

Government Arts college (Autonomous), Coimbatore-18
Performance - Teacher Appraisal Report

i)General Information

- a) **Name** : Dr. K. B. Rajesh., M. Sc., Ph.D.
b) **Address (Residential)** : A 302, Sneham Apartment, Anna Nagar,
2nd Main Road, Peelamedu,
Coimbatore- 641004
c) **Designation** : Associate Professor
d) **Department** : Department of Physics
e) **Date of Birth** : 18-05-1981
f) **Area of Specialization** : Nano Optics, Computational Optics,
Singular Optics, High Numerical
Focusing, Polarization Engineering,
Photonics, Surface Plasmon Resonance
(SPR)



A) Academic Qualifications

Exam. passed	Subjects	Board/University	Year	Division/Grade/Merit etc.
High School	Thambu Higher Secondary School, Coimbatore	State Board	1997	First Class
Higher secondary	Thambu Higher Secondary School, Coimbatore	State Board	1999	First Class
Bachelor's Degree B. Sc	Government Arts College, Coimbatore	Bharathiar University	1999-2002	First Class
Master's Degree M. Sc	Department of Physics Bharathiar University Coimbatore	Bharathiar University	2002-2004	First Class
Ph. D	Department of Physics Periyar University Salem	Periyar University	2004-2008	Awarded

ii) Research Experience& Training

Research		Title of the Work/Thesis	University Where the Work was Carried out
Ph.D.		A Theoretical Study of Sub-Wavelength and Super-Resolution Non-Diffracting Beams for High-Density Optical Recording	Periyar University, Salem
Research Guidance			
1.	M. SenthilKumar	Focal Engineering For Nano Scale Applications Using Spirally Polarized Beam	Bharathiar University
2.	D. Thiruarul (Ph. D)	Focal Engineering for Generation of Axial Multiple Focal Structures using WALSH function Filters	Bharathiar University
3.	M. Udhayakumar (Ph. D)	Focal Engineering for Manipulation of Magnetic Field of a Tightly Focused Laser Beam	Bharathiar University
4.	M. Lavanya (Ph. D)	Theoretical Investigation on Effect of Dielectric Interface on Tightly Focused Beam.	Bharathiar University
5.	J. William Charles (Ph. D)	Investigation of Focal Properties of Azimuthally Polarized Beam Based on Vector Diffraction Theory	Bharathiar University
6.	R. C. Saraswathi (Ph. D)	Investigation On Tight Focusing Properties of Lorentz–Gauss Beam Based on Vector Diffraction Theory	Periyar University
7.	R. Chandrasekaran (Ph. D)	Focal Engineering for Nano Scale Application Using Cylindrical Vector Beam	Periyar University
8.	G. Alagu Vibisha (M. Phil)	Designing and Optimizing Novel Hybrid Structure SPR Sensor for Enhanced Performance	Bharathiar University
9.	M. Udhayakumar (M. Phil)	Investigation On Focal Properties of High Na Parabolic Mirror using Vector Diffraction Theory	Bharathiar University

B) Research Projects carried out

Title of the Project	Name of Funding Agency	Duration	Remarks
Focal Engineering for ultrafast all optical magnetic recording with sub wavelength scale resolution	DST SERB-YSS	2016-2019	Complete
Designing Phase Filters to Tailor Sub Wavelength Scale Energy Flux and Transverse Spin Density Structures using Vector Diffraction Theory	DST SERB	2023 - 2026	Ongoing
Designing Enhanced Photonics Spin Hall Effect (PSHE) sensor for early detection of Cancer	CMRG	2025-2027	Ongoing

C) Seminars, Conferences, Symposia Workshops etc. attended (*If necessary, give a separate list*)

Name of the Seminar/Conference/Symposia Workshop, etc.	Name of the Sponsoring Agency	Place and Date
Attached separately		

iii) Teaching Experience

Courses Taught	Name of University/ College/Institution	Duration
U.G: B. Sc	Anna University Tirunelveli	2009-2011
	Government Arts College, Dharmapuri	2011-2012
	Chikkanna Government Arts College, Tiruppur	2012-2026
	Government Arts College, Coimbatore	2026-till date
PG:	Anna University Tirunelveli	2009-2011
	Government Arts College, Dharmapuri	2011-2012
	Chikkanna Government Arts College, Tiruppur	2012-2026
	Government Arts College, Coimbatore	2026-till date
M.Phil.	Chikkanna Government Arts College, Tirupur	2012-till date
Ph.D	Anna University Tirunelveli Chikkanna Government Arts College	2009-till date

Total Teaching Experience (in years and months):

- | | |
|--------------------------|---------------------|
| a) Under-Graduate (Pass) | : 17 years 5 months |
| b) Under-Graduate (Hons) | : |
| c) Post-Graduate | : 17 years 5 months |

viii) Innovations/Contributions in Teaching (*If necessary, give a separate list*)

a) Design of curriculum	:	❖ Member – Board of Studies in Nano Technology, Anna University of Technology, Tirunelveli (2009–2011) ❖ Member – Board of Studies in Physics (UG/PG), K.S. Rangasamy College of Arts and Science, Namakkal (2018–2022) ❖ Member – Board of Studies in Physics (UG/PG), Government Arts College, Coimbatore (2021–2023) ❖ Member – Board of Studies in Physics (UG/PG), Bharathiar University, Coimbatore (2022–2024) ❖ Member – Board of Studies in Physics (UG/PG), Krishnammal College for Women, Coimbatore (2026 Onwards)
b) Teaching Methods	:	❖ Conventional lecturing ❖ ICT-enabled teaching using PPT and multimedia ❖ Conducting seminars and interactive sessions ❖ Incorporating problem-solving and

			concept-based learning
c)	Laboratory experiments	:	❖ Conducting practical classes using innovative and student-centric approaches ❖ Demonstrating advanced experimental techniques ❖ Organizing visits to research laboratories and industrial facilities ❖ Ensuring safety, accuracy, and hands-on learning in laboratory sessions
d)	Evaluation Methods	:	❖ Examiner and scrutiny work for university examinations ❖ Member – Panel of Question Paper Setters (Theory & Practical) ❖ External Examiner for Practical/Viva-Voce across various universities and autonomous colleges (2011 Onwards) ❖ Continuous internal assessment through tests, assignments, and viva
e)	Preparation of resource material	:	❖ Preparation of teaching materials using journals, online databases, periodicals, research papers, and standard textbooks ❖ Developing reference notes and supplementary learning content for students ❖ Curating digital resources for classroom and laboratory use
f)	Remedial Teaching/Students	:	❖ Special coaching classes for academically weaker students ❖ Providing additional notes, problem-solving sessions, and personalized guidance ❖ Monitoring progress and offering continuous academic support
g)	Any other	:	❖ Serving as Class Tutor for UG students ❖ Providing academic, personal, and career counseling ❖ Maintaining discipline and supporting overall student welfare ❖ Facilitating communication between students, department, and administration

ix) Extension Work/Community Service *(If necessary, give a separate list)*

a) Please give a short account of your contribution to:

b) Positions held/leadership role played in organizations linked with Extension Work National Service Scheme (NSS), or NCC or any other similar activity-

- Served as PO- NSS (Unit-1) -Anna University of Technology Tirunelveli/2009-2011

D. Participation in Corporate Life

Please give a short account your contribution to:

a) College/ University/Institution	❖ Teaching UG & PG Physics courses (Theory & Practical) ❖ Member, Board of Studies (Physics) ❖ In-charge, Laboratory maintenance ❖ Coordinator, Department Seminars / Workshops ❖ Academic advising for UG students ❖ Research Co-ordinator -Chikkanna Govt.Arts College,Tiruppur
b) Co-curricular Activities	❖ Organized guest lectures and science outreach programs ❖ Coordinated Physics Association activities ❖ Guided students for science exhibitions / competitions ❖ Conducted value-added courses / certificate programs
c)Enrichment of Campus Life(Hostels, sports, games, cultural activities)	❖ Coordinated college sports day events
d)Students Welfare and Discipline	❖ Tutor for UG Physics students ❖ Monitoring attendance and academic progress ❖ Counselling students on academic and personal issues ❖ Maintaining discipline during college hours and events ❖ Member, Discipline Committee
e) Membership/Participation in Bodies/ Committees on Education and National Development	❖ Member, Indian Association of Physics Teachers (IAPT) ❖ Participation in National Education Policy (NEP) workshops ❖ Involvement in national science outreach programs
f) Professional Organization of Teachers	❖ Member, Tamil Nadu Government College Teachers Association ❖ Participation in Faculty Development Programs (FDPs)

E.(a)Membership of Professional Bodies, Societies etc. –

- 1) Regular fellow optical society of India (OSI)
- 2) Reviewer of various OSA journals, Optics Laser &Technology, Optics Communication, Journal of Optics, Optical Engineering

(b)Editorship of Journals

- 1) Frontiers in Photonics spl. issue (Editor),
- 2) Journal of optics and photonics Technology (Editor)

BOOK/ BOOK CHAPTERS

S.No	Title	Year
1.	Y.P. Arul Teen, NimmyLazer, J.M. Aravind and Rajesh K. B. , Experimental Investigation of Pulse Modulation Schemes in Free Space Optical Communication under Turbulence, Smart Intelligent Computing and Communication Technology, IOS Press , ISBN : 978-1-64368-202-0	2021
2.	Y.P. Arul Teen, NimmyLazer, J.M. Aravind and Rajesh K. B. , Performance Analysis of Different Wavelength Gaussian Laser Beam in Free Space Optical Communication,Recent Advancements in Engineering and Technology, Avin Books and Publishers, New Delhi, ISBN: 978-81-946168-3-2	2020

List of Publications

S.No	Title	Year
1	Tight focusing properties of transversely polarized beam, D Thiruarul, KB Rajesh , M Saravanan, https://doi.org/10.1007/s12596-026-03123-0	2026
2	Polarization-controlled axial multi-focal structures generated by higher- order cylindrical vector beams modulated with annular Walsh filters, D Thiruarul, M Saravanan, J William Charles, M Lavanya, KB Rajesh , Z Jaroszewicz, https://doi.org/10.1007/s12596-026-03096-0	2026
3	MAPbBr3-2D material based on ultrahigh efficiency urine glucose detection SPR sensor, Alagu Vibisha G ^a , Senthilkumar V ^a , Priyadharsini N ^b , Habibur Rahman S.M. ^c , Jaroszewic Z ^d , Rajesh K.B. ^a https://doi.org/10.1016/j.ijleo.2025.172655	2026
4	High-Performance Copper-Based Surface Plasmon Resonance Sensor for the Detection of Blood Cancer Using Perovskite Cesium Lead Iodide and Black Phosphorus, R Nikhita, N Priyadharsini, SM Habibur Rahman, Z Jaroszewicz, KB Rajesh , https://doi.org/10.1007/s11468-025-03123-z	2025
5.	Enhanced performance of SPR sensor using PbTiO3 and BlueP/WS2 on Al-Co bimetal for urine glucose sensing application, G Alagu Vibisha, V Senthilkumar, N Priyadharsini, SM Habibur Rahman, Z Jaroszewicz, KB Rajesh , https://doi.org/10.1016/j.rio.2025.100873	2025
6.	Surface plasmon resonance sensor utilizing potassium niobate for non- invasive urine glucose detection, KB Rajesh	2025
7.	Sub-wavelength longitudinal magnetization spot and focal shifting using cosine phase plate, M Udhayakumar, P Raju, KB Rajesh	2025

	https://doi.org/10.13074/jopt.2025.03.251006	
8.	Generation of sub-wavelength longitudinal magnetization needle and multiple longitudinal spots using circularly polarized beam through an annular walsh function filter, D Thiruarul, J William Charles, M Lavanya, KB Rajesh , Z Jaroszewicz, https://doi.org/10.1007/s12596-023-01428-y	2024
9.	Numerical investigation on high-performance Cu-based surface plasmon resonance sensor for biosensing application, M Muthumanikkam, Alagu Vibisha, Michael Cecil Lordwin Prabhakar, Ponnan Suresh, Karupiya Balasundaram Rajesh , Zbigniew Jaroszewicz, Rajan Jha, https://doi.org/10.3390/s23177495	2023
10	K. B. Rajesh , M. Muthumanikkam, G. Alagu Vibisha, M. C. L. Prabhakar, P. Suresh, Numerical Investigation on High-Performance Cu-Based Surface Plasmon Resonance Sensor for Biosensing Application https://doi.org/10.3390/s23177495	2023
11	K. B. Rajesh , M. Muthumanicam, M. C. L. Prabhakar, G. Alagu Vibisha, P. Suresh, Z. Jaroszewicz, Theoretical analysis of a high-performance surface plasmon resonance biosensor using BlueP/WS2 over a Cu-Pt bimetallic layer https://doi.org/10.4302/plp.v15i2.1206	2023
12	Generation of sub-wavelength longitudinal magnetization needle and multiple longitudinal spots using circularly polarized beam through an annular walsh function filter D Thiruarul, JW Charles, M Lavanya, KB Rajesh , Z Jaroszewicz Journal of Optics, 1-10 https://doi.org/10.1007/s12596-023-01428-y	2023
13	Tight Focusing of a higher order Radially Polarized sinh-Gaussian beam Transmitting through Cosine Phase Plate RV Kumar, K Prabakaran, KB Rajesh , AM Musthafa, V Aroulmoji International journal of advanced Science and Engineering 10 (1), 3329-3335 https://doi.org/10.29294/IJASE.10.1.2023.3329-3335	2023
14	Generating novel focal patterns for radial variant vector beam focusing through a dielectric interface M Lavanya, D Thiruarul, KB Rajesh , Z Jaroszewicz Photonics Letters of Poland 15 (1), 7-9 https://doi.org/10.4302/plp.v15i1.1198	2023
15	Generation of multiple focal pattern via phase modulated radial and azimuthal variant vector beam. Thiruarul, D., Charles, J.W., Lavanya, M., Rajesh, K.B. et al. <i>Opt Quant Electron</i> 55 , 395 (2023). https://doi.org/10.1007/s11082-023-04654-7	2023
16	High performance SPR biosensor using Cu-Pt bimetallic layers and 2D materials. P Maheswari, V Ravi, KB Rajesh , SMH Rahman, R Jha Digest Journal of Nanomaterials & Biostructures (DJNB) 18 (1) https://doi.org/10.15251/DJNB.2023.181.221	2023
17	Vortex carrying circular airy beam in free space optics and aberration	2023

	effects in turbulent atmosphere N Lazer, YPA Teen, KB Rajesh Optical and Quantum Electronics 55 (1), 63 https://doi.org/10.1007/s11082-022-04298-z	
18	Generation of Multiple Focal Pattern via Phase Modulated Radial Azimuthal variant Vector Beam. Thiruarul. D., Charles. J. W., Lavanya. M., KB Rajesh. , R Jha J.Environ. NanoTechol 11 (3), 1-10 DOI:10.1007/s12596-022-01010-y	2023
19	Theoretical Design of Highly Sensitive Ag-Ni-Thiol-based Hybrid SPR Biosensor for Viral Detection M Muthumanicam, P Maheswari, A Vibisha, CL Prabhakar, S Ponnan, Z Jaroszewicz, KB Rajesh J. Environ. Nanotechnol 12 (3), 14-18 https://doi.org/10.13074/jent.2023.09.233472	2023
20	Engineering axially polarized sub-wavelength scale focal structures using annular Walsh filter N Umamageswari, D Thiruarul, M Lavanya, JW Charles, KB Rajesh Journal of Optics, 1-8 https://doi.org/10.1007/s12596-022-01010-y	2023
21	Generation of light sheet focal patterns for light-sheet fluorescence microscopy via phase modulated radial and azimuthal variant vector beam D Thiruarul, JW Charles, M Lavanya, KB Rajesh , Z Jaroszewicz https://doi.org/10.21203/rs.3.rs-2215617/v1	2022
22	Generation of axial multi foci pattern D Thiruarul, JW Charles, M Lavanya, KB Rajesh , Z Jaroszewicz https://doi.org/10.21203/rs.3.rs-2144299/v1	2022
23	Generation of axially splitted ultra-long multiple optical needles/optical tubes using generalized cylindrical vector Bessel Gaussian beam phase modulated by annular Walsh ... D Thiruarul, JW Charles, M Lavanya, KB Rajesh , Z Jaroszewicz Optical and Quantum Electronics 54 (10), 654 https://doi.org/10.1007/s11082-022-04037-4	2022
24	Focusing Properties of Spirally Polarized Annular Multi Gaussian Beam by High NA Lens M Senthilkumar, K B Rajesh , M Udhayakumar, K Prabakaran, M Lavanya International journal of advanced Science and Engineering 9 (1), 2607-2616 https://doi.org/10.29294/IJASE.9.1.2022.2607-2616	2022
25	Generation of 1D array of focal segments using spirally polarized beam and Complex Phase Filter M Senthilkumar, M Udhayakumar, M Lavanya, G Mahadevan, KB Rajesh , Optics & Laser Technology 149, 107869 https://doi.org/10.1016/j.optlastec.2022.107869	2022
26	Orbital Angular Momentum Carried by ShGB Vortex Beam for FSO and its Aberration Effects N Lazer, YPA Teen, KB Rajesh https://doi.org/10.21203/rs.3.rs-1512547/v1	2022
27	Sensitivity Enhancement of Surface Plasmon Resonance-based Biosensor using Aluminium-Cobalt-Tungsten Disulfide-Graphene Heterostructure GA Vibisha, MG Daher, SMH Rahman, Z Jaroszewicz, KB Rajesh , R Jha J. Environ. Nanotechnol 11 (4), 05-13 https://doi.org/10.13074/jent.2022.12.224462	2022
28	High Performance bimetallic (Cu-Co) surface plasmon resonance sensor using hybrid configuration of 2D materials	2022

	P Maheswari, V Ravi, KB Rajesh , R Jha J. Environ. Nanotechnol 11 (3), 1-10 https://doi.org/10.13074/jent.2022.09.223455	
29	Sensitivity enhancement of SPR sensor using Ni/ZnO nanocomposite assisted with graphene P Maheswari, S Subanya, A Nisha, V Ravi, KB Rajesh , R Jha Optical and Quantum Electronics 53, 1-17 https://doi.org/10.1007/s11082-021-03379-9	2021
30	Programmable multiplier circuit designed for quantum-dot cellular automata devices YPA Teen, M Subha, SH Shabeer, KB Rajesh Materials Today: Proceedings 37, 1295-1300 https://doi.org/10.1016/j.matpr.2020.06.464	2021
31	Energy flux density for higher-order cylindrical vector vortex beam tightly focused through a dielectric interface M Lavanya, D Thiruarul, KB Rajesh , G Mahadevan, D Velauthapillai, ... Journal of Optics 50 (4), 548-558 https://doi.org/10.1007/s12596-021-00691-1	2021
32	Ag-Ni bimetallic film on CaF2 prism for high sensitive surface plasmon resonance sensor A Nisha, P Maheswari, S Subanya, PM Anbarasan, KB Rajesh , ... Photonics Letters of Poland 13 (3), 58-60 https://doi.org/10.4302/plp.v13i3.1114	2021
33	Ag-Ni bimetallic film on CaF2 prism for high sensitive surface plasmon resonance sensor A Nisha, P Maheswari, S Subanya, PM Anbarasan, KB Rajesh , ... Photonics Letters of Poland 13 (3), 58-60 https://doi.org/10.4302/plp.v13i3.1114	2021
34	Sensitivity enhancement of surface plasmon resonance sensor using Al–Au–BaTiO ₃ –Graphene layers NV Suresh, KB Rajesh , TVS Pillai Journal of Optics 50, 152-159 https://doi.org/10.1007/s12596-021-00694-y	2021
35	Creation of one dimensional array of magnetic field by tightly focused phase modulated azimuthal and radial variant vector beam M Udhayakumar, M Lavanya, D Thiruarul, KB Rajesh , Z Jaroszewicz Optics Communications 482, 126594. https://doi.org/10.1016/j.optcom.2020.126594	2021
36	Multiple focal structure generation of incident beam in the focal region under tight focusing P Suresh, U Muthuraman, M Revathi, KB Rajesh , U Saravanakumar, ... Materials Today: Proceedings 37, 3775-3778 https://doi.org/10.1016/j.matpr.2020.11.034	2021
37	Generation of ultra-long multiple optical tubes using annular Walsh function filters D Thiruarul, KB Rajesh , M Lavanya, G Mahadevan, D Velauthapillai, ... Optical and Quantum Electronics 52, 1-14 https://doi.org/10.1007/s11082-020-02507-1	2020
38	SPR Based Bio Sensors Using Black Phosphorus-A Boon To Biomedical Applications GS Deepapriya, PV Nivethitha, S Subanya, KB Rajesh Chikkanna Govt. Arts College, Tiruppur	2020

39	Theoretical Study on Surface Plasmon Resonance Based Fiber Optic Sensors using Platinum-TMDC Bilayers S Subanya, KB Rajesh - 2020	2020
40	High Performance Spr Based Fiber Optic Sensors Using Mxene A Balamurugeshwari, PV Nivethitha, S Subanya, KB Rajesh Chikkanna Govt. Arts College, Tiruppur	2020
41	Sensitivity enhancement of surface plasmon resonance sensor using hybrid configuration of 2D materials over bimetallic layer of Cu–Ni G AlaguVibisha, JK Nayak, P Maheswari, N Priyadharsini, A Nisha, K B Rajesh... Optics Communications 463, 125337 https://doi.org/10.1016/j.optcom.2020.125337	2020
42	Focal hole shifting of azimuthally polarized sinh Gaussian beam using cosine phase filter K Prabakaran, V Karthik, K Rajesh , P Anbarasan, V Aroulmoji, ... International journal of advanced Science and Engineering 6, 1476-1481 <u>10.29294/ijase.6.4.2020.1476-1481</u>	2020
43	Tight focusing properties of phase modulated azimuthally polarized doughnut Gaussian vortex beam by high NA parabolic mirror N Umamageswari, M Lavanya, M Udhayakumar, KB Rajesh , ... Materials Today: Proceedings 26, 3539-3543 https://doi.org/10.1016/j.matpr.2019.07.209	2020
44	S. Seethalakshmi, M. Udhayakumar, N. Priyadharsini, K.B. Rajesh , Z. Jaroszewicz. Generation of sub-wavelength longitudinal magnetic probe and multiple spots using circularly polarized annular multi-Gaussian beam Journal of Optics , 1–8, (2019) https://doi.org/10.1007/s12596-019-00571-9	2019
45	K.Prabakaran, K.B.Rajesh , V.Hariharan, A. Mohamed Musthafa, M.Velu,V.Aroulmoji, Focal Shifting of Double Ring Shaped Radially Polarized MultiGaussian Beam Int. J. Adv. Sci. Eng.6 .1 1193-1199 (2019) https://doi.org/10.29294/IJASE.6.1.2019.1193-1199	2019
46	N. Umamageswari, M. Lavanya, M.Udhayakumar, K.B.Rajesh ,Z.Jaroszewicz. Tight Focusing Properties of Phase Modulated AzimuthallyPolarized Doughnut Gaussian Vortex Beam By High NA Parabolic Mirror Materilas Today Proceedings,(2019) https://doi.org/10.1016/j.matpr.2019.07.209	2019
47	M.Senthil Kumar, K.B.Rajesh , M.Udhayakumar, G.Mahadevan. Focusing properties of spirally polarized sinh Gaussian beam. Optics & Laser Technology 111:623-628 (2019) https://doi.org/10.1016/j.optlastec.2018.10.048	2019
48	A.Nisha, P.maheswari, P.M.Anbarasan,K.B.Rajesh, Z.Jaroszewicz. Sensitivity enhancement of surface plasmon resonance sensor with 2D material covered noble and magnetic material (Ni) Optical and Quantum Electronics 51(1) (2019). https://doi.org/10.1007/s11082-018-1726-3	2019
49	K.Prabakaran, R.Loagnathan, A.Kesavan, K.B.Rajesh Tight Focusing Properties of Radially Polarized Doughnut Gaussian Beam through a DielectricInterface Int. J. Adv. Sci. Eng. Vol.5 No.2 896-900 (2018)	2018

	https://doi.org/10.29294/IJASE.5.2.2018.896-900	
50	R.Murugesan, D.ThiruArul, K.B.Rajesh , M.Lavanya, G.Mahadevan Tight Focusing Properties of Circularly Polarized Annular Multi-Gaussian Beam through a Uniaxial Birefringent Crystal Int J Opt Photonic Eng 3:011 (2018), https://doi.org/10.35840/2631-5092/4511	2018
51	K.Prabakaran, K.B.Rajesh , V.Hariharan, P.Sangeetha, Vincent Aroulmoji, A.M. Musthafa Focal Shifting of Radially Polarized Laguerre Bessel Gaussian Beam with Radial Cosine Phase Plate Int. J. Adv. Sci. Eng. Vol.4 No.4 740- 745 (2018), https://doi.org/10.29294/IJASE.4.4.2018.740-745	2018
52	Y.P.Arul Teen, T.Nathiyaa, , K.B.Rajesh , S.Karthick Bessel Gaussian Beam Propagation through Turbulence in Free Space Optical Communication Optical Memory and Neural Networks 27(2):81-88 (2018) https://doi.org/10.3103/S1060992X18020029	2018
53	K.Prabakaran, K.B.Rajesh , R.Selvam, M.Jayaprakash, Vincent Aroulmoji Tight Focusing Properties of Phase Modulated Longitudinally Polarized Doughnut Gaussian Beam. Int. J. Adv. Sci. Eng. Vol.4 No3 651-655 (2018), ISSN 2349 5359. https://doi.org/10.29294/IJASE.4.3.2018.651-655	2018
54	M.Udhayakumar, K.Prabakaran, K.B.Rajesh , Z.Jaroszewicz, A.Belafhal Generating sub wavelength pure longitudinal magnetization probe and chainusing complex phase plate. Optics Communications 407:275 (2018) https://doi.org/10.1016/j.optcom.2017.09.007	2018
55	N.Umamaheswari, K.B.Rajesh , M.Udhayakumar, K.Prabakaran, Z.Jaroszewicz. Tight focusing properties of spirally polarized LG (1,1)* beam with High NA Parabolic mirror. Optical and Quantum Electronics 50(2) (2018) https://doi.org/10.1007/s11082-018-1320-8	2018
56	M.Udhayakumar, K.Prabakaran, K.B.Rajesh Z.Jaroszewicz, A.Belafhal, V.Dhayalan Generation of ultra-long pure magnetization needle and multiple spots by phase modulated doughnut Gaussian beam. Optics & Laser Technology 102:40-46 (2017) https://doi.org/10.1016/j.optlastec.2017.12.008	2018
57	C.Mohana sundaram, K.Prabakaran, M.Udhayakumar, K.B.Rajesh , G.Mahadevan. Effect of annular obstruction on tight focusing properties of azimuthally polarized sinh Gaussian beam Global Journal of Pure and Applied Mathematics 13(5):208-214(2017)	2017
58	M.Lavanya, K.B.Rajesh , M.Udhayakumar, K.Prabakaran Tight Focusing properties of Phase Modulated Azimuthally Polarized Laguerre- Bessel - Gaussian Beam Global Journal of Pure and Applied Mathematics 13(5):215-222 (2017)	2017
59	J.Amala, M.Lavanya, K.B.Rajesh , M.Udhayakumar, Z.Jaroszewicz, V.Dhayalan Tight Focusing Properties of Azimuthally Polarized Pair of Vortex Beams through a Dielectric Interface Chinese Physics Letters 34(7):074209(2017)	2017

	https://doi.org/10.1088/0256-307X/34/7/074209	
60	N.Umamaheswari, M.Udhayakumar, K.B.Rajesh , Z. Jaroszewicz Focal properties of cylindrically polarized axisymmetric Bessel-modulated Gaussian beams by a high NA parabolic mirror. Optical and Quantum Electronics 49(5) (2017). https://doi.org/10.1007/s11082-017-1026-3	2017
61	K.Prabakaran, P.Sangeetha, V.Karthik, K.B.Rajesh , A.Mohammed Musthafa Tight Focusing Properties of Phase Modulated Radially Polarized Laguerre Bessel Gaussian Beam Chinese Physics Letters 34(5):054203(2017) https://doi.org/10.1088/0256-307X/34/5/054203	2017
62	R.Murugesan, N.pasupathy, D.ThiruArul, K.B.Rajesh , V.Dhayalan Generating multiple focal structures with circularly polarized double ring shaped beam and axial birefringence J Opt, The Optical Society of India (2017) Springer https://doi.org/10.1007/s12596-017-0392-3 ,	2017
63	R.Murugesan, N.pasupathy, M.Udhayakumar, K.B.Rajesh, Z.Jaroszewicz Properties of Surface Plasmon Polaritons Excited by Radially Polarized Sinh Gaussian Beams, Plasmonics 13(5):1-7 (2017). https://doi.org/10.1007/s11468-017-0526-0	2017
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152	K.B.Rajesh, P.M.Anabarasana, Generation of sub-wavelength and super-resolution longitudinally polarized non-diffraction beam using lens axicon Chinese Optics Letters 6 (10), 785-787 (2008). https://doi.org/10.3788/COL20080610.0785	2008
153	K.B.Rajesh, P.M.Anabarasana, K.Tamilmaran, Nanoscale resolution lens axicon for high density optical recording using krypton ion laser JP Journal of solids and structures, 2, 10,139-149 (2008). https://doi.org/10.3788/20080210.0785	2008

Seminars, Conferences, Symposia Workshops etc. attended

S.NO	NAME AND TITLE	YEAR
1	KB Rajesh* “ Spin Orbit Photonics in the Tight Focusing limit”, International Topical Meeting on Fundamental and Applied Optics (INTOPTICS – 2026), December (16- 18, 2024), Indian Institute of Space and Science Technology(IIST), Thiruvananthapuram, Kerala	2026
2	KB Rajesh* “Mathematical Modelling of Plasmonic and Spin – Orbital Photonic Sensors for Ultrasensitive Cancer Detection ” International Conference on Reverberation of Applied Mathematics in Artificial Intelligence & Medical Millennium(ICRAMAIMM -2026), Department of Maths, The Gandhigram Rural Institute, Gandhigram, Dindugul -624302	2026
3	R Nikhita, K B Rajesh* “Superior sensing performance of hybrid structured SPR sensor utilizing perovskite (FASnI ₃) for blood cancer detection” International conference on fuzzy intelligence modelling optimization and applications (ICFIMO-2025) October (13,2025) at	2025

	Chikkanna Government Arts college, Tiruppur - 641 602	
4	R Nikhita, K B Rajesh * “Optimization of highly sensitive surface plasmon resonance sensor for the diagnosis of blood cancer” International conference on advanced materials sustainable technologies (ICAMST-2025) January (23-24,2025) at PSGR Krishnammal college for women, Coimbatore - 641 004	2024
5	G. Alagu Vibisha, K B Rajesh * “Numerically Designing a High-Sensitive Surface Plasmon Resonance Biosensor Using SrTiO ₃ -BP” International conference on advanced materials sustainable technologies (ICAMST-2025) January (23-24,2025) at PSGR Krishnammal college for women, Coimbatore - 641 004	2024
6	R Nikhita, K B Rajesh * “Optimizing the SPR sensor for cancer detection” International conference on blooming fuzzifier logic (ICBFL-2024) October (21,2024) at Chikkanna Government arts college, Tiruppur - 641 602	2024
7	K. B Rajesh , “Sculpturing Noval Sub wavelengtScale Spin Density Structure using Highly Focused Vector Lissajous Beam”, International Topical Meeting on Classical and Quantum Optics(INTOQ -24), December (16- 18, 2024), Indian Institute of Space and Science Technology(IIST), Thiruvananthapuram, Kerala, India	2024
8	M. Muthumanicam,G. Alagu Vibisha, M.C.L. Prabhakar, P. Suresh K.B. Rajesh * “Effect of Lithium Niobate on the Sensing Performance of the Surface Plasmon Resonance Biosensor” XLVI OSI SYPOSIUM International Conference on Optics, Photonics & Quantum Information (OPTIK - 2023) December (11- 13, 2023) at International School of Photonics, Cochin University of Science and Technology, Kerala – 682 022	2023
9	G. Alagu Vibisha, R. Priyakalyani, K.B. Rajesh * “Enhance Performance of SPR Biosensors using Al-Co Bimetallic Layer Covered by PbTiO ₂ -BlueP/WS ₂ ” XLVI OSI SYPOSIUM International Conference on Optics, Photonics & Quantum Information (OPTIK - 2023) December (11- 13, 2023) at International School of Photonics, Cochin University of Science and Technology, Kerala – 682 022	2023
10	V. Ashwaanth, K.B. Rajesh * “Landscaping SAM and OAM with Tightly Focused Vector Lissajous Beam Embedded with Vortex Phase ” XLVI OSI SYPOSIUM International Conference on Optics, Photonics & Quantum Information (OPTIK - 2023) December (11- 13, 2023) at International School of Photonics, Cochin University of Science and Technology, Kerala – 682 022	2023
11	M Lavanya D Thiruarul K.B. Rajesh " Focusing Properties of Hybridly Polarized Sin h Gaussian Beam Through A Dielectric Interface", Optical Society of India (OSI), International Conference on Optics and Optoelectronics (ICOL-2019) October 19-22, 2019 at Instruments R & D Establishment, Dehradun, India	2019
12	M. Udhayakumar, M Lavanya, K.B. Rajesh "Generation and Manipulation of Super-Resolution Spherical Magnetization Chains by Phase Modulated Circularly Polarized", Optical Society of India (OSI), International Conference on Optics and Optoelectronics (ICOL-2019) October 19-22, 2019 at Instruments R & D Establishment, Dehradun, India.	2019
13	M. Udhayakumar, K.B. Rajesh Multiple focal segments generated by phase modulated azimuthal and radial variant vector beam Optics & Photonics: Theory & Computational Techniques (OPTCT) IIT-Delhi. March 23-24, 2019	2019

14	K.B. Rajesh All optical magnetic recording using ultrafast lasers ^{2nd} International Conference on Recent Trends in Applied Science and Technology 23-25 August (2018) Periyar University, Salem	2018
15	M Lavanya, K.B. Rajesh Focusing properties of azimuthally polarized axisymmetric Bessel modulated vortex Gaussian beam through a dielectric interface”, “OSI ISO- International symposium on Optics (OSI – ISO 2018) , IIT Kanpur, 19-22 Sep 2018.	2018
16	M Lavanya ., K.B. Rajesh “Generating 3D chain of optical bubbles using concentric piecewise cylindrical vector beams” , The International Conference on Fibre Optics and Photonics, Photonics 2018, IIT Delhi, 12-15 Dec 2018	2018
17	K.B. Rajesh Generation of sub-wavelength longitudinal magnetization by tightly focusing of azimuthally polarized multi Gaussian beam. Optics & Photonics: Theory & Computational Techniques (OPTCT) IIT-Delhi. March 4-5, 2017	2017
18	K.B. Rajesh Generating super-long pure longitudinal magnetization Needle for all optical magnetic recording Applied and Adaptive Optics (INTOPMAA-17) IISST Tiruvanthapuram , 11-13 August 2017	2017
19	K.B. Rajesh Tight focusing Properties of phase modulated azimuthally polarized Laguerre Bessel Gaussian Beam International conference on Discrete and Computational Mathematics (ICDCM -2017) Feb-16-18, 2017, The Gandhi gram Rural Institute–Deemed University	2017
20	K.B. Rajesh Recent trends in Nano optics One day seminar P K R Arts College For Women, Gobichettipalayam, 2 August 2017	2017
21	C. Mohanasundaram, K. Prabakaran, K. B. Rajesh “Tight focusing properties of transversely polarized sin h Gaussian beam through a numerical aperture lens” National Conference on “Advances in Materials Science and Non-Linear Systems During August 7 th -8 th , 2016, organized by K.S.R. College of Engineering, Department of Physics, Thiruchengode, Namakkal, Tamilnadu.	2016
22	C. Mohanasundaram, K. Prabakaran, K. B. Rajesh “Tight focusing properties of transversely polarized sin h Gaussian beam through a numerical aperture lens” National Conference on “Advances in Materials Science and Non-Linear Systems During August 7 th -8 th , 2016, organized by K.S.R. College of Engineering, Department of Physics, Thiruchengode, Namakkal, Tamilnadu.	2016
23	C. Mohanasundaram, K. Prabakaran, K. B. Rajesh “Tight focusing properties of transversely polarized sin h Gaussian beam through a numerical aperture lens” National Conference on “Advances in Materials Science and Non-Linear Systems During August 7 th -8 th , 2016, organized by K.S.R. College of Engineering, Department of Physics, Thiruchengode, Namakkal, Tamilnadu	2016

24	M.Udhayakumar, K. B. Rajesh Focusing properties of Linearly Polarized Hollow Gaussian Beam through a Dielectric Interface, TEQIP II Sponsored International Conference on Recent Advancements in Materials (ICRAM-15) 16 th & 17 th October, (2015) Organized by Department of Physics, Bharathidasan Institute of Technology, Trichy, Tamilnadu	2015
25	C. Mohanasundaram, K. Prabakaran, K. B. Rajesh “Focal shifting of radially polarized Laguerre Bessel Gaussian beam using cosine phase plate” International Conferences on Latest Development in the Application of Laser Technology, During 7th Dec (2015), Organized by Department of Chemistry and Physics, PSGR Krishnammal College for Women, Coimbatore, Tamilnadu	2015
26	C. Mohanasundaram, K. Prabakaran, P. M. Anbarasan, V. Senthil Kumar, K. B. Rajesh “Transversely Polarized Optical Needle with Super Long Focal Depth Using Azimuthally Polarized Multi-Gaussian Beam” TEQIP II Sponsored International Conference on Recent Advancements in Materials (ICRAM-15) 16 th & 17 th October, (2015) Organized by Department of Physics, Bharathidasan Institute of Technology, Trichy, Tamilnadu.	2015
27	C. Mohanasundaram, K. Prabakaran, P. M. Anbarasan, K. B. Rajesh “Tight Focusing Properties of Phase Modulated Transversely Polarized Doughnut Gaussian Beam” State Level Conference on Application of Materials Science in Physics during October 9th (2015) organized by Department of Physics Mahendra Arts and Science College, Thiruchengode, Namakkal, Tamilnadu	2015
28	K.Prabakaran, K.B.Rajesh, T.V.S.Pillai” Generation of Sub wavelength focal hole using azimuthally polarized annular multi- Gaussian beam by vector diffraction theory” DAE-BRNS, National Laser Symposium(NLS-22), organized by, Manipal University, Manipal, Karnataka on Jan 08-11, 2014,	2014
29	J.Willam Charles K.Prabakaran, Hareseh M. Pandiya, K.B. Rajesh, T.V.S.Pillai, “Generation of multiple focal spot segments using radially polarized Bessel Gaussian,” in XXXVII National symposium of Optical society of india at Department of physics, Pondicherry University , Pondicherry on January 23-25, 2013.	2013
30	K.Prabakaran, K.B.Rajesh, T.V.S.Pillai, A. Mohamed Musthafa, “Effect of complex phase filter in tight focusing of double ring shaped radially polarized beam”, 21 st DAE-BRNS, National Laser Symposium(NLS-21), during Feb 06-09, 2013, organized by Bhabha Atomic Research Centre, Mumbai	2013

31	K.Prabakaran, R.Chandrasekaran, K.B.Rajesh, T.V.S.Pillai, "Effect of spherical aberration in high NA lens systems used for nano patterning applications" Third national conference on multifunctional nanomaterials and nanocomposite (NCMNN-2013),during Feb 25-26 th 2013, is organized by Department of Nanoscience and Technology, Bharathiyar university, Coimbatore.	2013
32	N.Veerabagu Suresh, K.Prabakaran, R.Chandrasekar, HareshM.Pandya, K.B.Rajesh, Generation of Tunable Focal Spot and Focal hole by Radially Polarized Axisymmetric Bessel-modulated Gaussian beam, Third National Conference on Innovations in Indian Science Engineering & Technology at CSIR-National Physical Laboratory and IARI, New Delhi, During February 25-27, 2013, organized by Swadeshi Science Movement of India, Delhi	2013
33	K.Lalithambigai, P.M.Anbarasan, K.B.Rajesh, "Generation of nanoscale transversally polarized multiple focal spot using complex phase filter " Third national conference on multifunctional nanomaterials and nanocomposite (NCMNN-2013),during Feb 25-26Th 2013, is organized by Department of Nanoscience and Technology, Bharathiyar university, Coimbatore.	2013
34	N.Veerabagu Suresh, M.Lavanya, S.Subanya, K.B.Rajesh, "Excitation of surface Plasmon on graphene coated metal layer by radially polarized Bessel Gaussian beam" Third national conference on multifunctional nanomaterials and nanocomposite(NCMNN-2013),during Feb 25-26 th 2013, is organized by Department of Nanoscience and Technology, Bharathiyar University, Coimbatore.	2013
35	P.Suresh, K.RamKarthik Kumar, J.Willam Charles, K.B. Rajesh, T.V.S.Pillai, "Generation of tunable focal holes by Tight Focusing of Phase Modulated Azimuthally Polarized Double Ring Shaped Beam," in IEEE International Conference on Computational Intelligence and Computing Research(ICCIC) at TamilNadu College of Engineering on December 18-20, 2012	2012
36	G.Therese Anita, R.Mahesh Kumar, K.Lalithambigai, K.B. Rajesh, P.M.Anbarasan,"Effect of Spherical Aberration in Tight Focusing of Azimuthally Polarized Double Ring Shaped Beam,"in IEEE International Conference on Computational Intelligence and Computing Research(ICCIC) at TamilNadu College of Engineering on December 18-20, 2012	2012
37	P.Suresh, K.B.Rajesh, T.V.S.Pillai, "Tight Focusing of Amplitude Modulated HYGG Type – II Beam using high NA Lens Axicon," in International conference on Fiber Optics and Photonics (Photonics 2012) held at IIT Madras.	2012

38	K.Lalithambagai, , Leelavathi, P.M.Anbarasan, K.B.Rajesh, "Generation of Subwavelength super long dark channel using complex phase filter," in International conference on Fiber Optics and Photonics (Photonics 2012) held at IIT Madras.	2012
39	R.Chandrasekaran, K.Prabakaran, K.B.Rajesh, Z.Jaroszewicz, "Tight Focusing of Cylindrical Vector Beam with High NA Lens Axicon," in International conference on Fiber Optics and Photonics (Photonics 2012) held at IIT Madras.	2012
40	K.Prabakaran, K.B.Rajesh,Z.Jaroszewicz, "Effect of phase modulated on tightly focused radially and azimuthally polarized double ring shaped beam," in International conference on Fiber Optics and Photonics (Photonics 2012) held at IIT Madras.	2012
41	C.Mariyal, P.Suresh, K.B.Rajesh, T.V.S.Pillai, "Generation of tenable focal shift for optical manipulation of trapped Nano particles using radial cosine phase wave front", in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012	2012
42	G.ThereseAnitha, C.AmalaPrathiba Janet, T.V.S.Pillaia, K.B.Rajesh, "Effect of Spherical Aberration on tight focusing of Azimuthally Polarized Double Ring Beam", in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012	2012
43	K.Lalithambagai, R.C.Sarasvathi, R.Chandraseker, A.Cyrac Peter, K.B.Rajesh, P.M.Anbarasan, " Generation of Axially tunnable sub wavelength focal hole with a binary phase filter and high NA lens system", in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012	2012
44	C.Kanchanadevi, K.Gokulakrishnan, C.Mariyal, C.AmalaPrathiba Janet, T.V.S.Pillai K.B.Rajesh,"Tight focusing of azimuthally polarized beam with pure phase plate and a high numerical aperture Lens Axicon" in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012	2012

45	S.Sumathi, K.Gokulakrishnan, N.Veerabagu Suresh K.B.Rajesh, G.ThreseAnita,"Tight Focusing of Double Ring Shaped Azimuthally Polarized Beam Using High NA Lens Axicon", in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012.	2012
46	K.Prabakaran, N.Veerabagu Suresh, C.AmalaPrathiba Janet, G.ThereseAnitha, T.V.S.Pillai, K.B.Rajesh," Focus shaping using cylindrical vector beam with high NA lens axicon", in International conference on Nanomaterials and applications (ICNMA-2012) held at Mother teresa women's University, Kodaikanal on Feb 28-29,2012.	2012
47	P.Suresh, C.Mariyal, C.Kanchana Devi, K.B. Rajesh, Z. Jaroszewicz,T.V.S.Pillai, "Generation of Focal shift with large depth of focus using high numerical aperture lens axicon" in The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics held at IIT Delhi, New Delhi on Dec 3-5, 2011	2011
48	K. Prabakaran, P.Suresh, Mohamed Musthafa.A, Z.Jaroszewicz ,K. B. Rajesh," Tight focusing of Hypergeometric-Gaussian type-II optical mode beam with high NA lens axicon",in The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics held at IIT Delhi, New Delhi on Dec 3-5, 2011	2011
49	K.Lalithambigai, V.Ravi, K.Prabakaran, Z.Jaroszewicz, K.B.Rajesh, P.M.Anbarasan, T.V.S.Pillai," Generation of nanoscale focal hole with extended depth of focus for trapping array of nanoparticles" in The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics held at IIT Delhi, New Delhi on Dec 3-5, 2011	2011
50	G.Threse Anita, C.AmalaPrathiba Janet, S.Sumathi, K.Gokulakrishnan, Z.Jaroszewicz K.B.Rajesh, T.V.S.Pillai," Generation of longitudinal magnetic probe with extended DOF for near field magneto optical recording", in The XXXVI Optical Society of India Symposium on Frontiers in Optics and Photonics held at IIT Delhi, New Delhi on Dec 3-5, 2011	2011
51	P.Suresh, C.Mariyal, C.Kanchana Devi, K.B. Rajesh, Z. Jaroszewicz,T.V.S.Pillai, "Increasing the focal depth of cylindrical vector beam using high numerical aperture lens axicon" in First International OSA Network of Students Conference in Asia(IONS'1-Delhi) held at IIT Delhi, New Delhi on Dec 1-2, 2011.	2011

52	C.Mariyal, P.Suresh, C.KanchanaDevi, K.B. Rajesh, Z. Jaroszewicz, T.V.S. Pillai, "Focusing a radially polarized cosine wave front through high numerical aperture lens axicon system" in First International OSA Network of Students Conference in Asia(IONS'1 -Delhi) held at IIT Delhi, New Delhi on Dec 1-2, 2011.	2011
53	C.Mariyal, P.Suresh, C.KanchanaDevi, K.B. Rajesh, Z. Jaroszewicz, T.V.S. Pillai, "Focusing a radially polarized cosine wave front through high numerical aperture lens axicon system" in First International OSA Network of Students Conference in Asia(IONS'1 -Delhi) held at IIT Delhi, New Delhi on Dec 1-2, 2011.	2011
54	P.Arul Teen, P.Deivegan, K.B.Rajesh & K. Esakkimuthu, "Improving the SNR using Bessel- Gauss beam for free space optical interconnection" in International conference on Optics to be held at National Institute of Technology, Calicut on Mar 23-24, 2011	2011
55	K.B.Rajesh, Z.Jaroszewicz, R.Mohanakumar, C.AmalaPrathiba Janet & T.V.S.Pillai, "Generation of High Efficiency Longitudinally Polarized Beam Using High NA Lens Axicon and dedicated Phase Filter" in International conference on optics 2011 to be held at National Institute of Technology, Calicut on Mar 23-24, 2011	2011
56	G.DeekKumaran, K.B.Rajesh & G. Therese Anita, "Focal switching for manipulation of Optical traps Using Double Ring Shaped Radially Polarized beam with Spherical Aberration" in International conference on optics 2011 to be held at National Institute Of Technology, Calicut on Mar 23-24, 2011	2011
57	G.DeekKumaran, K.B.Rajesh & K.Gokulakrishnan, "Effect of Spherical Aberration on tightly focused Hypergeometric-Gaussian beam" in International Conference in Optics 2011 to be held at National Institute of Technology, Calicut on Mar 23-24,2011	2011
58	R.Mohan Kumar, K.B.Rajesh & EsakkiMuthu , "All Optical Magnetic recording using High NA Lens axicon" in XXXV OSI International Conference on Contemporary trends in Optics and Opto Electronics held at Indian Institute of Space Science and Technology, Trivandrum on Jan 17-19,2011	2011

59	G.DeekKumaran, K.B.Rajesh & K.Gokulakrishnan, "Generation of Novel Focal Pattern using Double Ring Shaped Radially Polarized Beam with Radial Cosine Phase Plate" In XXXV OSI International Conference on Contemporary trends in Optics and Opto Electronics held at Indian Institute of Space Science and Technology, Trivandrum on Jan 7 -19, 2011	2011
60	N.Veerabagu Suresh, K.B.Rajesh & K.Gokulakrishnan, "High Density Optical Interconnections using Bessel Beam" National Conference on Microwave and Optical Communication NCMOC 2010 held at Alagappa University, Karaikal on 6th April 2010	2010
61	K.B.Rajesh, N.Veerabagu Suresh & K.Gokulakrishnan, "Generation of longitudinally Polarized beam with large depth of focus using High NA Lens Axicon" in Annual Photonics Workshop (APW 2010) on Quantum Optics held at International School of Photonics, Cusat,Cochin on Feb 27-28, 2010	2010
62	K. B. Rajesh, V.Ravi & P.M.Anbarasan, "Generation of Sub Wavelength and Longitudinal Polarized Non Diffracting Beam by tight focusing of Double Ring Shaped Radially polarized Beam through High Na Lens Axicon" National Seminar on Photonics Materials (NSPM-2009 (NSPM-2009), University of Kerala, Feb.26-28, 2009	2009
63	K. B. Rajesh, V.Ravi & P.M.Anbarasan "Generation of n ear field optical virtual probe Using Solid Immersion Axicon (SIAX)" National Seminar on Photonics Materials (NSPM-2009), University of Kerala, Feb 26-28, 2009	2009
64	K.B.Rajesh,P.M.Anbarasan&V.Ravi, "Lens Axicons Illuminated by Gaussian Beams for Optical Microlithography" in the National Conference on Recent Trends in Opto Electronics and Laser Technology (NCOL- 2007), University of Kerala, April 9 – 11, 2007	2007
65	K.B.Rajesh &P.M.Anbarasan, "Bessel Beam using Annular Rings for Optical Microlithography" in the National Conference on Recent Trends in Optoelectronics and Laser Technology (NCOL -2007), University of Kerala, April 9 – 11, 2007	2007

66	K.B.Rajesh & P.M.Anbarasan, “Bessel beam using annular rings for optical Microlithography” in the XXXII OSI Symposiums – held at MS University of Baroda –Gujarat during 1-3 Mar. 2007	2007
67	P.M.Anbarasan, S.Selvanandan, K.B.Rajesh, A.Kalyanasundaram &R.Rengaiyan “Microlenses focused beam on silicon solar cells for high efficient light trapping scheme” in the International conference on Photonics-2006 held at Hyderabad Central University, Dec 13-16, 2006	2006
68	K.B.Rajesh, P.M.Anbarasan, V.Ravi & K.Vasudevan, “Experimental and theoretical Investigation on the effect of Various Parameters on the Surface morphology of the Microlenses under hot embossing process” in the National Conference on Recent Advances in Materials Science (NCMS-2006) held at Periyar University, Feb16-17, 2006	2006

Faculty Development Programs Attended

Course	University/Institute	Subject	Period
Orientation Course	Academic Staff College, University of Madras, Chennai	Physics	04.05.2011 to 02.06.2011 (28 Days)
Refresher Course	Academic Staff College, Bharathiar University, Coimbatore	Physics	03.12.2014 to 23.12.2014 (21 Days)
Refresher Course	Academic Staff College, Bharathiar University, Coimbatore	Physics	23.11.2018 to 13.12.2018 (21 Days)
Refresher Course	Teaching Learning Centre, Ramanujam College University of Delhi	Advanced Research Methodology Tools And Techniques	30.01.2021 to 14.02.2021 (16 Days)
Refresher Course	Teaching Learning Centre, Ramanujam College University of Delhi	Physics	10.04.2022 to 24.04.2022 (15 Days)

Resource Person/Invited Lectures

1. **Invited Talk:** International Conference on Automation, Information Technology and Advancements in Pharmaceutical Sciences (**ICAAPS–2026**) at PSG College of Pharmacy on 24.07.2026. (Title: Beyond Binding: Expanding the Role of Surface Plasmon Resonance Sensors in Pharmaceutical Research and Development)
2. **Invited Talk :**INTOPTICS-2026 organized by the Department of Physics, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, Kerala, India from 30th–31st March 2026.(Title: **"Spin–Orbit Photonics in the Tight Focusing Limit"**)
3. **Resource Person:** Tenth Refresher Course in Mathematics -UGC–Malaviya Mission Teacher Training Centre (UGC-MMTTC) The Gandhigram Rural Institute (Deemed to be University)
4. **Invited Speaker:** ICAMAIMM-2026 held during 26th–28th March, 2026, organized by the Department of Mathematics, The Gandhigram Rural Institute (Deemed to be University), Gandhigram, Dindigul, Tamil Nadu, India.(Title: **"Mathematical Modelling of Plasmonic and Spin-Orbit Photonic Sensors for Ultrasensitive Cancer Detection"**)
5. **Invited Speaker:** PSG College of Arts & Science, Coimbatore, Title “Entrepreneurship in Biphotonic: Trends and Future Directions” on 14.07.2025
6. **Invited Speaker:** Refresher Course, conducted by UGC – Malaviya Mission Teacher Training Centre, THE GANDHIGRAM RURAL INSTUTITE – DEEMED UNVERSITY- DTB, Gandhigram , Dindigul – 624 302. **Dated : 09.06.2024**
7. **Invited Speaker:** 9th International Conference on Discrete Mathematical and Mathematical Modeling in Digital Era (ICDMMMDE- 2023), (Title:**Numerical Analysis of Laser Focal Fields using Vector Diffraction Theory**), THE GANDHIGRAM RURAL INSTUTITE – DEEMED UNVERSITY, Gandhigram , Dindigul – 624 302. **Dated : 23.03.2023**
8. **Invited Speaker:** International Conference on Optics and Photonics Technology – ICOPT – 23, (Title: **Sculpturing Focal Structure with Tightly Focused Beam**), PSGR Krishnammal College for Women, Peelamedu, Coimbatore – 641004. **Dated: 03.02.2023.**
9. **Invited Talk:** Recent Advancements and Innovations in Energy Research, PG& Research Department of Physics, Mahendra Arts & Science College (Autonomous), Kalippatti (Po)- 637501, Tiruchengode (Tk), Namakkal (Dt), TN. **Dated: 20.4.2022.**
10. **Invited Talk :** International E- Conference on Recent Trends in Applied Physics(Titel: **Optics for Nano- scale Application**) PG& Research Department of Physics, Sri Sarada College for Women, Ariyakulam, Thoothukudi NH, maharaja Nagar Post, Tirunelveli – 627011 **Dated: 28.011.2021**
11. **Invited Talk :** Applied optics and Photonics(Title: **Optics for Nano Scale Application**), Indian Institute of Technology Indore, Khandwa Road, Simrol-453552, Indore. **Dated: 10.08.2021.**
12. **Invited Talk:** First Virtual Conference on Nano Exploration 2021(Title: **Nano photonics &Nano Biotechnology**), PG& Research Department of Physics, Mahendra Arts & Science College (Autonomous), Kalippatti (Po)- 637501, Tiruchengode (Tk), Namakkal (Dt), TN. **Dated: 24.5.2021.**
13. **Invited Lecture:** International Lecture Series Rendezvows with Science (Title: **Optics for Applications**), Department of Physics, Mother Teresa Women’s University, Kodaikanal – 624102. **Dated: 25.02.2021**
14. **Resource Person:** Technical Advances in Novel Materials (Title: **Focal engineering for Nanoscale Application**), Physics Research Centre and the Department of Humanities and Sciences, St.Xavier's Catholic College of Engineering, Nagercoil, Tamil Nadu. **Dated: 09.10.2020**
15. **Resource Person:** Advanced Application of Nanotechnology (Title: **Nano Bio photonics**), PG& Research Department of Physics, Arignar Anna College (Arts & Science), Krishnagiri – 635115. **Dated: 16.09.2020.**
16. **Invited Talk:** Optics & Photonics: Theory & Computational Technuques (OPTCT), IIT Delhi **Dated : 21.03.2020.**
17. **Invited Talk:** National Seminar on Recent Trends in Material Science (NSRTMS- 2020), (Title: **Laser in Day Today Life**), PG& Research Department of Physics, Pachamuthu College of Arts Science for Women, Dharmapuri. **Dated : 25.02.2020.**

18. **Invited Talk:** International Conference on Innovation in Graphs and its Application in Digital Era– 2020. Department of Mathematics, University of Kerela, Kariavattam, thiruvananthapuram- 695581 **Dated : 22.01.2020.**
19. **Invited Talk:** National Symposium on Nano composites and their Application, Department of Physics, P.K.R. Arts College for women, Gobichettipalayam, Erode – 63476. **Dated : 18.01.2019.**
20. **Invited Talk:** Nano optics in Nutshell. Department of physics, DON BOSCO Arts and science college, Dharmapuri 29.08.2019
21. **Invited Talk:** Vectorial approach in focal engineering for all optical magnetic recording, International Conference on Emerging Materials and Modeling (ICEMM - 2019) 07 – 09th January 2019 Organized by K.S. Rangasamy College of Arts and Science (Autonomous) K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt, Tamilnadu.
22. **Invited Talk:** International Conference on Revolutionary Trends in Mathematical Science (ICRTMS 2018), Department of Mathematics & Department of Mathematics (CA), Mannar Thirumalai Naicker College, Madhurai – 625 004 **Dated : 14.12.2018**
23. **Resource person:** Workshop On Optics PSGR Krishnammal College for women, Coimbatore. 16.10.2018
24. **Invited Talk:** All optical magnetic recording using ultrafast lasers 2nd International Conference on Recent Trends in Applied Science and Technology 23-25 August (2018) Periyar University, Salem
25. **Invited Talk:** Nano optics, Organized by K.S. Rangasamy College of Arts and Science (Autonomous) K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt, Tamilnadu 02.08.2018
26. **Resource person:** Guest Lecture, Department of Physics, Saiva Bhanu Kshatriya College 20.01.2018
27. **Invited Talk:** Advancing materials research AMR 2017 organized by the PG & Research Department of Physics, Mahendra Arts & Science College, Kalippatti, Namakkal – 637 501 on 21.08. 2017.
28. **Invited Talk:** Generation of sub-wavelength longitudinal magnetization by tightly focusing of azimuthally polarized multi Gaussian beam. Optics & Photonics: Theory & Computational Techniques (OPTCT) IIT-Delhi. March 4-5, 2017
29. **Invited Talk:** Generating super-long pure longitudinal magnetization Needle for all optical magnetic recording Applied and Adaptive Optics (INTOPMAA-17) IISST Tiruvanthapuram, 11-13 August 2017
30. **Invited Talk:** Recent trends in Nano photonics, P.K.R Arts College for women, Gobichettipalayam. **Dated: 02.08.2017.**
31. **Invited Talk:** Discrete and Computational Mathematics- ICDCM2017, International Conference on Discrete and Computational Mathematics, THE GANDHIGRAM RURAL INSTITUTE – DEEMED UNIVERSITY, Gandhigram, Dindigul – 624 302 **Dated: 16.02.2017.**
32. **Invited Talk:** Light Based Current Technology, Special Lecture on 3rd March 2016 in the K.S.R. College of Engineering, Tiruchengode - 637 215.
33. **Resource person:** Seminar on Plasmonics Sensors & recent Trends in Nano Optics, Organized by, PG & Research Department of Physics, Pachamuthu College of Arts and Science for Women, Dharmapuri. **Dated: 19.11.2015**
34. **Invited Lecture: Recent Trends in Nanooptics,** Kamadhenu Arts and Science College, Sathayamagalam, Erode – 638503, **Dated : 15.9.2015.**
35. **Invited Talk:** Special Lecture (Title: Nanooptics), Department of Physics, Periyar University, Periyar Palkalai Nagar, Salem – 636001. **Dated : 11.01.2013**