye, Prakasarao Aruna, Singaravelu Ganesan, SPIE-Optical Biopsy XXII: Toward Real-Time Spectroscopic Imaging and Diagnosis, Volume 128360H, Year 2024, DOI:10.1117/12.3010046.

6. Brindha Elumalai, Prakasa Rao Aruna, Bharanidharan Ganesan, Dornadula Koteeswaran & Singaravelu Ganesan, 'Raman spectroscopic characterization of urine of normal and oral cancer subjects', Journal of Raman Spectroscopy, 2015, vol. 46, no.1, pp. 84–93.
7. Pachaiappan Rekha, Prakasarao Aruna, Elumalai Brindha, Dornadula Koteeswaran, Munusamy Baludavid, Singaravelu Ganesan "Near-infrared Raman spectroscopic characterization of salivary metabolites in the discrimination of normal from oral premalignant and malignant conditions" Journal of Raman Spectroscopy, 2016, DOI: 10.1002/jrs.4897.
8. Elumalai Brindha, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran and Singaravelu Ganesan, "Highwavenumber Raman Spectroscopy in the characterization of urinary metabolites of Normal subjects, Oral Premalignant and Malignant Patients", Spectrochimica Acta. Part A, 2016 - doi:10.1016/j.saa.2016.06.048.
9. Brindha Elumalai, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran & Singaravelu Ganesan, 'Discrimination of Premalignant conditions of oral cancer using Raman Spectroscopy of urinary metabolites', SPIE Proc. 2015, vol. 9318, pp. 93180J1-7.
10. Brindha Elumalai, Ramu Rajasekaran, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, "Raman spectroscopy of Bio Fluids : An exploratory study for oral cancer detection", SPIE Proc. 2016, Vol. 97031T, DOI: 10.1117/12.2212684.
11. Ramu Rajasekaran, Brindha Elumalai, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, "Fluorescence anisotropy characterization of urine in the diagnosis of cancer", SPIE Proc. 2016, Vol. 97031P, DOI: 10.1117/12.2212618.
12. Ramu Rajasekaran, Brindha Elumalai, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, "The effect of Stokes Shift in the discrimination of cervical cancer from normal subjects", SPIE Proc. 2016, Vol. 97031Q, DOI: 10.1117/12.2212618.

Awards:

1. Research Assistant-BRNS sponsored project "Setting up of laser facility for medical and technological applications" at Anna University, Chennai, India during 2010 – 2013.

Online Courses:

1. NITTTR-Module 1
2. NITTTR-Module 2
3. NITTTR-Module 3
4. NITTTR-Module 5

5. NITTTR-Module 7
6. NITTTR-Module 8
7. NPTEL- Theory of Non-destructive testing (8 weeks course)
8. NPTEL –Nanobiophotonics:Touching our daily life (12 weeks course)
9. NPTEL-Accreditation and Outcome Based Learning (8 weeks course)
10. NPTEL-Biomedical Instrumentation (12 weeks course)
11. NPTEL –Biophotonics (12 weeks course)
12. NPTEL –Basics of Fluorescence Spectroscopy (12 weeks course)
13. Completed the Professional Development Program (PDP) –“INDIAN KNOWLEDGE SYSTEMS” during the period 20-11-2023 to 24-11-2023, organised by NITTTR, Chennai.
14. Completed the Professional Development Program (PDP) –“Innovative Approaches in Teaching & Learning” during the period 22-07-2024 to 26-07-2024, organised by NITTTR, Chennai.
15. Completed the Professional Development Program (PDP) –“Data Mining Techniques” during the period 19-01-2026 to 23-01-2026, organised by NITTTR, Chennai.

Webinar:

1. Participated in the 1st Global Web Forum Series on Science & Technology – 2023-24 titled “Raman Spectroscopy and its Applications in Solving Crystal Structure”organized by Department of Physics, Surana College Autonomous, Bangalore held on 20th September 2023.