



# Sri SAI RAM INSTITUTE OF TECHNOLOGY

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Sai Leo Nagar, West Tambaram, Chennai - 44. [www.sairamit.edu.in](http://www.sairamit.edu.in)

## DEPARTMENT OF PHYSICS

Name : Dr. R. Rajasekaran  
 Designation : Assistant Professor  
 Email : [rajasekaran.phy@sairam.edu.in](mailto:rajasekaran.phy@sairam.edu.in)  
 Qualification : M.Sc., B.Ed., Ph.D  
 Specialization : Optical Spectroscopy, Biophotonics,  
 Photodynamic Therapy



Research Interest : Optical Spectroscopy, Biophotonics, Nano Medicine

Experience in years : **Teaching** UG  PG  **Industry**

No. of Workshop/Conferences/  
 FDP attended : Workshop  Conferences  FDP

No. of Workshop/Conferences/  
 FDP Organized : Workshop  Conferences  FDP

Professional Membership	IEEE, NLS
Publications	National: <b>1</b>
	International: Journal: <b>10</b> , Conference Proc.: <b>6</b>
	Book:-
Research Funded Projects	
Patents	

Achievements	<ol style="list-style-type: none"> <li>1. Received CAPES fellowship for one year from Govt. of Brazil for doing Post Doctoral Research</li> <li>2. Delivered Invited talk at SPIE Photonics West 2017 – San Francisco USA</li> </ol>
Any Other Information	<ol style="list-style-type: none"> <li>1. Reviewer for various Scopus Indexed Journals</li> <li>2. Anna University recognized supervisor for guiding Ph.D &amp; M.S(By Research)</li> </ol>

## List of Publications:-

### Papers in International Journals

1. **Ramu Rajasekaran**, Prakasa Rao Aruna, Dornadula Koteeswaran, Loganathan Padmanabhan, Kulandaivel Muthuvelu, Ram Rathan Rai, Palraj Thamilkumar, Chilakapati Murali Krishna, Singaravelu Ganesan, “Characterization and Diagnosis of Cancer by Native Fluorescence Spectroscopy of Human Urine”, **J. Photochem. and Photobiol.**, 2013, 89: 483–491.
2. **Ramu Rajasekaran**, Prakasa Rao Aruna, Dornadula Koteeswaran, Ganesan Bharanidharan, Munusamy Baludavid and Singaravelu Ganesan, “Steady-state and time-resolved fluorescence spectroscopic characterization of urine of healthy subjects and cervical cancer patients”, **J. Biomed. Opt.**, 2014, 19(3), 037003-9.
3. **Ramu Rajasekaran**, Prakasarao Aruna, Dornadula Koteeswaran, Munusamy Baludavid, Singaravelu Ganesan, “Synchronous luminescence spectroscopic characterization of urine of normal subjects and cancer patients” **J. of Fluoresc.**, 2014, 24, 1199-1205.
4. Niranzena PA, Jayachandran S, Ganesan S, **Rajasekaran R**, “Treatment of oral leukoplakia with photodynamic therapy – a pilot study”, **J. Can. Res. & Therapeutics**, 2015, 11(2), 464-467
5. Everton Diniz dos Santos, Gerson Luqueta, **Ramu Rajasekaran**, Thaisa Baesso dos 6 Santos, Anelise Cristina Osorio Cesar Doria , Polyana Alves Radi, Rodrigo Savio Pessoa, Lucia Vieira, Homero Santiago Maciel, “Macrophages Adhesion Rate On Ti-6al-4v Substrates: Polishing 3 And Dlc Coating Effects” **Res. Biomed. Eng.** - 2016 – 32(2), 144 – 152.
6. Claudio A. Tellez S., Liliane Pereira, Laurita dos Santos, **Ramu Rajasekaran**, Priscila Favero, Airton A. Martin, “DFT:B3LYP/3-21G theoretical insights on the Confocal Raman experimental observations in skin dermis of healthy young, healthy elderly and diabetic elderly women”, **J. Biomed. Opt.** - 2016 – 21 (12), 125002.
7. 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**, 2017 – 171, 52-59.

8. Monica Bergamo Lopes, **Ramu Rajasekaran**, Ana Clara Figueira Lopes Cançado, Airton Abrahão Martin, “*In vivo* Confocal Raman Spectroscopic Analysis of the Effects of IR Radiation in the Human Skin Dermis” – **Photochemistry and Photobiology** – 2017 – 93 (2), 613 – 618.
9. Luis Felipe Carvalho, Marcelo Saito Nogueira, TanmoyBhattacharjee, LázaroNeto, Lucas Daun, Thiago Mendes, **Ramu Rajasekaran**, Maurílio Chagas, Airton Martin and Luis Eduardo Soares, “*In vivo* Raman spectroscopic characteristics of different sites of the oral mucosa in healthy volunteers” – **J. Clin. Oral Investigation**, 2018, 23(7), 3021-3031.
10. Medeiros-Neto, L.P., Tellez Soto, C.A.; Chagas, M.J., Carvalho, L.F.C., **Rajasekaran, R.**, Martin, A.A., “*In Vivo* Raman Spectroscopic Characterization Of Papillary Thyroid Carcinoma” – **J. Vibrational Spectroscopy**, 2019, 101(0), 1-9.
11. Gerson R Luqueta; Julia M Abdala; **Rajasekaran Ramu**; Elisa Esposito; Erico Teixeira; Leandro B Rezende; Lucia Vieira; Homero S Maciel; Milton Beltrame, “Antimicrobial silver coating using PVD-PECVD system”, **Indian J. of Fibre & Textile Research**, 2020, 45(2), 197-206.

### **Papers in International Conference / Proceedings:**

1. **Ramu Rajasekaran**, Prakasa Rao Aruna, Munusamy Balu David, Dornadula Koteeswaran, Kulandaivel Muthuvelu, Rai R, Singaravelu Ganesan, “Steady state and time-resolved fluorescence spectroscopic characterization of normal and cancerous urine”, **SPIE Proc.** 2013, Vol. 8577, DOI: 10.1117/12.2006086
2. **R. Rajasekaran**, E. Brindha, P. Aruna, S. Ganesan, “Fluorescence Emission Spectroscopic Characterization of Urine of Normal Subjects and Breast Cancer Patients”, **OSA Optical Infobase**, 2014.
3. 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, DOI: 10.1117/12.2078029.
4. E. Brindha, **R. Rajasekaran**, L. Pereira, P. Aruna, D. Koteeswaran, A. A. Martin, S. Ganesan, “Raman Spectroscopy of Human Urine in the Diagnosis of Cervical Cancer”, **Proc. of EnBraER**, 2015, Brazil.
5. **Ramu Rajasekaran**, Brindha Elumalai, Prakasarao Aruna, Dornadula Koteeswaran, Singaravelu Ganesan, “Fluorescence anisotropy characterization of urine in the diagnosis of cancer”, **SPIE Proc.** 2016, Vol. 9703, doi: [10.1117/12.2212618](https://doi.org/10.1117/12.2212618).
6. **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 9703, doi:[10.1117/12.2213178](https://doi.org/10.1117/12.2213178).
7. 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 9703, doi: [10.1117/12.2212684](https://doi.org/10.1117/12.2212684).

## Workshop / Conferences / FDP Attended:-

### Conferences:

<b>S.No</b>	<b>Conference on</b>	<b>Held on</b>	<b>Place</b>
1.	<b>SPIE – Photonics West</b>	28.01.2017 – 2.02.2017	San Francisco, USA
2.	<b>SPIE – Photonics West</b>	13.02.2016 - 18.02.2016	San Francisco, USA
3.	<b>EnBraER</b>	6.12.2015 – 9.12.2015	Juiz de Fora, MG, Brazil
4.	<b>Photonics</b>	13.12.2014 – 16.12.2014	IIT, Kharagpur
5.	<b>DAE – BRNS – NLS - 21</b>	8.01.2014 – 11.01.2014	Manipal, Karnataka
6.	<b>DAE – BRNS – NLS - 22</b>	6.02.2013 – 09.02.2013	BARC, Mumbai