



## **DR. ANU MISHRA**

- B.Tech. in “Man made Fibre Technology” from Govt. Central Textile Institute (GCTI), Kanpur (1999-2003).
  - M.Tech. in “Fibre Science & Technology” from IIT Delhi (2003-2005).
  - Ph. D. from Department of Textile Technology, IIT Delhi (Awarded in 2018).
  - Experience: 21 years of teaching & research experience.
- 
- Area of Research: Carpet Technology, Functional finishing of Textiles.
  - Recipient of prestigious “*Dr Triguna Charan Sen Prize*” from Institution of Engineers for the year 2023.
- 
- Presently working as Asstt. Professor in Indian Institute of Carpet Technology, Bhadohi (U.P.). Also, holding the responsibility of Deputy Technical Manager of ICT Laboratories (NABL accredited).
- 
- Program coordinator of Short term training course on “Carpet Inspection and Quality Control”.

Mobile No: 09935792794e. mail: [mishraanu79@gmail.com](mailto:mishraanu79@gmail.com)

## Journal Publications

- Mishra, A., & Butola, B. S. (2017). Deposition of Ag doped TiO<sub>2</sub> on cotton fabric for wash durable UV protective and antibacterial properties at very low silver concentration. *Cellulose*, 24(8), 3555-3571.
- Pandey, A., & Mishra, A. (2017). Application of artificial neural networks in yield prediction of potato crop. *Russian Agricultural Sciences*, 43(3), 266-272.
- Goel, A., Osta, S., Mishra, A., & Butola, B. S. (2017). Use of amorphous TiO<sub>2</sub> deposited on cotton by sol-gel process for de-colorization of direct dye solutions in presence of UV radiation. *Indian Journal of Fibre & Textile Research (IJFTR)*, 42(4), 474-479.
- Mishra, A., & Butola, B. S. (2018). Development of cotton fabrics with durable UV protective and self-cleaning property by deposition of low TiO<sub>2</sub> levels through sol-gel Process. *Photochemistry and photobiology*, 94(3), 503-511.
- Anu Mishra and B. C. Ray (2018). Need of skill development in hand made carpet industry: a socio- economic perspective. *Journal of the Textile Association (JTA)*, 79 (1), 24-27 (ISSN 0368-4636).
- Mishra, A., & Butola, B. S. (2019). Silver-Doped TiO<sub>2</sub>-Coated Cotton Fabric as an Effective Photocatalytic System for Dye Decolorization in UV and Visible Light. *Photochemistry and photobiology*, 95(2), 522-531.
- Anu Mishra, Himansu Shekhar Mohapatra and B.S. Butola (2019). Imparting Protection against UV Radiations Using *In Situ* Coating of Titanium Dioxide on Textiles. *International Letters of Chemistry, Physics and Astronomy*, ISSN: 2299-3843, Vol. 82, pp 14-20, doi:10.18052/www.scipress.com/Switzerland.
- Mishra, A. (2022). Hydrothermal Treatment for Imparting Wash-Durable UV Protection Property in Cotton Using Zinc Oxide Nanoparticles. *Journal of The Institution of Engineers (India): Series E*, 103(2), 227-231 (ISSN: 2250-2483).
- Mishra, A., & Butola, B. S. (2022). Enhancement in Dye Decolorization and Stain Removal Property of Cotton Fabric Coated with a Combination of Different TiO<sub>2</sub> Forms (Both P-25 and Anatase TiO<sub>2</sub>). *Journal of The Institution of Engineers (India): Series E*, 103(2), 209-218 (ISSN: 2250-2483).

- Mishra, A. (2022). In-situ Deposition of Copper Oxide for Imparting Multifunctional Properties in Cotton Fabrics. *Journal of the Textile Association (JTA)*, 83 (4), 263-266 (ISSN 0368-4636).
- Mishra, A. (2022). Preparation and Evaluation of Electroconductive Threads from waste carpet. *Journal of the Textile Association (JTA)*, 83 (4), 233-236 (ISSN 0368-4636).
- Mishra, A. (2022). Self-cleaning Technique: Working Mechanism, Utility in Textile Products and Existing Challenges. 0975-2412 (Online); 0971-7706 (Print), NIScPR-CSIR, India, [BVAAP Vol.30\(2\) \[December 2022\]](#), 71-78.
- Mishra, A. (2024). Carpet with Good Indoor Air Quality – A Technical Appraisal. *Journal of the Textile Association (JTA)*, 85 (3), 254-257 (ISSN 0368-4636).
- Mishra, A. (2025). Handmade Rugs: Pathways to Ethical Certification and Global Compliance. *Journal of the Textile Association (JTA)*, 86 (2), 155-160 (ISSN 0368-4636).

### **Conference Publications**

- Anu Mishra (2024). Role of Certifications in Handmade Rug Business, National Conference on “Advent of Emerging Technologies in Textile Industry”, October 26-27, 2024 organized by OBA GCTI Kanpur and UPTTI Kanpur, India (Pg. 109-113). (ISBN: 978-93-92497-96-4)
- Anu Mishra and B.C. Ray (2019). New generation handmade carpet through mechanistic rationalization-A technical survey. TEQIP III sponsored National Conference on “Futuristics in Mechanical Engineering (FME 2019)” on 28-29th March, 2019, organized by MMMUT, Gorakhpur, Uttar Pradesh. (ISBN: 978-81-933908-3-2)
- Anu Mishra (2017). Imparting UV protection property in cotton fabric by treatment with zinc oxide nanoparticles, National Conference on “Fashion Apparel and Textile (NCFAT’18)” on 29th March, 2017, organized by Amity University Uttar Pradesh. (ISBN: 978-93-86238-19-1)
- Anu Mishra, P.K. Bhar and K.K. Goswami (2007). Exploration of Unconventional vegetable fibres in floor-covering applications (page-6). 3<sup>rd</sup> International conference on “Natural Fibres: Vision 2020” organized by NISTI ( North India Section of the Textile Institution)

### **Conference Presentations**

- Mishra, A., Dashora, P. & Butola, B. S. (2015). Multi functional cotton fabric by sequential deposition of metal oxides. 15<sup>th</sup> Autex World Textile Conference 2015, June 10-12, 2015, Bucharest, Romania (ISBN 978-606-685-276-0)
- Anu Mishra (2017). Imparting wash durable, anti-bacterial property in cotton fabric by in-situ deposition of ZnO nanoparticles. Poster presentation in International conference on “Advances in Biological system and materials science in nano world”, 19-23 February, organized by IIT BHU.
- Mishra, A. (2017). Imparting UV protection in cotton fabrics using TiO<sub>2</sub> coating. International Conference on Advance Materials, Textiles and Processes (ICAMTP) October 14-15, 2017, UPTTI Kanpur.
- Mishra, A., & Butola, B. S. (2018). Photocatalytic decolorization of Rhodamine B dye solution using TiO<sub>2</sub> coated cotton fabric. International Conference on Functional Textiles & Clothing Conference, February 9-11, 2018, IIT Delhi.
- Mishra, A. (2018). Application of Red sandal wood (*Pterocarpus santalinus*), Madder (*Rubia cordifolia*) and their binary mixtures for coloration of woollen goods, International Conference on Industrial Textiles – Products, Applications And Prospects (**InduTech 2018**), 17 & 18 August, PSG College of Technology, Coimbatore.
- Anu Mishra (2018). Protection against UV radiations using Textiles, International Conference on Advances in Textile Materials and Processes (ATMP 2018), 19-20 November, organized by UPTTI Kanpur & IIT Kanpur.
- Anu Mishra (2019). Atomic Absorption Spectroscopy: Measurement Principle and Applications in the field of Textiles, International Conference on Advances in Textile Materials and Processes (ATMP 2019), 02-03 December 2019, organized by UPTTI Kanpur & UICT Jalgoan.
- Anu Mishra (2023). Imparting Multifunctional Properties in Cotton Fabric by In-Situ Deposition of Copper Oxide nanoparticles, International Conference on Polymers for Advanced Technology, February 23-25, 2023 organized by Asian Polymer Association, India & IIT Delhi.
- Anu Mishra (2024). Handmade Rugs: Essential Certifications and Global Compliance, Seminar on “Sustainability and Circularity in Carpet and Textile Industry”, October 25-26, 2024 organized by OP Jindal Global University, Sonapat, India.
- Anu Mishra (2025). Development of Natural Dyeing process for Woolen Carpets using Indigenous Bio-Resources, 12<sup>th</sup> HSCA International Conference on Sustainable Materials

and Bio-resource Integration: Bridging Technology and Traditional Knowledge, June 14-15, 2025 organized by Him Science Congress Association, India & ICFRE-HFRI, Shimla.

### Book Chapters

- Anu Mishra (2018). Woolen Carpet Industry: Environmental Impact and Recent Remediation Approaches, Shahid-ul-Islam and B.S. Butola (eds.) *Advanced Textile Engineering Materials*, (289–328), Scrivener Publishing LLC (ISBN 9781119487852).
- Anu Mishra and Bhupendra Singh Butola (2019). Photocatalytic Decolorization of Rhodamine B Dye Solution Using TiO<sub>2</sub> Coated Cotton Fabric, Springer Nature Singapore Pte Ltd., A. Majumdar et al. (eds.), *Functional Textiles and Clothing*, [https://doi.org/10.1007/978-981-13-7721-1\\_13](https://doi.org/10.1007/978-981-13-7721-1_13) (June 2019)
- Mishra, A., & Butola, B. S. (2019). UV Protective Clothing. *Advanced Functional Textiles and Polymers: Fabrication, Processing and Applications*, 33-64.
- Mishra, A. (2020). Imparting self-cleaning property in textiles. In *Advances in Functional and Protective Textiles* (pp. 191-212). Woodhead Publishing. DOI: [10.1016/B978-0-12-820257-9.00009-6](https://doi.org/10.1016/B978-0-12-820257-9.00009-6)
- Mishra, A., & Natarajan, S. (2021). Chitosan—A Promising Biomaterial for Dye Elimination. *Novel Materials for Dye-containing Wastewater Treatment*, 59-83.

### Invited Talks

- Delivered invited talk on “Pashmina Fiber: Characteristics, Production and Processing” in the national workshop on “Skill development & entrepreneurship (with special reference to natural fabric dyeing & pashmina weaving)” organized by Institute of Advanced Studies in Education, Srinagar from 16<sup>th</sup> to 21<sup>st</sup> October, 2017.
- Delivered invited talk on “Natural dyeing of wool fibres”, in the national workshop on “Skill development & entrepreneurship (with special reference to natural fabric dyeing & pashmina weaving)” organized by Institute of Advanced Studies in Education, Srinagar from 16<sup>th</sup> to 21<sup>st</sup> October, 2017.
- Delivered invited talk on “Production of Raised fabrics”, in the short term training program on “Innovations in textile materials and their applicability in defence sector” organized by OFIL, Kanpur from 11<sup>th</sup> to 15<sup>th</sup> September, 2017.

- Delivered invited talk on “Application of textiles in Bullet-proofing”, in the short term training program on “Innovations in textile materials and their applicability in defense sector” organized by OFIL, Kanpur from 11<sup>th</sup> to 15<sup>th</sup> September, 2017.
- Expert Lecture on Water Recycling & Pollution Prevention in Textile Industry in Ganga basin states on 06 August 2018 at AICMA, Bhadohi
- Delivered invited talk on "Writing A Research Paper" in a workshop on “Research Paper Writing” organized by Department of Textile Technology of MLVTEC, Bhilwara, under TEQIP-III scheme, held on 29th September 2018.
- Delivered invited talk on "UV protection using Textiles" in a workshop on “Advancement in Protective Textiles” organized by Department of Textile Technology of MLVTEC, Bhilwara, under TEQIP-III scheme, held on 28th September 2018.
- Delivered invited talk on "Textiles for Bulletproof Applications" in a workshop on “Advancement in Protective Textiles” organized by Department of Textile Technology of MLVTEC, Bhilwara, under TEQIP-III scheme, held on 28th September 2018.
- Delivered invited talk on "Anti-microbial Textiles" in a workshop organized by Department of Textile Engineering of CET, Bhubneshwar under TEQIP-III scheme, held during 25.02.2019 to 02.03.2019.
- Delivered invited talk on "UV Protective Clothings" in a workshop organized by Department of Textile Engineering of CET, Bhubneshwar under TEQIP-III scheme, held during 25.02.2019 to 02.03.2019.
- Delivered invited talk on "Thermal Characterization of Textile Materials" in a workshop organized by Department of Textile Engineering of CET, Bhubneshwar under TEQIP-III scheme, held during 25.02.2019 to 02.03.2019.
- Delivered invited talk on “Latest developments in Bullet Protective Jackets and their Testing Procedures”, in the short term training program on “Latest Textiles and Leather Fabrics for Defence Use” organized by OFIL, Kanpur from 20<sup>th</sup> to 24<sup>th</sup> May, 2019.
- Delivered invited talk on "Need of Technology Intervention in Carpet Industry” on 19.01.2023" in National seminar organized by MSME, Varanasi in Sonbhadra.
- Delivered invited talk on "Advancing Quality and innovation in Handmade Carpets” on 30.12.2024" in Hindi Workshop organized by CSTRI, Bangaluru (Central Silk Board).

- Delivered invited talk on "Importance of Handmade Carpet Industry in National perspectives" on 13.10.2025" in National seminar on "National Importance of Regional Industry" organized by M.P Higher Education Department, Bhopal (online mode).

### **Workshop/ FDP/QIP attended**

- A Short Term Training Programme on "Optimization Techniques for Engineers" organized by HBTI Kanpur from 23-03-2009 to 28-03-2009.
- A Q.I.P. on "Emerging Trends in Fibres and Textiles" organized by IIT Delhi from 06-07-2009 to 10-07-2009.
- A Short Term Training Programme on ".Multi-media Tools & Instructional Material Development" organized by NITTR Chandigarh from 15/02/2010-19/02/2010.
- A Short Term Course on Quantum Chemistry under TEQIP- II organized byCET, Bhubneswar from 23/09/13 to 28/09/13.
- A Workshop on Quality Engineering & Six Sigma under TEQIP- II, organized by CET, Bhubneswar from 02/12/13 to 06/12/13.
- An FDP on "Application of Nano Technology in Textile Engg.", organized by UPTTI Kanpur from 18-01-2016 to 23-01-2016.
- Participated in an Orientation Program conducted by UGC Human Resource Development Centre, BHU from 05 August-24 August 2019.
- AICTE sponsored STTP on "Advances in Apparel Manufacturing Technology" organized by Sona College of Technology, Salem from 10/08/2020 to 10/08/2020.
- AICTE sponsored STTP on "Fashion Forecasting & Trend Analysis" organized by Bannari Amman Institute of Technology, Sathyamangalam from 21/09/2020 to 21/09/2020.
- An ATAL FDP on "Green Technology and Sustainability Engineering", organized by NIT Jalandhar from 19-10-2020 to 23-10-2020.
- An online NPTEL –AICTE FDP on Technical Textiles, organized byNPTEL –AICTE from Sep-Dec 2020.
- An ATAL FDP on "Recent Developments in Sustainable Processes", organized by IICT Bhadohi from 31-05-2021 to 04-05-2021.
- A workshop on "Curriculum Development & Academic Quality Improvement", organized by IICT Bhadohi from 01-03-2023 to 05-03-2023.

- An online Interdisciplinary Refresher Course, organized by University of Allahabad, from 02 March-15 March 2024.
- An FDP on “Functional and Sustainable Textiles: Future Trends and Innovations”, organized by MLVTEC Bhilwada from 07-04-2025 to 11-04-2025.

### **Sponsored Projects Undertaken**

- Study on R & D of Natural fibre Floor covering (10.8 Lakhs) sponsored by O/o DC (Handicrafts), 2005-06.
- Survey & Documentation of Carpet Yarn Dyeing Industry of Jaipur, Bikaner, Panipat, Mirzapur and Bhadohi (7.80 Lakhs) sponsored by O/o DC (Handicrafts), 2007-08.
- Craft Awareness Program on Mechanical Finishing of Carpets (1.0 Lakh) sponsored by O/o DC (Handicrafts) 2016-17
- Craft Awareness Program on Washing of Handmade Carpets (1.0 Lakh) sponsored by O/o DC (Handicrafts) 2016-17
- Workshop/Seminar on Mechanical Finishing of Carpets for Youth (5.60 Lakh) sponsored by O/o DC (Handicrafts) 2016-17
- Study of constructional and Performance requirements for Handmade wool blended carpet used in floorcovering applications and packaging practices of carpets (7.8L) sponsored by BIS, 2024-25
- Development of Dyeing Process of Woolen Carpet Yarn using Plant-Based Natural Dyes (11.20 L) sponsored by O/o DC (Handicrafts) 2024-26