

PG Department of Physics

Faculty Achievements



2024-25

LIST & PROOFS OF PUBLICATIONS (April 2024-Jan 2025)

A. Paper Publication in Peer Reviewed Journals

| Sr. No. | Title | Journal | DOI No. | Proof |
|---------|-------|---------|---------|-------|
| 1. | nil | | | |

B. Publication in Conference Proceedings/Book Chapter

| S.No. | Title | Publisher | ISBN | Year | Level | Proof |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------|------|---------------|---------------------------------------------------------------------------------------|
| Dr. Anita Rani | | | | | | |
| 1. | Pressure induced analysis on the structural, optoelectronic, magnetic and thermoelectric properties of spinel ferrites: a DFT study | Woodhead | 9780443217425 | 2024 | International |  |
| Ms. Rajveer Kaur | | | | | | |
| 1. | Nanotechnology and its applications in different fields- A review | JS University, Manipuri Road, Shikohabad, Firozabad (U.P) | 978-93-91535-99-5 | 2024 | International |  |




C. Research Projects

| S.No. | Title | Status | Role | Funding Agency | Duration | Year of completion |
|-------|-------|--------|------|----------------|----------|--------------------|
| nil | | | | | | |

D. Invited Talk

| S.No. | Title | Conference | Venue | National/ International | Date | Proof |
|-------|-------|------------|-------|-------------------------|------|-------|
| nil | | | | | | |

E. Paper presentation

| S.No. | Title | Conference | Venue | National/ International | Date | Proof |
|-------------------------|------------------------------------------------------------------------------------------------|-------------|--------------------------------------------|--------------------------------|------------|---------------------------------------------------------------------------------------|
| Dr. Anita Rani | | | | | | |
| 1. | Spinel Ferrites (SF): Synthesis and catalytic application in environment and energy field | RISEMH-2024 | J S University, Shikohabad, Uttar Pradesh | International (Within Country) | 26-10-2024 |  |
| 2. | Structural and electronic properties of N substituted C20 fullerene (Abstract accepted) | NCMD-2025 | Teerthanker Mahaveer University, Moradabad | National | 15-02-2025 |  |
| Ms. Rajveer Kaur | | | | | | |
| 3. | Nanotechnology and its applications in different fields- A review | RISEMH-2024 | J S University, Shikohabad, Uttar Pradesh | International (Within Country) | 26-10-2024 |  |

List of training courses/workshops attended by the faculty (April 2024-Jan 2025)

| Sr. No. | Title | Date | Proof(certificates) |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|
| Department of Physics | | | |
| Dr. Anita Rani | | | |
| 1. | Attended One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda. | 07-08-2024 to 13-08-2024 | |
| 2. | Attend the One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS Conducted by Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala | 09-09-2024 to 14-09-2024 | |
| 3. | Attended workshop on G.M. Counters Conducted by Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai | 25-09-2024 to 26-09-2024 | |
| 4. | Attended Mentorship Programme delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib. | 30-09-2024 | |
| 5. | Attended the Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques delivered by Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib. | 01-10-2024 | |
| 6. | Attended the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh. | 05-10-2024 | |
| 7. | Attended the workshop on CRO AND DSO conducted by Dr. Asha Arora , Assisstant Professor in Physics , Dev Smaj College For Women at Ferozpur. | 09-10-2024 to 10-10-2024 | |
| 8. | Attended the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor , University College of Jaito. | 23-10-2024 | |

Ms. Rajveer Kaur

| Ms. Rajveer Kaur | | |
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| 1. | Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda. | 07-08-2024 to 13-08-2024 |
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Ms. Jeevanjot Kaur

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| 1. | Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda. | 07-08-2024 to 13-08-2024 | |
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Ms. Sandeep Kaur

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|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--|
| 1. | Attend the One Week Workshop on Proteus Software, Machine Learning and Cyber Security conducted by Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda. | 07-08-2024 to 13-08-2024 | |
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| 6. | Attend the Lecture on Standard Model I and II delivered by Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh. | 05-10-2024 | |
| 7. | Attend the workshop on CRO AND DSO conducted by Dr. Asha Arora ,Assisstant Professor in Physics ,Dev Smaj College For Women at Ferozpur. | 09-10-2024 to 10-10-2024 | |
| 8. | Attend the Extension Lectutre on Nuclear Physics delivered by Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito. | 23-10-2024 | |

Training/Workshops/Seminars organized (April 2024-Jan 2025)

| S.No | Name of Activity | Resource Person | No. of beneficiaries | Date | Proof |
|------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------|---------------------------------------------------------------------------------------|
| Department of Physics | | | | | |
| 1. | One Week Workshop on Proteus Software, Machine Learning and Cyber Security | Dr. Navdeep Goyal, a Professor from the Department of Electronics and Communication Engineering at Yadavindra Department of Engineering, Punjabi University Guru Kashi Campus, Talwandi Sabo, Bathinda, Punjab Dr. Manish Jindal, Director and Professor, Dept of Computer Science, Panjab University Regional Centre, Muktsar Dr. Monika Bansal, Associate Professor, Dept of Computer Science, SSD Girls College, Bathinda. | 151 | 07-08-2024 to 13-08-2024 |  |
| 2. | One week Workshop on Hand on Training Workshop ON ELECTRONICS PROJECTS | Er. Sukhwinder Singh , Coordinator , National Institute of Electronics , Research and Training , Patiala. | 151 | 09-09-2024 to 14-09-2024 |  |
| 3. | Rangoli Competition to Observe International Ozone Day. | - | 20 | 16-09-2024 |  |
| 4. | Workshop on G.M. Counters. | Dr. Sarbjit Singh , Ex- Scientific Office, BARC , Mumbai | 130 | 25-09-2024 to 26-09-2024 |  |
| 5. | Mentorship Programme | Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib. | 14 | 30-09-2024 |  |
| 6. | workshop on CRO AND DSO | Dr. Asha Arora , Assisstant Professor in Physics , Dev Smaj College For Women at Ferozpur. | 120 | October 09-10,2024 |  |
| 7. | National Graduate Physics Examination | - | 15 | 19-01-2025 |  |

Books purchased (April 2024-Jan 2025)

Department of Physics

1. **Journal Subscribed: Nil**






2. **List of Books (Total Books: 87 with 43)**

| S.No. | Book Name | Author | QTY. |
|--------------|---------------------------------------------------------|-----------------|-------------|
| 1. | Classical Mechanics | Gupta | 2 |
| 2. | Mechanics | Soni | 2 |
| 3. | The special theory of relativity | Morris | 2 |
| 4. | Vibration and waves | French A | 2 |
| 5. | Waves and Oscillations | Subrahmanya m N | 2 |
| 6. | Electricity and Magnetism | Murugesan | 3 |
| 7. | Introduction to Electrodynamics | Griffiths | 3 |
| 8. | Statistical Physics, thermodynamics and kinetic theory | Bhatia V | 3 |
| 9. | Thermal Physics | GARG | 2 |
| 10. | Electronic devices and circuit theory | Boylestad | 3 |
| 11. | Electronic principles | Malvino | 3 |
| 12. | Solis state electronic devices | Streetman B.G | 3 |
| 13. | Basic electronics and linear circuits | BHARGAVA | 2 |
| 14. | Electronics fundamentals and applications | Chattopadhyay | 2 |
| 15. | Nuclear Physics | Roy R | 2 |
| 16. | Lasers and non-linear optics | Laud | 3 |
| 17. | A textbook of optics | Subrahmanyam | 3 |
| 18. | Optics | Ghatak A | 3 |
| 19. | Introduction of quantum mechanics | Griffiths | 2 |
| 20. | Solid state Physics | Pillai | 3 |
| 21. | Elementary solid state Physics | Omar | 2 |
| 22. | Fundamentals of Physics (2016) | GIAMBATTIST | 3 |
| 23. | Introduction of crystallography and solid state Physics | Bhattacharya D | 2 |





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| 24. | Elements of solid state Physics | Srivastava J. | 2 |
| 25. | Introduction to Nuclear Physics | Krane | 3 |
| 26. | Introduction to Solid State Physics | Kittel | 3 |
| 27. | An Introduction to Mechanics | Kleppner | 3 |
| 28. | Non-Relativistic Quantum Mechanics | Puri | 1 |
| 29. | Statistical Physics Vol, 9 | Landau | 1 |
| 30. | Classical Electrodynamics | Schwinger | 1 |
| 31. | Quantum Field Theory | Ryder | 1 |
| 32. | Introductory Solid state physics | Schmool D. | 2 |
| 33. | Statistical Physics Vol 5 | Landau | 1 |
| 34. | Digital Integrated Electronics | TAUB | 2 |
| 35. | Computational Physics | Mittal | 1 |
| 36. | Elements of Modern Physics | Jain V | 1 |
| 37. | Mathematical Physics | Balakrishr | 1 |
| 38. | Introduction to Electromagnetic Theory | Chow | 1 |
| 39. | Atomic and Nuclear Physics | Thorley N | 1 |

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|-----|------------------------------------------------------|-----------|---|
| 40. | Basic Electronics | Thareja | 1 |
| 41. | Radiation Detection and Measurement | Knoll G | 1 |
| 42. | Laser Fundamentals 2nd Edition (South Asian Edition) | SILFVAS T | 2 |
| 43. | Elements of Modern Physics | Patil | 1 |

Outreach Interdisciplinary Activities (April 2024-Jan 2025)

| S.No. | Name Of Activity | Date | Participants | Proofs |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|---------------------------------------------------------------------------------------|
| Department of Physics | | | | |
| 1. | Educational visit to Verka Milk Plant, Ludhiana | 04-11-2024 | 90 |  |
| 2. | Paper presented by Ms. Gaganpreet Kaur and Ms. Jashanpreet Kaur (students of B.Sc. III N.M.) in RISEMH-2024 at J S University, Shikohabad, Uttar Pradesh | 26-10-2024 | 02 |  |
| 3. | Paper presented by Ms. Chahat, (students of B.Sc. II N.M.) in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala | 21-11-2024 | 03 |  |
| 4. | Paper presented by Ms. Ramandeep Kaur, (students of B.Sc. II N.M.) in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala | 21-11-2024 | 03 |  |
| 5. | Paper presented by Ms. Harsharan in ICIM-2024 at St. Stephens College, Uzhavoor, Kerala | 21-11-2024 | 03 |  |

Invited Lectures (April 2024-Jan 2025)

| S.No. | Topic | Speaker | Date | No. of Beneficiaries | Proofs |
|------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------|----------------------|---------------------------------------------------------------------------------------|
| Department of Physics | | | | | |
| 1. | Special talk on radioactivity and nuclear decay, radiation detection | Dr. Sarbjit Singh , Ex-Scientific Office, BARC , Mumbai | 25-09-2024 to 26-09-2024 | 130 |  |
| 2 | Extension Lecture on Indoor Radon ,Thoron Concern And Measurement Techniques. | Dr. Vimal Mehta , Assisstant Professor in Physics , Sri Guru Teg Bahadhur Khalsa College, Anandpur Sahib. | 01-10-2024 | 120 |  |
| 3 | Extensio lecture on Standard Model I and II | Dr. Navneet Kumar Pruthi , Assistant Professor , DAV College Sector-10, Chandigarh. | 05-10-2024 | 120 |  |
| 4 | Extension Lectutre on Nuclear Physics | Dr. Bhawandeep Kaur Uppal Assisstant Professor ,University College of Jaito. | 23-10-2024 | 120 |  |