

## **GAJENDRA SINGH RATHORE**

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### **CAREER OBJECTIVE**

To be a part of a global organization that utilizes my skills and expertise in its process of growth and challenges while giving me ample opportunities to enrich my competencies.

### **NATIONAL EXAMINATION QUALIFIED**

<b>Examination (Agency)</b>	<b>National Eligibility Test (UGC)</b>
<b>Qualifying Month &amp; Year</b>	December – 2012, December – 2013, June – 2014, December - 2015
<b>Subject</b>	Electronic Science

### **SPONSORED PROJECTS UNDERTAKEN**

<b>Title of the Project</b>	<b>Name of the Funding Agency</b>	<b>Duration</b>	<b>Role</b>	<b>Remarks</b>
Synthesis and characterization of rare earth doped $MY_2O_4$ (M= Sr, Ba, and Ca) Phosphors	Chhattisgarh Council Of Science & Technology (CGCOST)	2 Years	Co-Investigator	Submitted

### **ACADEMIC EXPERIENCE**

<b>Organisation</b>	<b>Pt. Ravishankar Shukla University, Raipur</b>
<b>Period</b>	From January '16 to April '20 & November '20 to Till Date
<b>Designation</b>	Assistant Professor (Contract)
<b>Responsibility</b>	<ul style="list-style-type: none"><li>▪ <b>TEACHING &amp; LAB ASSIGNMENTS:</b> Subjects related to Solar PV Technologies, Rooftop PV Systems, Energy Audit &amp; Management and Electrical Utilities etc. Projects &amp; Renewable Energy based Lab sessions.</li><li>▪ Assistance to complete establishment of Bachelor of Vocation programme in Renewable Energy Technology &amp; Management, approved by UGC under the National Skill Qualification Framework (NSQF), to promote interdisciplinary activities for development of skills. An initiative by Govt. of India.</li></ul>

	<ul style="list-style-type: none"> <li>▪ Establishment of Renewable Energy Lab: Identification, Specification Study, Report submission for procurement of lab equipment.</li> <li>▪ Complete Coordination including Salary Preparation, Report Preparation, Schedule Visits and Procurement of books related to course.</li> <li>▪ Complete data handling which includes: Admission, Scholarship, Attendance, Mentoring, Exam, Disciplinary, Website, Audit.</li> </ul>
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<b>Organisation</b>	<b>MATS University, Raipur</b>
<b>Period</b>	From August '12 to December '15
<b>Designation</b>	Assistant Professor
<b>Responsibility</b>	<ul style="list-style-type: none"> <li>▪ M.Tech (Power Electronics) Course Co-Coordinator under Department of Electronics &amp; Communication, School of Engineering &amp; IT.</li> <li>▪ Drafted syllabus of M.Tech (Power Electronics) &amp; B.Tech (Electronics &amp; Communication).</li> <li>▪ Coordinator for Two Days National Conference on “Innovations in Material Science &amp; Technology” (NCIMST - 2015) on 24<sup>th</sup> – 25<sup>th</sup> April, 2015 at School of Engineering &amp; IT.</li> <li>▪ Conducted &amp; Coordinated an Expert Lecture of Dr. K. Shankar, Visiting Scientist, CERN, Geneva, Switzerland &amp; Ex-Fulbright Program Coordinator, USIEF, Mumbai on 18<sup>th</sup> March 2015.</li> <li>▪ Overall In-Charge (Acting Head) of Department of Electronics &amp; Communication, School of Engineering &amp; IT since January 2013.</li> <li>▪ Member of Board of Studies for Department of Electronics &amp; Communication, School of Engineering &amp; IT.</li> <li>▪ IQAC Coordinator from Department of Electronics &amp; Communication, School of Engineering &amp; IT.</li> <li>▪ Member of Examination Committee for Conducting Term End Exam (May-June 2013) in University.</li> <li>▪ Member of Internal Audit Board of School of Engineering &amp; IT.</li> </ul>

## INDUSTRY EXPERIENCE

<b>Organisation</b>	<b>Ortel Communications Ltd., Raipur</b>
<b>Period</b>	From December '09 to July '10
<b>Designation</b>	Executive Engineer
<b>Role &amp; Responsibility</b>	<ol style="list-style-type: none"> <li>a) Node Monitoring using reverse receiver and to rectify corresponding problems with the co-ordination of fiber team (e.g. OFC Breakdown etc.)</li> <li>b) Transmission of Analog, Digital and Data signals using Hybrid fiber co-ax technique. Monitoring of all channels and Updation of their Electronic Program Guide.</li> <li>c) Planning about new projects to be established. Network design and mapping of corresponding area. Meeting with LCO's for network expansion in Raipur Area.</li> <li>d) Taking care of consumption record &amp; reporting to higher officials.</li> </ol>

	<b>Achievements:</b> <ul style="list-style-type: none"> <li>▪ Achieved a record figure of 599 (173 Analog &amp; 426 Digital) connections in one month with team size of only 4 persons, at a maximum delay of 2 days per customer with quality assurance of signal transmission at customer premise end.</li> <li>▪ Handled the project (Network design, connections and maintenance) of highly sensitive areas of Chhattisgarh state like Police Headquarter, CM House, Legislative Assembly etc.</li> </ul>
<b>Organisation</b>	<b>Web Edge Solutions, Raipur</b>
<b>Period</b>	From July '08 to November '09
<b>Designation</b>	Project Engineer
<b>Role &amp; Responsibility</b>	<ul style="list-style-type: none"> <li>a) Planning &amp; Execution of new projects.</li> <li>b) Developed Internal Network Infrastructure.</li> <li>c) Worked on the project based on Java &amp; get hands on for web development tools like Drupal, Dreamviewer etc.</li> </ul>

## M.TECH PROJECT

<b>Organisation</b>	<b>Raja Ramanna Centre for Advanced Technology, Indore (Department of Atomic Energy)</b>
<b>Title of Project</b>	Design and Development of Target Maneuvering System for Laser Welding Rig and Development of LabVIEW Based PC Interface.
<b>Period</b>	From – July 2011 to July 2012
<b>Units Operated</b>	<ul style="list-style-type: none"> <li>▪ Electronic Control System (Motion Controller) for Laser Welding Operation.</li> <li>▪ 10 KW High Power Lamp Pumped Pulsed Nd:YAG Laser System.</li> <li>▪ Vacuum System for Performing Experiments in Inert Atmosphere.</li> </ul>

## ACADEMICS

DEGREE/COURSE	INSTITUTE	UNIVERSITY/BOARD	YEAR	PERCENTAGE/ C.P.I.
Ph.D. (Electronics)	S.O.S. in Electronics & Photonics	Pt. Ravi Shankar Shukla University, Raipur	2018	Pursuing
Post Graduate Diploma (Energy Management)	Maharashtra Institute of Technology	MIT World Peace University	2019	77%

Advanced Diploma (NSQF-6)	Rooftop Solar Photovoltaic Entrepreneur	National Skill Development Corporation	2018	Qualified
M.Tech. (Optoelectronics & Laser Technology)	S.O.S. in Electronics & Photonics	Pt. Ravi Shankar Shukla University, Raipur	2012	73.7 %
B.E. (Electronics & Telecommunication)	Raipur Institute of Technology Raipur (C.G.)	Pt. Ravi Shankar Shukla University, Raipur	2008	70.5 % / 7.10
H.S.S.C. 12th	Holy Cross Hr. Sec. School Byron Bazaar Raipur (C.G.)	Chhattisgarh Board of Secondary Education	2004	68.6 %
S.S.C. 10th	Holy Cross Hr. Sec. School Byron Bazaar Raipur (C.G.)	Chhattisgarh Board of Secondary Education	2002	74.8 %

## CO-CURRICULAR ACTIVITIES

<b>Certification</b>	<ul style="list-style-type: none"> <li>• <b>Certified Trainer</b> for Gandhi Global Solar Yatra: Student Solar Ambassador 2019 organized by Indian Institute of Technology (IIT) Bombay.</li> <li>• <b>Training of Trainers (TOT)</b> for Solar PV Installer (Suryamitra, Civil, Electrical) organized by Skill council for Green Jobs (SCGJ), Govt. of India at New Delhi.</li> </ul>
<b>Orientation Course</b>	<ul style="list-style-type: none"> <li>• Attended <b>Two Weeks</b> DST, NSTEDB, EDII funded Faculty Development Programme on Entrepreneurship organized by Chhattisgarh Industrial and Technical Consultancy Centre, Raipur from 20<sup>th</sup> January -01<sup>st</sup> February 2020.</li> <li>• Attended <b>One Day Faculty Seminar</b> on “<i>Emerging Solar PV Technology Applications for Academics</i>” conducted at PVG’s College of Engineering &amp; Technology, Pune on 24<sup>th</sup> of February 2016.</li> <li>• Attended <b>Two Weeks</b> ISTE Short Term Training Programme on “<i>Engineering Physics</i>” under NMEICT (MHRD) conducted by IIT, Bombay from 08<sup>th</sup> to 18<sup>th</sup> December 2015.</li> <li>• Attended <b>Two Days</b> Short Course on “<i>Ultrafast Laser Pulses - Generation, Amplification &amp; Characterization</i>” organized by INDIAN LASER ASSOCIATION at RRCAT, Indore on 29<sup>th</sup> &amp; 30<sup>th</sup> November 2010.</li> </ul>
<b>Conferences</b>	<ul style="list-style-type: none"> <li>• Presented paper in <b>Two Days</b> International Conference on “<i>Innovation &amp; Challenges in Nano science &amp; Nano technology: Past, Present &amp; Future</i>” at Sanjay Rungta Group of Institutions, Bhilai on 15<sup>th</sup> -16<sup>th</sup> December 2022.</li> <li>• Presented papers in TEQIP funded <b>Two Days</b> International Conference on “<i>Recent Trends in Renewable Energy &amp; Sustainable Development</i>” at Bhilai Institute of Technology, Raipur on 30<sup>th</sup> &amp; 31<sup>st</sup> January 2020.</li> <li>• Coordinated <b>Two Days</b> National Conference on “<i>Innovations in Material Science &amp;</i></li> </ul>

	<p><i>Technology</i>” (NCIMST - 2015) at School of Engineering &amp; IT, MATS University, Raipur.</p> <ul style="list-style-type: none"> <li>• Presented paper at National Conference (BITCON - 2015), organized by BIT, Durg.</li> <li>• Presented posters at National Conference on “<i>Recent Trends in Photonics</i>” (NCRTP - 2014), organized by S.O.S. in Electronics &amp; Photonics, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Presented paper at National Conference on “<i>Applied Physics &amp; Material Science</i>” (NCAPMS-2013), organized by Vasavi College of Engineering, Hyderabad.</li> <li>• Attended International Conference on “<i>Vedic Science &amp; its Application</i>” (ICVSA-2010), Organized by Pt. Ravishankar Shukla University &amp; Vigyan Bharti, Raipur.</li> </ul>
<p><b>Workshops</b></p>	<ul style="list-style-type: none"> <li>• Attended one day International Symposium on “<i>Recent Trends in optical materials &amp; photonic devices</i>” held on 07<sup>th</sup> December 2022 organized by Dept. of Pure &amp; Applied Physics, Guru Ghasidas Viswavidyalaya, Bilaspur.</li> <li>• Attended 12 days Training Program on “<i>12 Days Master Class on Motor Control for EV Application using MATLAB Simulink</i>” from 01<sup>st</sup> -12<sup>th</sup> January 2022 organized by Pantech e-Learning, Chennai.</li> <li>• Attended one day National Webinar on “<i>Nuclear Power for Sustainable Development</i>” held on 04<sup>th</sup> September 2021 organized by Institute of Renewable Energy Technology &amp; Management &amp; Public Outreach Centre, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Participated in Two Weeks Hands-on Online Workshop Series on MATLAB for Engineering &amp; Science in the workshop module code “<i>EXEWEE02: Modeling with MATLAB Simulink</i>”, held during 12 - 25, July 2021 organized jointly by the ELIXIR Educational Services, Chhattisgarh and The Prime Academy, Tamil Nadu, India</li> <li>• Attended one day National Webinar on “<i>Science and Technology for Innovations, Entrepreneurship and Jobs</i>” held on 17<sup>th</sup> March 2021 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Attended one day National Webinar on “<i>Raman Effect and Fiber Optics Revolution</i>” held on 28<sup>th</sup> February 2021 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Attended one day National Webinar on “<i>Optical Communication: Innovation and Applications to 4G-5G Technology</i>” on 15<sup>th</sup> February 2021 organized by Govt. M.H. College of Home Science &amp; Science for Women (Auto.) Jabalpur &amp; State Project Directorate, Department of Higher Education, Govt. of M.P., Bhopal under the World Bank Project of M.P. Higher Education Quality Improvement Program.</li> <li>• Attended one day National Webinar on “<i>Optical &amp; Electrical Modeling and Simulation for Organic Semiconductor Devices using SETFOS s/w</i>” held on 05<sup>th</sup> February 2021 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Attended AICTE ATAL five days National Workshop on “<i>Green Technology &amp; Sustainability Engineering</i>” held on 08<sup>th</sup> -12<sup>th</sup> December 2020 at National Institute of Technology, Raipur,</li> <li>• Deputy Coordinator for “<i>Bright Idea Competition for Creating Awareness of Energy Conservation</i>” on 24<sup>th</sup> February 2020 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur in association with CREDA, Raipur.</li> <li>• Deputy Coordinator for <b>One Day Seminar</b> on “<i>Recent Advances in Sensors for Human Healthcare</i>” on 29<sup>th</sup> November 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> </ul>

	<ul style="list-style-type: none"> <li>• Deputy Coordinator for <b>GANDHI GLOBAL SOLAR YATRA: STUDENT SOLAR AMBASSADOR 2019</b>, “Solar Lamp Assembly Workshop” on 02<sup>nd</sup> October 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur in association with Indian Institute of Technology (IIT) Bombay.</li> <li>• Deputy Coordinator for <b>One Day Workshop</b> on “<i>Foldscope: An Educational &amp; Research Tool</i>” on 30<sup>th</sup> September 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Organizing Committee Member for National Level <b>Six Day UGC Workshop</b> on “<i>MOOCs, E-content Development and Open Educational Resources</i>” from 19<sup>th</sup> – 24<sup>th</sup> August 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Organizing Committee Member for <b>World Bank funded SUPRABHA Technical Assistance Two Day Training Program</b> on “<i>Rooftop Solar Grid Engineers for Utility officers</i>” on 25<sup>th</sup> -26<sup>th</sup> April, 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Deputy Coordinator for National Level <b>Five Days</b> Workshop on “<i>Entrepreneurship &amp; Skill Development Programme on Solar PV Rooftop</i>” from 3<sup>rd</sup> – 8<sup>th</sup> April 2019 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Deputy Coordinator for <b>Two Days</b> National Workshop on “<i>Computer Interfaced Science Experiments using ExpEYES</i>” (NWCISE-2019) on 30<sup>th</sup> -31<sup>st</sup> March 2018 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Deputy Coordinator for <b>05 Days</b> National Workshop on <i>Solar Entrepreneurship Development Program</i> from 22<sup>nd</sup> – 26<sup>th</sup> October 2018 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• Deputy Coordinator for <b>Six Days</b> National Workshop on “<i>Entrepreneurships in Renewable Energy Technologies for Chhattisgarh Tribal</i>” (ERETCT - 2016) from 19<sup>th</sup> – 24<sup>th</sup> September, 2016 at Institute of Renewable Energy Technology &amp; Management, Pt. Ravishankar Shukla University, Raipur.</li> <li>• <b>Two Days</b> Workshop on “<i>MATLAB Programming</i>”, from 30<sup>th</sup> to 31<sup>st</sup> October 2015, organized by School of Engineering &amp; IT, MATS University.</li> <li>• UGC sponsored <b>Five Days</b> National Workshop on “<i>Operation and Maintenance of Laboratory Equipments</i>”, from 19<sup>th</sup> to 23<sup>rd</sup> January 2015, organized by Western Regional Instrumentation Centre, University of Mumbai.</li> <li>• <b>Two Days</b> National Workshop on “<i>MATLAB Programming in Power Electronics &amp; Control System</i>”, from 21<sup>st</sup> to 22<sup>nd</sup> February 2014, organized by School of Engineering &amp; IT, MATS University in Aaghaaz-2014.</li> <li>• UGC sponsored <b>Two Days</b> National Workshop APW-2011, on “<i>Recent Trends on Optical Fiber</i>”, from 27<sup>th</sup> to 28<sup>th</sup> February 2011, organized by International School of Photonics at CUSAT, Cochin.</li> </ul>
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## RECOGNITIONS

	<ul style="list-style-type: none"> <li>▪ Overall 2<sup>nd</sup> Rank in Pt. Ravishankar Shukla University Merit List for M.Tech Course.</li> <li>▪ <b>Certified Trainer</b> for Gandhi Global Solar Yatra: Student Solar Ambassador 2019</li> </ul>
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<b>Recognitions and Responsibilities held</b>	<p>organized by Indian Institute of Technology (IIT) Bombay.</p> <ul style="list-style-type: none"> <li>▪ <b>Successfully accomplished Training of Trainers (TOT)</b> Programme for Solar PV Installer (Suryamitra, Civil, Electrical) organized by Skill council for Green Jobs (SCGJ), Govt. of India at New Delhi.</li> <li>▪ Founder member of Electronics Club and in charge of Information Cell of Electronics Club of S.O.S. in Electronics &amp; Photonics (Pt.Ravishankar Shukla University, Raipur).</li> <li>▪ General Secretary of Alumni Association of S.O.S. in Electronics &amp; Photonics (Pt.Ravishankar Shukla University, Raipur).</li> <li>▪ Secured 3<sup>rd</sup> Position in Model Competition in RITOFEST '06 organized by R.I.T. Raipur.</li> </ul>
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## B.E. VIII SEMESTER PROJECT

<b>Title of Project</b>	<b>SMS Based Device Switching.</b>
<b>Description</b>	<p>This Project is used to control eight electrical devices connected to the Kit. The status of the devices is made known to the user by the micro controller. The microcontroller polls each device and sends their status to user mobile phone. This enables the user to understand the status of each device.</p>

## B.E. VII SEMESTER PROJECT

<b>Title of Project</b>	<b>Implementation of 8 bit microprocessor using VHDL.</b>
<b>Description</b>	<p>In this project all of the functionality will come from the VHDL code that is written. The processor will have most of the arithmetic and logic functions. The desired instructions executed and the data to be operated on was given to the system as inputs. The result of the executed instructions was output. Each part was designed separately and tested, after testing; the individual parts were integrated to test functionality, which together formed a simple microprocessor. Integration of parts was done with the use of packages in VHDL.</p>

## LIST OF PUBLICATIONS

- Papers in International /National Journal: **09**
- Paper in International /National Conference Proceedings: **05**
- Book Chapter: **01**

## AREA OF INTEREST

- PV System Design, Characterization & System Losses Measurement, Charge Controller Design.
- LASER Material Processing, Optical Materials Synthesis and Characterization.

## SKILLS AND STRENGTHS

<b>Application Software &amp; Languages</b>	MATLAB Simulink, LabVIEW, OrCAD, PV*SOL, PVsyst, C & JAVA2.
<b>Strengths</b>	Learning Attitude, Innovative, Deterministic.

## REFERENCES

- 1. PROF. SANJAY TIWARI**  
Vice Chancellor, MP Bhoj Open University, Bhopal.  
Professor, S.O.S. in Electronics & Photonics, Pt. Ravishankar Shukla University, Raipur.  
Visiting Fellow, Cambridge University, Ex- Visiting Associate Professor, University of California.  
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- 2. DR. RAM NARAYAN PATEL**  
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Department of Electrical Engineering,  
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- 3. SHRI PRASHANT KHARE**  
Scientific Officer/G,  
Head, Cryo-module Engineering Lab,  
Raja Ramanna Centre for Advanced Technology,  
Govt. of India,  
Department of Atomic Energy.  
Phone No. : +91-731-2442460.

## MEMBERSHIPS

- Member of Indian Laser Association.
- Member of Photonics Society of India.
- Member of Chhattisgarh Vigyan Bharti.

## PERSONAL DETAILS

Name : Gajendra Singh Rathore  
Father's Name : Shri K.K.Rathore  
Sex : Male  
Date of Birth : 05<sup>th</sup> August 1986  
Linguistic Proficiency : English, Hindi  
Nationality : Indian

**I hereby declare that above data furnished are true to best of my knowledge and belief.**

**Gajendra Singh Rathore**