Curriculum Vitae

V S BHAGAVAN NETHETI
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Senior Asst. Professor in Physics.
Dr.V.S.Krishna Govt. Degree College (A)
D.O.B: 21-06-1985.

ACADAMIC QUALIFICATIONS:

Program	Institute/Board	Duration	Percentage/CGPA
Ph.D in Physics	GITAM Deemed to be university.	2017-Till date	N.A.
M.Tech in Optoelc-troncs and Optical communication	Indian Institute of Technology Delhi-110016	2008-2010	CGPA: 8.9/10
M.Sc in Physics	Sri Venkateswara University, Tirupati	2006-2008	79.4%
B.Sc (CPM)	Andhra University Visakhapatnam	2003-2006	80.2%
10+2 (CPM)	Board of Intermediate Education	2001-2003	88.8%
10^{th} class	Board of Secondary School	1999-2000	72.8%

ACADAMIC ACHIEVEMENTS

- Topper of the SVUCET-2006 (in Physics).
- Qualified IIT JAM-2006 (in Physics) with all India Rank-500.
- Qualified JEST-2007 (in Physics) with all India Rank-139, Percentile 96.58.
- Qualified JEST-2008 (in Physics) with all India Rank-90, Percentile 97.98.
- Qualified GATE- 2008 (in Physics) with all India Rank-15, Percentile 99.75.
- Qualified CSIR-Entrance exam-2008 for JRF cum NET in Physics.
- Recipient of MHRD fellowship in the year-2008.
- Recipient of CSIR-JRF fellowship in the year-2009.
- Recipient of Gold medal from Sri Venkateswara University for the first rank in M.Sc(Physics-2008) on 51st Convocation held in October 2010.

M.Tech THESIS TITLE

"Photon Statistics of Optical Sources and Erbium Doped Fiber Amplifier" IIT DELHI (Photonics lab).

PROJECT SYNOPSIS

In this Project as a part-I an experimental setup to study the photon statistics of different optical sources viz. Laser diode, LED, He-Ne laser Thermal source and Pseudo-Thermal source derived from laser source was designed. The photon statistics of above mentioned sources was studied experimentally. This study is useful for understanding the nature of different light sources statistics, which is important in conducting Bio-Photonic and photon correlation spectroscopy.

In the part-II of the project an experimental study of Statistics of the Erbium Doped Fiber Amplifier (EDFA) was carried out, which is the key element in Optical Communication. Amplified Spontaneous Emission (ASE) unavoidably is added as noise in optically amplified links, and degrades the bit-error rate. This study is very useful for precise evaluation of the performance of optical transmission systems, in terms of estimating the power budget and the bit-error rate.

WORK EXPERIENCE

Organization	Division	Duration	Designation
Central Scientific Instruments Organization (CSIO), Chandigarh.	**PHOTONICS (V-4)**	11th AUGUST 2010 TO 4th MAY 2011	**SCIENTIST 'C' (AD-HOC)**
Oil and Natural Gas Corporation (ONGC)-ASSAM-ARAKAN BASIN JORHAT, ASSAM	**GEOPHYSICS**	5th May 2011 TO 28th January 2012	**EXECUTIVE OFFICER (E-1)**
DEPARTMENT OF HIGHER EDUCATION	**GOVT.DEGREE COLLEGE, Tekkali**	4th February 2012 TO 2nd September 2015	**ASST.PROFESSOR IN PHYSICS**
DEPARTMENT OF HIGHER EDUCATION	**GDC(M), Srikakulam**	3rdSeptember2015 TO 30th September 2021	**Senior Asst. Professor in Physics.**
DEPARTMENT OF HIGHER EDUCATION	**Dr.V.S.Krisna Gvot. Degree College (A)**	1st October 2021 TO Till date	**Senior Asst. Professor in Physics.**

PROJECTS INFORMATION

1. HOT SPOTS DETECTION IN A TRANFORMER: An experiment was designed and performed to check the repeatability of fiber Bragg grating (FBG) sensor in transformer oil upto 100°C using an interrogator (micron optics inc.) and also tested the long term reliability of FBG sensor in transformer oil at 50°C a continuous monitoring mode.

2. DESIGNING AND REALIZATION OF INTERROGATOR: A bench top model of an Interrogator based on edge filter (Chirped Fiber Bragg Grating filter) technique for demodulating FBG sensor signal was designed and implemented experimentally. A further work is going to improve the resolution and range of the Interrogator.

3. DETECTION OF TOXIC AND EXPLOSIVE GASES: In this In-house project literature survey and schematic design of experimental setup was done. In this Hollow Core-Photonic Band gap Fiber (HC-PBF) will serve as a gas cell to increase the light and matter interaction. This sensor design is based on spectroscopic absorption technique, the absorption bands are characteristics of a particular gas. In this approach one can identify and quantify the gas. This

approach is better than the conventional trace gas sensors as it can work in harsh environment, capability of multiplexing, and capable of remote monitoring. Applications of these sensors are in coal mines and oil fields etc.

4. DETECION OF PESTICIDES USING FBG SENSOR: In this project Schematic design of experimental setup was done. In this FBG sensor will be etched upto core of 4μm diameter so that the evanescent wave can experience the refractive index variations adjacent to the fiber surface. This etched fiber surface will be functionalized to immobilize the targeted antigen/antibody. This technique is based on evanescent wave microscopy. This technique is better than the existing conventional techniques, as it is cost effective, can be employed in harsh environments and easy of remote monitoring. Based on this technique one can detect and quantify the pesticides with very high sensitivity.

INSTRUMENTAL EXPERTISE

- Expertise in operating Optical Spectrum Analyzer (OSA) , Fiber Splicing machine , Interrogator for demodulating FBG sensors, Optical Time Domain Reflectometer (OTDR) , Photon counting Photo multiplier tube , Digital Sampling Oscilloscope (DSO) and Distributed Sensor Systems (DSS).
- Familiar with Fiber Bragg Grating writing system, Scanning Electron Microscope, Tunneling electron microscope, Laser ablation spectroscopy and Fluorescence Spectrophotometer.
- Programming languages: C, C++, MATLAB, Python.
- Software handling: Windows, MS office package, Optigrating, Opti-wave (for designing of FBGs and Fiber optic filters etc).

POSTER PRESENTATIONS AND CONFERENCES

1. Attended workshop on VLSI Design organized by chadalavada ramanamma engineering college tirupati, conducted on 14th and 15th july 2007.
2. Umesh Tiwari, Vandana Mishra, Nidhi Singla, NVS Bhagavan,Nahar Singh and Pawa Kapur "Structural health monitoring of aircrafts using fiber bragg grating". National Symposium on "NEW HORIZONS IN AVIONICS DISPLAY SYSTEMS" held at CSIO Chandigarh in Oct. 2010.
3. Attended the International conference on "FIBER OPTICS AND PHOTONICS -2010" held at IIT-GUWAHATI on December 2010, and also attended the short courses on Photonic Crystal fibers (PCFs) and Fiber Bragg gratings (FBGs) sensors applications.
4. Nidhi Singla, NVS Bhagavan, Vandana Mishra, Umesh Tiwari, Nahar Singh and Pawan Kapur "Early detection of steam leaks in steam pipes using a simple FBG" in international conference 'Contemporary Trends in Optics and Optoelectronics' held at IIST Trivandrum in Jan 2011.
5. Attended Two day National Conference on " GREEN ENERGY AND SUSTAINABLE METHODS TO MEET THE MEET THE GROWING ENERGY NEEDS OF THE NATION" on 9th & 10th , November , 2012 at M.R.COLLEGE VIZIANAGARAM, and presented paper on " FIBER BRAGG GRATING STEAM SENSOR".
6. Attended "innovation in science pursuit for inspired research" district level exhibition and project competitions on 29th and 30th November 2013, at BS&JR High school (EM) Tekkali Srikakulam as jury panel member.
7. Attendend Two day state level workshop on "CAPACITY BUILDING OF RESEARCH CULTURE IN UNDERGRADUATE INSTITUTIONS" held on 18th and 19th January 2014 organized by Science Association, Govt College for Women, Srikakulam.

8.Participated as resource person in one day "regional level science fair" on the occasion of national science day celebrations and delivered lecture on Nano-Technology organized by Science association, Govt. Degree college , Palakonda, Srikakulam District on 25th February 2014.

9.Attended one day district level work shop on “INDIAN BANKING –TRENDS AND CHALLENGES” held on 20th September 2014, at Govt. Degree College Tekkali-Srikakulam district.

10. Attended “ District level flash card quiz competition” organized by Departments of Science, Govt. Degree college, Narasannapeta-Srikakulam District held on 7th November 2014 and secured third prize.
11. Participated in the “zoology educational exhibition” conducted on 5th of December 2014 at Govt. Degree College, Tekkali.
12. 12. Attended National Seminar on “ ROLE OF PHYSICS IN TECHNOLOGY DEVELOPMENT” on 5th & 6th February, 2015 at GOVT. COLLEGE FOR WOMEN, SRIKAKULAM, and presented paper on “ PHOTON STATISTICS”
13. Attended as resource person for two day faculty training program on “TEACHING-LEARNING APPROACHES IN PHYSICS” organized by department of physics, Govt. College for Women Srikakulam on 9th & 10th September 2015.
14. Participated three day national seminar cum workshop on “UPLIFTING OF SOCIETY THROUGH BIOTECHNOLOGY” on 5th to 7th November, 2015, organized by department of Biotechnology, Govt. Degree College (Men), Srikakulam.
15. Attended Two day National seminar on “ RECENT TRENDS IN NANO-SCIENCE AND NANO –TECHNOLOGY” on 26th & 27th November 2016 at M.R.COLLEGE, VIZIA NAGARAM and presented paper on “ PHOTON STATISTICS OF ERBIUM DOPED FIBER AMPLIFIER”.
16. Participated in Three day national seminar on “GENETICS & GENOME ANALYSIS FOR NOVEL THERAPEUTICS” held on 19th -21st December 2016, organized by Department of Biotechnology, Govt. Degree college (Men), Srikakulam, A.P.
17. 17.Attended one day national seminar on “DEMONETISATION-INDIAN BANKING : CHALLENGES AND STRATEGIES” held on 30th December 2016 organized by Department of commerce, Govt. Degree College (Men),Srikakulam.
18. Attended a training programme on “EAT Module of Public Financial Management System(PFMS), for HEI’s “organized by UGC-SERO, Hyderabad on 13th February 2019.

19. Attended state level training programme on " LEARNING MANAGEMENT SYSTEM" organized by ICONMA Professional Services & Solutions Pvt. Ltd. And State Project Directorate RUSA, Govt. of Andhra Pradesh held on September 2019.
20. Attended "5th Andhra Pradesh Science Congress [APSC-2019]" held at Dr.B.R. Ambedkar University, Srikakulam, during 28th -30th November 2019, and presented poster on Simulation of multichannel filter in the photonic band gap of two quarter wave stacks separated by N-defect layers.
21. Attended a two day national conference on "Future challenges of higher education institutes in assessment accreditation and Ranking Framework Methodologies" FCHIARF-2020 organized by IQAC, Govt. College for women, Srikakulam on 31st January & 1st February 2020, presented a paper on Higher recompense to higher highly qualified a way to economic development.

Books and Journals Published

1. Published a book chapter No.18, page no.371 to 391 called " Water pollutants monitoring based on Internet of things" in the international book titled " INORGANIC POLLUTENTS IN WATER" published by Elsevier Inc. DOI: https://doi.org/10.1016/B978-0-12-818965-8.00018-4, in 2020.
2. Published a book chapter titled "Women in Politics" with ISBN No. 978-93-5406-405-0 date of publication 13th December 2020.
3. Published an international level book chapter titled " Higher Recompense to the highly qualified – A way to economic development, with ISBN No.978-1-68108-818-1 in 2021.
4. Published a paper in international journal OSA CONTINUUM, titled "Multi channel filter for UDWDM system designed based on stacking of Fabry-Perot Etalons" Vol.4, No. 10/15 Oct. 2021/ OSA Continuum, written by **V.S. Bhagavan Netheti**, M. M. Sandeep kumar and Gopala Krishnal Podagotlapalli.
5. Published a paper in international journal Engineering Research Express, titled "Temperature tunable Bragg transmission multichannel filters made of two quarter-wave stacks separated by defect layers" Eng. Res. Express 5 (2023) 015044, written by **V S Bhagavan Netheti** , B Santosh Kumar , M M Sandeep Kumar, A Chandrasekhar, P Kanaka Raju and G Krishna Podagatlapalli.

6. Published a paper in international journal of Springer-Silicon Research, titled "Evaluation of Photosensing Parameters of Au/polystyrene/ n-Si Heterojunction Based Self-Powered Organic Broadband Photodetectors" https://doi.org/10.1007/ s12633-023-02458-8, written by Nanda Kumar Reddy Nallabala, Yuvaraj C · Anil Vohra,Arunbabu Dhamodaran,S. Kaleemulla, A. Jaswanth,Chandra Mohan K, Sangaraju Sambasivam,**V. S. Bhagavan Netheti**,Vasudeva Reddy Minnam Reddy, Woo Kyoung Kim.
7. Published a paper in international journal of Physics Status Solidi: A, titled "Synthesis and Greenish-Yellow Luminescence Properties of Li6AlGd(BO3)4: Tb3þ Phosphors for Solid State Lighting " DOI: 10.1002/pssa.202300295, written by **Venkata Surya Bhagavan Netheti,** Bungala Chinna Jamalaiah,* Shaik Nayab Rasool,* and Pidaparthy Lalitha Saranya.
8. Published a paper in international journal of LUMINESCENCE: WILEY, titled "Orange-red luminescence of samarium-doped bismuth– germanium–borate glass for light-emitting devices" Accepted: 14 July 2023 DOI: 10.1002/bio.4560, written by **Netheti V. S. Bhagavan**, R. Ravanamma, Kummara Venkata Krishnaiah, N. Ravi, Upendra Kumar Kagola, C. R. Kesavulu, P. L. Saranya, V. Venkatramu.

Training Programs attended:

1. Attended76th Orientation course conducted by Central University Hyderabad and obtained A grade during Apr 25- May 23 2012.
2. Attended Refresher course conducted by JNTU Hyderabad on Role of communication Skills in teaching and obtained A grade during May 6- May 2013.
3. Attended UGC-sponsored refresher course on "LAW AND SOCIAL TRANSFROMATION" conducted by human resource development centre Sri Venkateswara University, Tirupati, from 25th February 2019 to 16th March 2019, and obtained Grade "A".

4. Passed a Swayam ARPIT online course Certification on "PHYSICS OF SEMICONDUCTORS AND DEVICES" with a "D" grade in the proctored examination held on 30th March 2019, offered by IISc, Bangalore.
5. Participated in " A five day APCCE –US Faculty development programme on new knowledge in Physics and Energy materials: Advanced Research Techniques" from 6th july 2020 to 10th july 2020. Organized by Commissionerate of collegiate education, AP, Vijayawada.
6. Participated in on week online faculty development programme on " Recent Advances in Synthesis, Characterizaton and Application of Nanomaterials" organized by Physics division, Department of basic science and humanities, GMR institute of Technology, Rajam during 13th -17th july, 2020.
7. Participated in "5 Day Faculty Development Programme in LMS Videos & Pedagogy" from 3rd August 2020 to 7th August 2020, organized by Commissionerate of Collegiate Educaion, AP, Vijayawada.
8. Annual Refresher Programme in Teaching (ARPIT-2020) online course on "Introduction to Quantum Physics and its applications" attended and passed in Proctored online exam on 13.10.2021.

Invited talks given:

1. Delivered a lecture on " SPECIAL THEORY OF RELATIVITY" at Vagdevi Degree College Kothavalasa, Vizianagaram District, on 25th September 2016.
2. Delivered a lecture on " Celestial bodies which can host humans" at Sri Chaitanya Techno School, Srikakulam on 28th February 2017.
3. Delivered lectured on "Use of Science and Technology for better living" at Ravindra bharathi School in Srikakulam, on 28th February 2018.
4. Deliverd lecture on "Fiber Optics and advances in it" at Satya Sai institute of higher learning Puttaparthi , Anantapuram district, on 12th December 2019.
5. Acted as a resource person for Physics practical training in "DST inspire internship science camp" organized by department of biotechnology, Govt. Degree college (Men), Srikakulam, from 23rd -27th September 2019.

6. Acted as judge for poster presentation and model making and delivered lecture on "advances in Physics" in "Blaze Physics 2020" programme organized by Kakinada Aditya degree college, Srikakulam on 11th February 2020.
7. Delivered an invited lecture on " Einstein's theory of relativity and understanding the universe around us" on 20.05.2022 in an online faculty development program conducted by Gayatri college of science and management Srikakulam.
8. Deliverd lecture on "Optical fibers in telecommunication and sensor applications" at Govt. College for Women, Visakhapatnam, Visakhapatnam district, on 12th September 2022.

Additional responsibilities undertaken:

1. Serving as head of the department from 3rd September 2015 to till date.
2. Serving as a UGC- Coordinator to the college.
3. Serving as a RUSA coordinator to the college.
4. Serving as a member of Various committees of the college.
5. Served as a Course coordinator to Dr. B.R.Ambedkar open university UG-Courses.
6. Served as a Course coordinator to Andhra university distance education UG-Courses.
7. Currently serving as a National Cadet Corps care taker for the Dr.V.S.Krishna Govt. Degree College, Visakhapatnam.
8. Served as incharge department of physics from October 2022 to July-2023.