


Sri Sai Ram Engineering College
Department Of Humanities And Sciences

Name : Dr. T. K. SUBRAMANIAM	
Designation :	Professor of Physics
Qualification :	M.Sc., Ph.D.,
Area of Specialisation	Laser Spectroscopy (Physics)
Experience :	Teaching : UG : 25 yrs 8 months PG : Nil Industry : 06 yrs
No. of Workshop / Conferences / FDP attended	15
Publication :	Journals National : 01 International : 21
	Conference National : 09 International : 05 Workshops National : 08 International : 02 Guest lecture arranged : 01 Resource person National : 01 FDP attended National : 10
Research Guidance :	Nil
General :	Nil

Staff Achievements	<p>(i) Member of Board of Studies of our college to design, develop and framework of new syllabus for the 'autonomous' institution, beginning from academic year, 2020.</p> <p>(ii) Formerly, faculty member of the IQAC-internal Quality Assurance Cell, of our college.</p> <p>(iii) Formerly, faculty member of the NAAC-National Assessment and Accreditation Council for our college.</p> <p>(iv) Faculty ISO –Coordinator for our department of Humanities and Sciences(H&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"> ● Invited talk –paper presentation at the 8th International Conference on Lasers, Optics and Photonics during November 15th-17th, 2017 at Las Vegas, USA. ● Presented a Paper at the Third International Work Shop on Infrared Technologies at Olching, Germany during Nov – 7 & 8, 2016. ● Served as Chief Superintendent of Anna University Exams in the college for more than 8 years continuously. ● Served as Chairman, Physics Board at Anna University Central valuation Centers for more than 7 years continuously. ● Gave an Invited Talk on Laser applications in Mechanical Engineering at Mohd. Sathak College of Engineering, Chennai, during the month of January 2017.(Resource person) ● Chaired a Technical Paper presentation session in International Conference ICMFM 2021, at SEC, Chennai during 24th and 25th June.
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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	2	27
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
Total				25	8	22

PUBLICATIONS

Journals:

2019

1. **Characterization studies for the nanoparticle fullerene and polyvinyl alcohol compound** Published: 7 Dec 2019 | Version 1 | DOI: 10.17632/kp9yhwhf6pw.1 [Mendeley Data]

2018

2. **Journal of Lasers, Optics and Photonics**, “Non-Linear Optical Properties of Nano Particle C₆₀ 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.

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.

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:

1. Participated and chaired a technical session in the International Conference on Modern Functional Materials (ICFM), June 24 to 25th, 2021.
2. 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.
3. Attended a five-day International Conference (online) on "Imaging and Applied Optics Congress" from 22nd June to 26th June 2020, OSA, USA.
4. Attended a five-day International Conference (online) on "Optical Sensors and Sensing Congress" from June 22nd to June 26th 2020, OSA, USA.
5. **"Invited Talk" and paper presentation, titled "Laser Technology to Guide Rainfall to a Particular Region", at the 8th International Conference on Lasers, Optics and Photonics" during November 15th-17th, 2017, at Las Vegas, USA.**
6. International Conference on Mechanical, Materials and Manufacturing systems, ICMMMS'16; Venue: SEC, Chennai; dates: February 24th and 25th, 2016.
7. Convener, SAIHUMSA, 20th March, 2014. Venue: SEC, Chennai
8. CSIR sponsored one-day National Seminar on Recent Trends in Laser Spectroscopy and its applications, 17th October 2013.
9. National Conference in Molecular Spectroscopy and its applications, 2011.
10. National Conference on Advances in Material Sciences, NCAMS-2008, Organized by Dept. of Physics, Crescent Engineering College, Chennai; Dates: 22nd and 23rd December 2008.
11. 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: 19th and 20th July 2007.
12. International Conference in MEMS and SMART applications, Chennai, 2005.

13. National Symposium on Atomic, Molecular Structure, Interactions and Laser Spectroscopy,(NSAMSILS-2004), organized by the Dept.of Physics, BHU, Varanasi, India; Dates: March 14th and 15th, 2004;(Paper Presentation)
14. National Laser Symposium, organized by DAE, Govt.of India, at Instruments and Development Establishment, Dehradun, India; Dates: February 10th to 14th, 1995.
15. National Laser Symposium, organized by National Laser Programme, DAE, Govt.of India; Venue: IIT, Chennai; Dates: 17th, 18th and 19th February 1993.
16. 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 3rd International Workshop on Infrared Technologies at Olching, Germany during November 7th-8th, 2016.**
3. National Level Workshop on “Revealing the Advances in Material Science”; Venue: SIT, Chennai; Dates: 19th and 20th 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: 9th to 11th February, 2012.
6. Workshop on Application of Metal Nano particles, organized by the Dept. of Chemical Engineering, SSN Engineering College, Chennai; Dates: March 11th, 2011.
7. Annual Photonics Workshop. Organized by International School of Photonics and Centre of Excellence in lasers and Optoelectronic Sciences,(CUSAT),Cochin, Kerala; Dates: 27th and 28th February, 2005.
8. Atomic and Molecular applications using lasers, 2002.
9. Workshop on Advanced Laser Spectroscopy, IIT, Kanpur, Date: February 25th, 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 28th 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 26th to July 30th, 2021.
2. FDP program on “Materials Characterization” at Sairam Institute of Technology, during 20th and 21st July 2017.
3. FDP program on “Cloud Computing” organized by the Dept. of Information technology at SEC, Chennai; Date: 5th 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 17th-22nd, 2005.
6. Anna University, Chennai, FDP program in Physics, 2002.

Coursera-online courses

- Total number of courses studied and certificates issued: 19 courses and 19 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 -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 23rd 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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