



Dr. Anupma Agarwal

Associate Professor

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Educational Qualification:

Ph.D (Physics) Rabindra Nath Tagore University, Bhopal, M.Phil (Physics) Dr C V Raman University, Bilaspur

Total Experience: 17 yrs

Areas of Interest:

Physics, Astro Physics, Materials, Product Development.

Brief Profile:

Dr. Anupma Agarwal is currently working as an Associate Professor at Sage University, Bhopal. She achieved her Ph. D Degree from Rabindranath Tagore University, Bhopal in July 2020. She obtained M. Phil degree from Dr. C. V. Raman University, Bilaspur, Chhattisgarh in 2009. She completed her post graduation from Govt. Autonomous P G College, Datia in 1998. She has 19 international publication and editor of two proceedings of International Conferences published in IOP Conference series: MSE and Material Today: Proceedings. Editor of two ISBN proceedings. Supervised three M Tech Thesis. Editorial Board Member of American Journal of Physics and Applications, USA since January 27, 2021, Life Member of International Association of Engineers (IAENG), Hong Kong since August 02, 2021 and Life Member of Indian Society of Technical Education (ISTE), New Delhi, since January 19, 2001. Life member of Indian LASER Association. Her research interest includes atmospheric physics, product development, material engineering. She has guided M. Tech students and organized many International Conferences, FDPs, webinar and seminars and delivered the expert talk.

Research publications:

1. Raja, Nitish; Kumar, Atul; Chauhan, Premanand S.; Agarwal, Anupma (2023). Finite element modelling and microstructural correlation of hot forged Al-Zn-Mg-Cu alloy (T6) using DEFORM-3D, Elsevier, Science Direct, *Material Today: Proceedings* <https://doi.org/10.1016/j.matpr.2023.08.355>

2. Verma, Rahul; Torgal, Suwarna; Agarwal Anupma (2023). Experimental stress analysis on polycarbonate material using photoelasticity, Elsevier, Science Direct, *Material Today: Proceedings*
<https://doi.org/10.1016/j.matpr.2023.08.270>
3. Chauhan, Premanand Singh; Sen, Mayur; and Agarwal, Anupma (2023). Manufacturing of non-threaded fasteners: an analysis of nonconformities during manufacturing process and abatement, IOP Publishing; Journal of Physics; doi:10.1088/1742-6596/2484/1/012056 <https://iopscience.iop.org/article/10.1088/1742-6596/2484/1/012056/pdf>
4. Kumar, Rajan; Tripathi, Ajay; Dwivedi, Ravi Kumar; Arya, Ranjeet Kumar; Yadav, Anil Singh; and Agarwal, Anupma (2023). Influence of austempering temperature on carbide free bainite development, a critical review, IOP Publishing; Journal of Physics; doi:10.1088/1742-6596/2484/1/012029
<https://iopscience.iop.org/article/10.1088/1742-6596/2484/1/012029/pdf>
5. Ojha, Amit; Chauhan, Premanand S; Sharma, Avadesh and Agarwal, Anupma (2022). Investigation of creep behaviour on copper rod at multiple temperature, Elsevier, Science Direct, *Material Today: Proceedings*
<https://doi.org/10.1016/j.matpr.2022.02.551>
6. Jain, Akshay; Agarwal, Anupma; Chauhan, Premanand S(2022). Optimization of laser cutting quality characteristics for basalt –glass hybrid composite using hybrid approach, Elsevier, Science Direct, *Material Today: Proceedings*
<https://doi.org/10.1016/j.matpr.2022.04.578>
7. Singh, Anoop Pratap; Dwive Ravi Kumar; Kumar Rajan; Agarwal, Anupma; Suhane, Amit(2022). Study of oleic acid as a surface modifying agent for oxide nanoparticles, Elsevier, Science Direct, *Material Today: Proceedings*
<https://doi.org/10.1016/j.matpr.2022.04.356>
8. Chauhan, Premanand S; Dwivedi, Ravi Kumar; Agarwal, Anupma(2022). Implementation of FMECA on Industrial Tool Room Cooling System, *International Journal of Materials, Mechanics, Mechatronics and Manufacturing, ISSN: 283-5688, Volume: 001 (2022), pp. 11-18*
<http://www.yajurvedam.in/ij4m/download/IJ4M003.pdf>
9. Jain, Gaurav; Agarwal, Anupma(2022). Improvement in engineering properties of locally available black soil by fly ash and brick waste, *International Journal of Materials, Mechanics, Mechatronics and Manufacturing, ISSN: 283-5688, Volume: 001 (2022), pp. 43-52*
<http://www.yajurvedam.in/ij4m/download/IJ4M008.pdf>
10. Sharma, Siddharth; Tripathi, Ajay; Dwivedi Ravi; Kumar, Rajan; Agarwal, Anupma(2021). A critical review on wear and corrosion of carbide free bainitic steel, *IOP Conf. Series; Material Science and Engineering, 1136 (2021) 012027* doi: 10.1088/1757-899X/1136/1/012027
<https://iopscience.iop.org/article/10.1088/1757-899X/1136/1/012027/pdf>

11. Kumar, Sumit; Chauhan, Premanand S; Sharma, Avadesh and Agarwal, Anupma (2020). Analysis of Temperature Dependent Creep Behaviour of Aluminium Bar. *International Journal of Advance Science and Technology*, 29(10S), 6256-6263.
12. Agarwal, Anupma; Bhattacharya, S and Chaudhary, Suryanshu (2020). Electric Field Mill, an Effective Methodology to Measure the Localized Lower Atmospheric Electric Field, Elsevier, Science Direct, *Material Today: Proceedings* 29(2020) 440-447
<https://www.sciencedirect.com/science/article/pii/S2214785320353906>
13. Bhattacharya, S, Agarwal, Anupma, Mishra P and Sikarwar M (2020). Smart Measurement Technique Employed for Detection of Localized Anomalies in the Atmosphere, Elsevier, Science Direct, *Material Today: Proceedings* 29(2020) 668-673
<https://www.sciencedirect.com/science/article/pii/S2214785320354249>
14. Agarwal, Anupma; Bhattacharya, S and Chaudhary, Suryanshu (2020). Study of Localized Atmospheric Electric Field in two Contrasting Weather Conditions, *International Journal of Innovation in Engineering Research & Management*; I.F. 6.33, Vol. 07 Issue I, <http://ijerm.co.in/index.php/IJIERM/article/view/1986>
15. Agarwal, Anupma; Bhattacharya, S and Chaudhary, Suryanshu (2019). Atmospheric Electric Field: A Study During Fair Weather, *Journal of Current Sciences*, Vol 20, Issue-07
16. Agarwal, Anupma and Bhattacharya S (2016). An Approach to Study the Atmospheric Electric Field Using EFM System, *International Journal of Current Engineering and Scientific Research*, Volume III, Issue I
<http://troindia.in/journal/ijcesr/vol3iss1part2/153=156,%20093.pdf>
17. Bhattacharya, S; Tyagi, Anugya and Agarwal, Anupma (2013). Signal Bursts Observed by Low Earth Satellite during Seismicity, *International Journal of Scientific and Research Publications*, Volume 3, Issue 3
<https://www.ijsrp.org/research-paper-0313.php?rp=P15860>
18. Bhattacharya, S; Agarwal, Anupma and Bhattacharya, A. K. (2013). Initial Response of Electric Field Monitoring System towards Measurement of Atmospheric Electric Field during Normal and Lightning Times, *International Journal of Scientific and Research Publications*, Volume 3, Issue 8
<https://www.ijsrp.org/research-paper-0813.php?rp=P201685>
19. Studying Some Examples of Ionospheric Perturbations recorded through Low Earth Orbiting DEMETER Satellite, *published in proceedings of 21st EM Induction Workshop, Darwin, Australia, July 25-31, 2012*

. Book/Proceedings:

1. An editor of an Edited book on **Biomedical Implants: Materials, Design & Manufacturing** published by **Taylor & Francis, CRC Press**
<https://www.routledge.com/Biomedical-Implants-Materials-Design-and-Manufacturing/Dwivedi-Chauhan-Sharma-Singh-Agarwal/p/book/9781032428406>

2. An Editor of Proceedings of an International Conference on Machine Intelligence and Cyber Physical Systems (ICMICPS 2023) with [ISBN: 978-93-100-0082-5](#)
3. An Editor of Proceeding of an International Conference on Material Science, Mechanics and Technology (ICMMT2022) with [ISBN: 978-93-5680-256-8](#)
4. Editor of Proceeding of an International Conference on Material Science, Mechanics and Technology (ICMMT2022) with [ISBN: 978-93-5680-256-8](#)
5. Editor of Proceedings of an International Conference on Material, Mechanics, Mechatronics and Manufacturing (IC4M2022), Elsevier, Science Direct, *Materials Today: Proceedings*
<https://www.sciencedirect.com/journal/materials-today-proceedings/vol/62/part/P12>
6. Editor of Proceedings of an International Conference on Material, Mechanics, Mechatronics and Manufacturing (IC4M2021), volume 1136 **published by IOP Conference Series: Material Science and Engineering**
<https://iopscience.iop.org/issue/1757-899X/1136/1>

<https://iopscience.iop.org/article/10.1088/1757-899X/1136/1/011001/pdf>

Book Chapter:

1. B Sharma, S S P M; Agarwal, Anupma; Chauhan Premanand S; Zirath, Rachna; Khemka, Amit; **Recent Advancements in Materials: Nano-composites**, A book chapter in an Edited book on **Biomedical Implants: Materials, Design & Manufacturing** published by Taylor & Francis, CRC Press
2. **Patent:**

S. N.	Application Number	Date of Filing	Date of Publication	Title	Publishing Agency
1	202341007972	07/02/2023	24/02/2023	Statistical Machine Learning Model for Generation and Integration of Renewable Energy Using Distribution Network	Indian Patent Office
2.	202321021542	25/03/2023	28/04/2023	System for real-time tracking and monitoring of inventory in a supply chain	Indian Patent Office
3.	394781-001	09/09/2023	Filed	Foldable Chair	Indian Patent Office

Symposium/Conference Attended:

1. Paper Presented at National Conference on Physics & Environment (NCPE-2023) at Lakshmi Narain College of Technology, Bhopal from June 30 to July 01, 2023.
2. Paper presented at an international conference on “Renewable Energy for Sustainable Development RESD-2018” at Maharana Pratap College of Technology, Gwalior in association with Aspire Research & Social Welfare Society, Ghaziabad, during 26-27, 2018
3. Paper presented at national conference on “Smart Materials: Energy and Environment for Smart Cities (NSES-2018) at Amity University, Madhya Pradesh on February 28, 2018.
4. Paper presented at National Conference on “Natural Hazards and Mitigation” paper entitled as “Effective Methods for the study of Atmospheric Electric Field Using Ground Based Electric Field Monitoring System” at Eshan College of Engineering, Farah, during December 04-05, 2012

Symposium attended on “Advances in Environmental Chemistry and Green Technologies-2012” at Rustamji Institute of Technology (RJIT), Tekanpur, during April 21-22, 2012

Lecture Delivered:

1. Lecture delivered at Medicaps University, Indore on **SDG 12, Responsible Consumption and Production** on April 12, 2024, at **Global Peace & Sustainable Development Summit 2024**
2. Lecture delivered at **Government College Nasrullaganj, Sehore**, on “**Gender Equality**” on September 30, 2022 sponsored by **M. P. Higher Education Quality Improvement Program and under the aegis of World Bank Project.**
3. Lecture delivered in the national level webinar at **Sardar Patel College of Engineering, Mumbai** organized by **IQAC, SPCE in collaboration with SAEINDIA, Western Chapter and IIE-SPCE, Student Chapter** on “**Need of Human Values in Present Scenario**” on September 06, 2021
4. Lecture delivered at **Government College Nasrullaganj, Sehore**, on “**Need of Value Education in Education**” on February 04, 2021
5. Lecture delivered at **Rewa Engineering College (REC), Rewa** on “**Need of Human Values in Present Scenario**” on December 07, 2020

Evaluator:

1. **Session Chair** at the **International Conference on Machine Intelligence and Cyber Physical Systems (ICMICPS2023)** held on December 23-24, 2023 organized by Sushila Devi Bansal College of Technology, Indore, India
2. **Session Chair** at the **International Conference on ICT in Business, Industry and Government(ICTBIG2023)** held on December 08-09, 2023 organized by Symbiosis University of Applied Sciences, Indore, India
3. Acted as a primary evaluator in **Toycathon-2021** jointly organized by **AICTE and Ministry of Education’s INNOVATION CELL, Government of India.**

Activity Organized:

1. Innovation, Design and Entrepreneurship (IDE) Bootcamp, Phase-II, Organized by **Ministry of Education's Innovation Cell (MIC) & All India Council for Technical Education(AICTE)** hosted by Symbiosis University of Applied Sciences, Indore, during January 29, 2024 to February 02, 2024.
(A Faculty Coordinator)
2. Member of **the Scientific Board** of the **International Conference of Mechanical and Mechatronics Engineering (ICMME)** which will be held in **Munich, Germany** from April 22-24, 2024
<https://www.pagesconferences.com/2024/mechanical-mechatronics-engineering/committee>
3. International Conference on Machine Intelligence and Cyber Physical Systems (ICMICPS-2023) held during December 23-24, 2023
<https://sdbc.ac.in/icmicps/pages/committee.php>
(National Collaboration Co-Chair)
4. An IEEE International Conference on Information and Communication Technology in Business, Industry and Government(ICTBIG2023) held during December 08-09, 2023 at Symbiosis University of Applied Sciences, Indore
(Member of Organizing Committee)
5. First Skill based Patent Conclave; Symbiclave 2023 held during May 05-06, 2023 at Symbiosis University of Applied Sciences, Indore
(Core Committee Member)
6. A Central Zone AIU VC's Meet held during January 17-18, 2023 hosted by Symbiosis University of Applied Sciences, Indore.
(Rapporteur)
7. An International Conference on Advances in Material, Mechanics, Mechatronics & Manufacturing to be held online during April 15-16, 2023 with the Publication partner **Materials Today: Proceedings, Elsevier (Scopus Indexed)**
(Organizing Secretary)
8. An International Conference on Material Science, Mechanics and Technology (ICMMT2022) scheduled during December 22-23, 2022 with the publication partner, **Journal of Physics: Conference Series, IOP Publishing (Scopus Indexed)**
(Joint Coordinator)
9. An International Conference on Advances in Material, Mechanics, Mechatronics & Manufacturing held online during April 09-10, 2022 with the Publication partner **Materials Today: Proceedings, Elsevier (Scopus Indexed)**
(Organizing Secretary)
10. **AICTE-ISTE Sponsored** Refresher Program on “Advanced Materials for Sustainable Engineering” organized at IPS College of Technology and Management, Gwalior during January 05-11, 2022.

(Co-coordinator)

11. An International Conference on Materials, Manufacturing and Energy (ICMME-2021) by Rajkiya Engineering College Mainpuri, U. P., India in Association with IFERP during December 17-18, 2021

(National Collaborator)

12. An International Conference on Innovation Challenges and Advances in Engineering & Technology organized by Vishwaniketan's & Institute of Management Entrepreneurship and Engineering Technology in association with Institute for Engineering Research & Publication (IFERP) during September 05-06, 2021

(Steering Committee Chair)

13. An International Conference on Advances in Material, Mechanics, Mechatronics & Manufacturing held online during March 06-07, 2021 with the publication partner, **Material Science and Engineering: Conference Series, IOP Publishing**

(Organizing Secretary)

14. **AICTE_ISTE Sponsored** one week refresher program on "Learner Oriented Teaching Methods" at IPS College of Technology and Management, held online during February 10 to 16, 2021

(Co-coordinator)

15. Three weeks Student's Induction Program for session 2020-2021

(Coordinator)

16. TEQIP-III sponsored one day webinar on "Hydrogen Fuel Cell: Challenges and Opportunities" by Dr. Prakash C. Ghosh, Prof. Dept. of Energy Science and Engineering, IIT Bombay, Mumbai, India with the association of RGPV, at IPS College of Technology and Management, Gwalior on September 11, 2020.

(Coordinator)

17. TEQIP-III sponsored six day "Student Excellence and Learning Program (SELP)" at IPS College of Technology and Management, Gwalior during June 16 to 21, 2020.

(Coordinator)

18. Annual Function Vilay-2020 of IPS Group of Colleges, Gwalior, held in the month of March 2020.

(Coordinator)

19. A seminar organized on "Healthy Life style and Stress Management" by Dr. Rachna Zirath, MD, Syracuse, Newyork at IPS College of Technology and Management, Gwalior on February 12, 2020.

(Coordinator)

20. Three weeks Student's Induction Program for session 2019-2020

(Coordinator)

21. TEQIP-III sponsored three days Popular lecture series on "Physics(Wave Optics)", at IPS College of Technology and Management during July 05-07, 2019.
(Co-coordinator)
22. TEQIP-III sponsored three days Popular lecture series on "Physics(Wave Mechanics)", at IPS College of Technology and Management during April 06-07, 2019.
(Member of organizing committee)
23. MPCST Sponsored One Week Short Term Training Program on "Recent Developments in Manufacturing System" at IPS College of Technology & Management during March 09-13, 2019
(Co-coordinator)
24. An International Seminar on "Advances in Solar Energy System" at IPS College of Technology and Management, Gwalior on March 02, 2019
(Organizing Secretary)
25. Three weeks Student's Induction Program for session 2018-2019
(Coordinator)
26. MPCST sponsored, National Science Day Celebration on the theme "Science & Technology for Sustainable Future" at IPS College of Technology & Management, Gwalior, on February 28, 2018.
(Organizing Secretary)
27. An International Conference on "Futuristic Trends in Engineering, Science. Humanities and Technology (FTESHT-16)" at IPS College of Technology & Management, Gwalior, during January 23-24, 2016.
(Co-coordinator)
28. National Creativity Aptitude Test at IPS College of Technology and Management, Gwalior in 2013.
(Member of Organizing Committee)
29. National Creativity Aptitude Test at IPS College of Technology and Management, Gwalior in 2012.
(Member of Organizing Committee)
30. International conference of All India Association for Educational Research [AIAER] on " Learning Community for Global Education Reform" organized by Institute of Professional Studies, Gwalior, during November 18-20, 2011
(Member of Organizing Committee)

Membership of Professional Bodies:

1. Life member of the **Indian Laser Association (ILA)** since February 2024
2. Life Member of the **International Association of Engineers (IAENG)** since August 02, 2021
3. Life Member of **Indian Society of Technical Education (ISTE)**, New Delhi, since January 19, 2001
4. Editorial Board Member of **American Journal of Physics and Applications, USA** since January 27, 2021

5. Associate Editor of the **International Journal of Materials, Mechanics, Mechatronics & Manufacturing (IJ4M)** with ISSN: 2583-5688