




## Sri Sai Ram Engineering College

### Department Of Humanities And Sciences

Name : <b>Dr. T. K. SUBRAMANIAM</b>	
Designation :	Professor of Physics
Qualification :	M.Sc., Ph.D.,
Area of Specialisation	Laser Spectroscopy (Physics)
Experience :	Teaching : UG : 26 yrs 8 months  PG : Nil
	Industry : 06 yrs
No. of Workshop / Conferences / FDP attended	16
Publication :	Journals
	<div style="text-align: right;">National : 01</div> <div style="text-align: right;">International : 21</div>

	<p>Conference</p> <p>National : 09</p> <p>International : 06</p> <p>Workshops</p> <p>National : 08</p> <p>International : 02</p> <p>Guest lecture arranged : 01</p> <p>Resource person</p> <p>National : 01</p> <p>FDP attended</p> <p>National : 11</p> <p>Journal Editor: 2</p>
Research Guidance :	Nil
General :	Peer-Reviewer_Optica,USA and MDPI,China.

Staff Achievements	<p>(i) <b>Member of Board of Studies</b> of our college to design, develop and framework of new syllabus for the 'autonomous' institution, beginning from academic year, 2020.</p> <p>(ii) <b>Formerly, faculty member of the IQAC-</b>internal Quality Assurance Cell, of our college.</p> <p>(iii) <b>Formerly, faculty member of the NAAC-</b>National Assessment and Accreditation Council for our college.</p> <p>(iv) <b>Faculty ISO –Coordinator</b> for our department of Humanities and Sciences(H&amp;S)</p> <p>(v) Served as anonymous Peer-Reviewer for Optical Society of America (OSA), USA. And Applied Optics, (OSA) USA.</p> <p>(vi) Achieved centum pass percentage results (100%) for several batches of students beginning from 2007-2020.</p> <p>(vii) Achieved 100% pass percentage for both the sections allotted, for both the semesters for the year 2013-2014, 2020-2021.</p> <ul style="list-style-type: none"> <li>● <b>Invited talk –paper presentation at the 8<sup>th</sup> International Conference on Lasers, Optics and Photonics during November 15<sup>th</sup>-17<sup>th</sup>, 2017 at Las Vegas, USA.</b></li> <li>● <b>Presented a Paper at the Third International Work Shop on Infrared Technologies at Olching, Germany during Nov – 7 &amp; 8, 2016.</b></li> <li>● <b>Served as Chief Superintendent of Anna University Exams in the college for more than 8 years continuously.</b></li> </ul>
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	<ul style="list-style-type: none"> <li>• <b>Served as Chairman, Physics Board at Anna University Central valuation Centers for more than 7 years continuously.</b></li> <li>• Gave an <b>Invited Talk</b> on Laser applications in Mechanical Engineering at Mohd. Sathak College of Engineering, Chennai, during the month of January 2017. <b>(Resource person)</b></li> <li>• Chaired a Technical Paper presentation session in International Conference ICMFM 2021, at SEC, Chennai during 24<sup>th</sup> and 25<sup>th</sup> June.</li> <li>• Editor of Conference Proceedings in American Institute of Physics (AIP), USA.</li> </ul>
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### Educational Qualification:

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	1979	Vivekananda College, Chennai.	Madras University	67.5%	I
PG	M.Sc.,	Physics	1982	University of Roorkee, Roorkee.	University of Roorkee	60%	I
Ph.D.	PhD	Laser Spectroscopy	2004	Banaras Hindu University, Varanasi.	Banaras Hindu University	PhD Degree awarded	PhD Degree awarded

### Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sai Ram Engineering College	Professor	01.01.2009	Till date	13	9	3
Sri Sai Ram Engineering College	Asst. Professor	05.05.2006	31.12.2008	2	7	27
AVIT, Chennai	Asst. Professor	01.02.2006	30.04.2006	-	2	28
Rajalakshmi Engineering College	Senior Lecturer & H.O.D	01.06.2001	31.12.2005	4	6	30
Sri Sankara Arts & Science College	Lecturer	01.06.1998	31.05.2001	2	11	30
Alpha Arts & Science College	Lecturer	01.06.1996	31.05.1998	1	11	30
<b>Total</b>				<b>26</b>	<b>03</b>	<b>28</b>

## PUBLICATIONS

### Journals:

#### 2022

**Editors:** Dr.N.Sivakumar and Dr.T.K.Subramaniam  
 Proceedings of First International Conference on Modern Functional Materials  
 (ICMFM 2021) ISBN : 978-0-7354-4340-2 ,Volume  
 2464, Published May 26, 2022

#### 2019

1. **Characterization studies for the nanoparticle fullerene and polyvinyl alcohol compound Published: 7 Dec 2019 | Version 1 | DOI: 10.17632/kp9yhwf6pw.1 [Mendeley Data]**

#### 2018

2. **Journal of Lasers, Optics and Photonics**, "Non-Linear Optical Properties of Nano Particle C<sub>60</sub> fullerene using Lasers", Vol.5, Issue 2, June 2018. doi: 10.4172/2469-410X.1000182.
3. **Journal of Lasers, Optics and Photonics**, "Laser Technology to Guide Rainfall to a Particular Region", in Volume 5, Issue 1 and ISSN: 2469-410X, pp1-2, 2018. doi:1.4173/2469-410X.1000173.

## 2016

4. **AASCIT Communications**, "Ultra Cold Atoms Using Laser Light", Volume 3, Issue 3, ISSN: 2375-3803, February 2016, pp125-131.
5. **AASCIT Communications**, "Fiber Bragg Grating for Producing Ultra Short Femto second Pulses for Data Transmission", Volume 2, Issue 6 January, 2016, ISSN: 2375-3803, pp332-335.

## 2015

6. **International Journal of Wireless Communications Networking and Mobile Computing**, "Erbium Doped Phase Matched Pulses using Fiber Ring Laser usable in Microwave Photonic Applications", Vol.2, No.3, 2015, pp 33-36.
7. **American Journal of Environmental Engineering and Science**, A Device to Harness the Power of the Tides and Waves off Every Coast 2015; Vol.2 (6): October 2015, ISSN: 2381-1153 (Print), pp74-77.
8. **AASCIT Communications**, "Dark Matter: An Enigma of Our Universe" Volume 2, Issue 6, September 2015, ISSN: 2375-3803, pp268-270.
9. **American Journal of Optics and Photonics**, "Erbium Doped Fiber Lasers for Long Distance Communication Using Network of Fiber Optics", Vol. 3(3), August 9, 2015, pp34-37.
10. **AASCIT Journal of Physics**, "Analysis of Internal Combustion Engines Using Laser Induced Fluorescence Spectroscopy", Vol.1 (4), July 2015, pp288-291.
11. **AASCIT Journal of Nanoscience**, "Nanoscale Patterning Using UV Light Pulsed Laser", Vol.1 (2) June, 2015, pp26-28.
12. **AASCIT Journal of Environment**, "Roadside Monitoring of Automobile Exhaust Gas Emission Using Tunable Diode Laser Absorption Spectroscopy" Vol. 1(2), April, 2015, pp16-20.
13. **AASCIT Journal of Environment**, "Quantum Cascade Laser in Atmospheric Trace Gas Analysis", Vol.1 (1), April, 2015, pp1-4.

14. **AASCIT Journal of Physics**, "Dielectric Loss Studies and Electronic Properties of Mandelic Acid", Vol.1 (1), March, 2015, pp6-10.

**2014**

15. **SSEC- Tech Journal**, (ISSN 0975-2846) "Heterodyne spectroscopy to study methane, its isotopes and trace gas analysis using near and mid infrared ranging spectro-radiometer", Vol.11, 2014, pp 18-22.

**2013**

16. **Procedia-Social and Behavioral Sciences-Science Direct**, "Innovative use of technology for content development and classroom use", Vol.93, 2013, pp 2224-2226.

**2012**

17. **International Journal of Science and Engineering Research, (IJSER), USA**, "Theoretical studies on Chirality of Graphene", Vol.5, 2012.

**2005**

18. **Indian Journal of Physics (B)**, "Opto galvanic transitions in lutetium in the 570-630 nm region", Vol.79, (4), 2005, pp 381-384.  
[www.iacs.res.in/ijp/ijp\\_april\\_05\\_abstract.pdf](http://www.iacs.res.in/ijp/ijp_april_05_abstract.pdf).

**2003**

19. **Indian Journal of Physics (B)**, "Spectroscopic studies of molecular bands of HgCl: identification of  $B^2\Sigma^+ \leftarrow X^2\Sigma^+$  transition ", Vol.77B, (5), 2003 pp 537-543.  
[www.iacs.res.in/ijp/ijp\\_october\\_03\\_abstract.pdf](http://www.iacs.res.in/ijp/ijp_october_03_abstract.pdf).

**1996**

20. **Advances in Plasma Science and Technology** Laser Opto galvanic Studies of Discharge Plasma, Allied Publishers, 175, 1996.

**1994**

21. **Applied Spectroscopy, USA**, "Opto galvanic spectrum of Aluminium", Vol.48, 1994, pp 160-163. <http://www.opticsinfobase.org/as/abstract.cfm?URI=as-48-1-160> 5.

**1992**

22. **Asian Journal of Physics**, "Laser Opto galvanic spectrum of xenon in the 570-630 nm region", Vol.1, No.3, 1992, 138-142.

**Conferences/Seminars/Webinars:**



1. Participated in one-day webinar on “Awareness Meet on Material Science with Ion Accelerator”, organized by UGC-DAE consortium for scientific research, Kalpakkam, node, India on July 19<sup>th</sup>, 2022.
2. Participated and chaired a technical session in the International Conference on Modern Functional Materials (ICFM), June 24 to 25<sup>th</sup>, 2021.
3. Convener of one-day seminar on “Implementation of National Education Policy 2020”, (NEP 2020), on 19.3.2021, at SSR Hall, SEC campus, Chennai-44.
4. Attended a five-day International Conference (online) on “Imaging and Applied Optics Congress” from 22<sup>nd</sup> June to 26<sup>th</sup> June 2020, OSA, USA.
5. Attended a five-day International Conference (online) on “Optical Sensors and Sensing Congress” from June 22<sup>nd</sup> to June 26<sup>th</sup> 2020, OSA, USA.
6. **“Invited Talk” and paper presentation, titled “Laser Technology to Guide Rainfall to a Particular Region”, at the 8<sup>th</sup> International Conference on Lasers, Optics and Photonics” during November 15<sup>th</sup>-17<sup>th</sup>, 2017, at Las Vegas, USA.**
7. International Conference on Mechanical, Materials and Manufacturing systems, ICMMS’16; Venue: SEC, Chennai; dates: February 24<sup>th</sup> and 25<sup>th</sup>, 2016.
8. Convener, SAIHUMSA, 20th March, 2014. Venue: SEC, Chennai
9. CSIR sponsored one-day National Seminar on Recent Trends in Laser Spectroscopy and its applications, 17<sup>th</sup> October 2013.
10. National Conference in Molecular Spectroscopy and its applications, 2011.
11. National Conference on Advances in Material Sciences, NCAMS-2008, Organized by Dept. of Physics, Crescent Engineering College, Chennai; Dates: 22<sup>nd</sup> and 23<sup>rd</sup> December 2008.
12. National Conference on Recent Advances in Molecular Structure, NCMS-2007, (Co-sponsored by CSIR, TNSCST, NCSTC and ISPA), organized by the Dept. of Physics, AVIT, Paiyanoor, and Chennai; Dates: 19<sup>th</sup> and 20<sup>th</sup> July 2007.
13. International Conference in MEMS and SMART applications, Chennai, 2005.
14. National Symposium on Atomic, Molecular Structure, Interactions and Laser Spectroscopy, (NSAMSILS-2004), organized by the Dept. of Physics, BHU, Varanasi, India; Dates: March 14<sup>th</sup> and 15<sup>th</sup>, 2004; (Paper Presentation)
15. National Laser Symposium, organized by DAE, Govt. of India, at Instruments and Development Establishment, Dehradun, India; Dates: February 10<sup>th</sup> to 14<sup>th</sup>, 1995.

16. National Laser Symposium, organized by National Laser Programme, DAE, Govt.of India; Venue: IIT, Chennai; Dates: 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> February 1993.

17. National Conference in Photonic applications with lasers, Nainital, 1992.

### **Workshops:**

1. Attended a series of eight lectures on “Innovation” conducted by Ministry of Higher Education, (MHRD), Government of India, through online mode from April to May, 2020.
2. **“Invited Talk” paper presentation at the 3<sup>rd</sup> International Workshop on Infrared Technologies at Olching, Germany during November 7<sup>th</sup>-8<sup>th</sup>, 2016.**
3. National Level Workshop on “Revealing the Advances in Material Science”; Venue: SIT, Chennai; Dates: 19<sup>th</sup> and 20<sup>th</sup> July 2016.
4. National Level Workshop on “Laser and Photonics “organized by the Dept. of Physics and the Dept.of ECE, in association with IEEE; Venue: Saveetha Engineering College, Chennai; Date: 5th march, 2015.
5. International Workshop on “Advances in Photonics and Optical Materials”; Venue: SSN Engineering College, Chennai; Dates: 9<sup>th</sup> to 11<sup>th</sup> February, 2012.
6. Workshop on Application of Metal Nano particles, organized by the Dept. of Chemical Engineering, SSN Engineering College, Chennai; Dates: March 11<sup>th</sup>, 2011.
7. Annual Photonics Workshop. Organized by International School of Photonics and Centre of Excellence in lasers and Optoelectronic Sciences,(CUSAT),Cochin, Kerala; Dates: 27<sup>th</sup> and 28<sup>th</sup> February, 2005.
8. Atomic and Molecular applications using lasers, 2002.
9. Workshop on Advanced Laser Spectroscopy, IIT, Kanpur, Date: February 25<sup>th</sup>, 1995. (Poster presentation-Title: Optogalvanic Spectrum of Aluminum”)
10. Staff Training College on lasers and its applications, BHU, Varanasi, 1995.
11. **Guest Lecture arranged:** Organized a Guest Lecture Series for the SaiHumsa-2014 by inviting Prof.Dr.C.Vijayan, Dept. of Physics, IIT, Chennai-36, on the 28<sup>th</sup> August 2014.

### **FDP:**

(Note: Kindly arrange so that the latest Program attended is listed first)

1. FDP program on inculcating “Universal Human Values”, conducted by AICTE from July 26<sup>th</sup> to July 30<sup>th</sup>, 2021.
2. FDP program on “Materials Characterization” at Sairam Institute of Technology, during 20<sup>th</sup> and 21<sup>st</sup> July 2017.
3. FDP program on “Cloud Computing” organized by the Dept. of Information technology at SEC, Chennai; Date: 5<sup>th</sup> May 2014.
4. AICTE sponsored staff development programme on “Recent Development in Computing” organized by Dept. of Computer Science and Engineering, SEC; Venue: SEC, Chennai; April 2010
5. Anna University, Chennai, FDP program in Physics, January 17<sup>th</sup>-22<sup>nd</sup>, 2005.
6. Anna University, Chennai, FDP program in Physics, 2002.

### **Coursera-online courses**

- Total number of courses studied and certificates issued: 21 courses and 21 certificates obtained.
- Highlight of Coursera Courses: **GOOGLE certified** three-courses continuously on Computer Networking.

### **EdX –Online courses:**

- Completed a course work on “**Climate-Energy Challenge**”, conducted by **Harvard University EdX-Online series, USA.**

### **NPTEL**

**Fundamentals of Spectroscopy- Certificate issued.**

**Analytical Chemistry –Silver Category-Certificate issued.**

### **OSA (Optical Society of America), USA sponsored -Short Course.**

Attended a one-day short course at BIEC (Bangalore International Exhibition Center), Bangalore on the 23<sup>rd</sup> September 2014, on the following topics: (i) Nano photonics-design, fabrication and characterization given by Prof.Dr.Joesph.W.Haus, University of Dayton, USA and (ii) Packaging of Optoelectronic Components given by Dr.Andreas Rose, CEO/CTO Photonics Research Corporation, USA.

**Peer-Reviewer:**

1. JOSA-A, USA (Optical Society of America) (WoS)
2. JOSA-B, USA (Optical Society of America) (WoS)
3. Applied Optics, USA. (Optical Society of America).(WoS)
4. Journal of Photonics, MDPI, China (Web of Science) (WoS)

**Text-Book Published**

1. **“Engineering Physics”** (As per Anna University Regulations 2017 syllabus) by D.K.Bhattacharya, Poonam Tandon and T.K.Subramaniam published under **Oxford University Press**, India.  
[ISBN 0-19-948463-5].
  2. **“Engineering Physics”**(As per Anna University –Regulations 2002 syllabus), by Selladurai, L.Sudha and T.K.Subramaniam by DD Publications, Chennai, in the year 2002.
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