

## CURRICULUM VITAE

### **Dr. Moumita Bera**

Assistant Professor (Textile Design Technology)

Indian Institute of Carpet Technology

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<https://vidwan.inflibnet.ac.in/profile/142873>

<https://scholar.google.com/citations?user=NnNmEl8AAAAJ&hl=en>

[https://www.researchgate.net/profile/Moumita\\_Bera3](https://www.researchgate.net/profile/Moumita_Bera3)



#### **Areas of specialization**

Medical Textiles, Elastic Knitted Fabrics, Natural fibre composites, recycling of textile waste materials, Carpet, Weave Design, weaving

#### **Academic credentials**

##### ***Doctor of Philosophy (Ph.D.):***

Dept. of Textile and Fibre Engineering, Indian Institute of Technology, Delhi 2013.

*Thesis: Studies on the characteristics of elastic knitted fabric tubes and their influence on pressure generation*

##### ***Master of Technology (M.Tech.):***

Dept. of Textile and Fibre Engineering, Indian Institute of Technology, Delhi, 2008, First Class (8.483/10).

##### ***Bachelor of Technology (B.Tech.):***

Dept. of Jute & Fibre Technology, University of Calcutta, 2006, First Class (74.47 %).

## Work Experiences

### 1. Teaching: 10 years

*Subjects expert:* Fabric Technology I and II, Weave Design, Design Management, Textile Testing.

*Subjects interested:* Knitting, Nonwoven, Technical Textile, Quality control

## Details of Research Publications in Journals/ Conference Proceedings/ Patents

### Journals:

- 1) M. Bera, R. Alagirusamy and A. Das, “A study on interfacial properties of Jute-PP composites”, Journal of Reinforced Plastics and Composites, 29(20), 2010, 3155-3161, (Impact factor = 3.710), ISSN 0731-6844. SAGE Publications <https://doi.org/10.1177/0731684410369723>
- 2) D. Gupta, R. Chattopadhyay and M. Bera, “Compression stockings-Structure Property analysis”, Asian Textile Journal, 29(1), 2011, 39-45, ISSN 0974-0589. Impact Factor 0.154 (2022-2023).
- 3) P. Paul, D. Gon and M. Bera, “Effect of weft yarn type and pick density on tearing strength of woven fabric”, Man Made Textiles in India, February, 2011, 44-48, ISSN 0377-7537. Impact Factor 0.09 (2022-2023)
- 4) M. Bera, P. Paul, “Influence of weave design on the properties of fabric”, Milliand International, March, 2017, Vol.23, Page 27-29. ISSN: 0947-9163. Impact Factor 0.03 (2022-2023)
- 5) D. Gupta, R. Chattopadhyay and M. Bera, “Comfort properties of pressure garments in extended state”, Indian Journal of Fibre & Textile Research, 36, December, 2011, 415-421, ISSN 0971-0426. <http://nopr.niscpr.res.in/handle/123456789/13236> Impact factor = 0.825(2022-2023).
- 6) R. Chattopadhyay, D. Gupta and M. Bera, “Effect of Input Tension of Inlay Yarn on the Characteristics of Knitted Circular Stretch Fabrics and Pressure Generation”, The Journal of Textile Institute, 103 (6), 2012, 636-642, (Impact factor = 1.77), ISSN 0040-5000. Taylor & Francis. <https://doi.org/10.1080/00405000.2012.665237>

- 7) M. Bera, R. Chattopadhyay, D.Gupta, “The effect of fibre blend on comfort characteristics of elastic knitted fabrics used for pressure garments”, Journal of The Institute of Engineers (India): Series E, 95(1) 2014, 41-47, (Impact factor = 0.89) ISSN: 2250-2483. Springer Publications. DOI: [10.1007/s40034-014-0029-x](https://doi.org/10.1007/s40034-014-0029-x)
- 8) M. Bera, R. Chattopadhyay, and D. Gupta, “Effect of linear density of inlay yarns on structural characteristics of knitted fabric tube and pressure generation on cylinder”, The Journal of Textile Institute, 106, 2015, 39-46, (Impact factor = 1.77), ISSN 0040-5000. <https://doi.org/10.1080/00405000.2014.902166>
- 9) M. Bera, R. Chattopadhyay, D. Gupta, “Influence of linear density of inlay yarn on pressure generation on human body” Journal of Industrial Textile, 46(4), 2016, 1053–1066. (Impact factor=3.721), ISSN 1528-0837 SAGE Publication. <https://doi.org/10.1177/1528083715612233>
- 10) R Chattopadhyay, Moumita Bera, “Prediction of pressure due to elastic fabric tube following energy principle”, Journal of Textile Engineering & Fashion Technology, 2(5), 2017, 499-504.eISSN: 2574-8114 DOI: [10.15406/jteft.2017.02.00075](https://doi.org/10.15406/jteft.2017.02.00075)
- 11) M. Bera, “Study on Tuft Withdrawal Force and Compressibility of Hand-Tufted Carpet”, Journal of The Institute of Engineers (India): Series E, 100, 2019, 175–181, ISSN 2250-2483, (Impact factor = 0.89) Springer Publications, <https://doi.org/10.1007/s40034-019-00151-3>.
- 12) Moumita Bera, Supriyo Chakroborty, “Knitted Active wear”, in Eds. Subhankar Maity, Sohel Rana, Pintu Pandit, Kunal Singha “ Advanced Knitting Technology”, Elsevier Publication, 2021, Page 255-305. Paperback ISBN: 9780323855341, eBook ISBN: 9780323855358. <https://doi.org/10.1016/B978-0-323-85534-1.00006-4>
- 13) Moumita Bera, “Auxetic Textiles” in Eds Subhankar Maity, Kunal Singha, Pintu Pandit “Functional and Technical Textiles”, Elsevier Publication, 2023, Page no.543- 614, Paperback ISBN: 9780323915939, eBook ISBN: 9780323915946. <https://doi.org/10.1016/B978-0-323-91593-9.00001-8>.

## Details of Conference/Seminar/Workshops/Symposium/FDP Attended & Organized

### Seminar/Conference/Symposium Attended:

1. M. Bera, R. Alagirusamy and A. Das, "Influence of Coupling Agents on Jute Fibre Composites", International conference of PPS-25 (Polymer Processing Society- 25<sup>th</sup> annual meeting) Goa, India, 4<sup>th</sup> March, 2009.
2. M. Bera, D. Gupta and R. Chattopadhyay, "Studies on Pressure Stockings", 23<sup>rd</sup> national convention of textile engineers, New Delhi, India, 26-27<sup>th</sup> March, 2010.
3. M. Bera, D. Gupta and R. Chattopadhyay, "Studies on Pressure Stockings", I<sup>2</sup>Tech, IIT Delhi, New Delhi, India, 24<sup>th</sup> April, 2010.
4. M. Bera, D. Gupta and R. Chattopadhyay, "Studies on Pressure Stockings", International conference of healthcare and hygiene textiles and clothing, HEAT 2010, Coimbatore, India, 30-31<sup>st</sup> July, 2010.
5. M. Bera, D. Gupta and R. Chattopadhyay, "Studies on Pressure Stockings", The 39<sup>th</sup> textile research symposium, IIT Delhi, New Delhi, India, 15-16<sup>th</sup> December, 2010.
6. M. Bera, R. Chattopadhyay and D. Gupta, "Influence of Inlay Yarn Pretension on the Characteristics of Knitted Elastic Fabric Used in Pressure Garment", The 11<sup>th</sup> Asian Textile Conference, Daegu, South Korea, 1-4<sup>th</sup> Nov, 2011.
7. R. Chattopadhyay, M. Bera and D. Gupta, "Deformation behaviour of power net and weft knitted elastic fabrics", The 41<sup>st</sup> Textile Research Symposium, Guimaraes, Portugal, 12-14<sup>th</sup> Sept, 2012.
8. R. Alagirusamy, A. Das and M. Bera, "Interfacial properties of jute-pp composites- influence of coupling agents", 1<sup>st</sup> International conference on natural fibres, Guimaraes, Portugal, 9-11<sup>th</sup> June, 2013.
9. M. Bera, R. Chattopadhyay, D. Gupta, "A field study on use of pressure garments in local hospital", International Conference On Emerging Trends In Traditional & Technical Textiles, NIT Jalandhar (India), April 11<sup>th</sup> - 12<sup>th</sup> 2014. Available at [\[https://www.icettnitj.in/A%20FIELD%20STUDY%20ON%20USE%20OF%20PRESSURE%20GARMENTS%20IN%20LOCAL%20HOSPITAL.pdf\]](https://www.icettnitj.in/A%20FIELD%20STUDY%20ON%20USE%20OF%20PRESSURE%20GARMENTS%20IN%20LOCAL%20HOSPITAL.pdf)

10. M. Bera, R. Chattopadhyay, D. Gupta, “Effect of covering on spandex yarn”, International Conference On Technical Textiles and nonwovens, IIT Delhi (India), November 6<sup>th</sup> - 8<sup>th</sup> Dec 2014.
11. M . Bera, “Study on tuft withdrawal force and compressibility of hand tufted carpet”, International Conference On Technical Textiles and nonwovens ICTN 2018, IIT Delhi. New Delhi, (India), December 6<sup>th</sup> - 8<sup>th</sup> 2018.
12. Abhijeet Kumar and Moumita Bera, “Recycling & Reusing of Fibrous Waste of Carpet Industry into Composite Material”, International e-Conference on Sustainability in Technical Textiles (ICSTT-2021), Bannari Amman Institute of Technology, 28-29 Dec 2021.

**Workshops/FDP Attended:**

1. 82<sup>nd</sup> orientation course at Banaras Hindu University from 5<sup>th</sup> Aug to 24<sup>th</sup> Aug., 2019 (21 days).
2. Annual Refresher program in Teaching (ARPIT) in Advances in Textile Engineering on SWAYAM portal from 4<sup>th</sup> Sep 2019 to 31<sup>st</sup> Dec, 2019 (16 weeks).
3. Faculty Development Programme in Mathematical Modelling & its Applications in Engineering 06<sup>th</sup> to 10<sup>th</sup> July 2020 by Joint AKTU-AICTE Short Term Training Programme. (6 days)
4. Faculty Development Programme in “Advances in Apparel Manufacturing Technology” 17<sup>th</sup> August to 22<sup>nd</sup> August, 2020 by Sona college of Technology AICTE sponsored Short Term Training Programme. (6 days)
5. FDP on “Green Technology and Sustainability Engineering (GTSE)” sponsored by AICTE Training and Learning (ATAL) Academy organised by NIT Jamshedpur from 14<sup>th</sup> September to 18<sup>th</sup> September , 2020 (6 Days).
6. FDP on Intellectual Property Rights Emphasis on Patent Drafting and Research Innovation organized by Sri Venkateshwaraa College of Engineering & Technology, Ariyur, Puducherry from 23<sup>rd</sup> September to 25<sup>th</sup> September 2020. (3 days)
7. AICTE sponsored virtual Short Term Training Programme (STTP) on “Fashion Forecasting and trend Analysis” organized by Department of Fashion Technology, Bannari Amman Institute of Technology from 28<sup>th</sup> September to 3<sup>rd</sup> October 2020. (6 Days)

8. FDP on “Productivity Enhancement” sponsored by AICTE Training and Learning (ATAL) Academy organised by NIT Warengal from 3<sup>rd</sup> November to 7<sup>th</sup> November, 2020 (6 Days).
9. FDP on “Recent developments in Sustainable processes” sponsored by AICTE Training and Learning (ATAL) Academy organised by Indian Institute Of Carpet Technology from 31<sup>st</sup> May, 2021 to 4<sup>th</sup> June, 2021 (6 Days).
10. FDP on “Textile Design” sponsored by AICTE Training and Learning (ATAL) Academy organised by National Institute of Technology, Jalandhar from 9<sup>th</sup> Aug, 2021 to 13<sup>th</sup> Aug, 2021 (6 Days).
11. FDP on “Testing of Functional and Technical Textiles” on SWAYAM portal from 15<sup>th</sup> Feb 2021 to 9<sup>th</sup> Apr, 2021 (8 weeks).
12. FDP on “Transformational Leadership” sponsored by AICTE Training and Learning (ATAL) Academy organised by Mahatma Jyotiba Phule Rohilkhand University, Bareilly from 2<sup>nd</sup> Sep, 2021 to 6<sup>th</sup> Sep, 2021 (6 Days).
13. FDP on “Sustainability and Quality Management in Apparel Industry” sponsored by AICTE Training and Learning (ATAL) Academy organised by Dayalbagh Educational Institute, Agra from 7<sup>th</sup> Dec, 2021 to 11<sup>th</sup> Dec, 2021 (6 Days).
14. FDP on “The Futuristic Trends In Textile & Apparel Engineering (FTTAE-2022)” sponsored by AICTE by Dept. of Textile Engg., GZSCCET, MRSPTU, Bathinda, Punjab-151001 from 21<sup>st</sup> -26<sup>th</sup> March 2022 (6 days).
15. Interdisciplinary Refresher course in “Climate Change and Human Health” Sponsored by UGC organized by UGC-Malviya Mission Teacher Training Centre, Allahabad University from 8<sup>th</sup> January 2024 to 21<sup>st</sup> January 2024 (**15 days**).
16. 3-day Face-to-Face FDP on “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education (AICTE) at Indian Institute of Carpet Technology, Bhadohi from 8th February to 10th February 2024.

#### **NITTT Courses done in 2021-22 academic year**

17. NITTT Module 1: Orientation Towards Technical Education and Curriculum Aspects
18. NITTT Module 2: Professional Ethics & Sustainability
19. NITTT Module 3: Communication Skills, Modes & Knowledge Dissemination
20. NITTT Module 4: Instructional Planning and Delivery
21. NITTT Module 5: Technology Enabled Learning & Life Long Self Learning

22. NITTT Module 6: Student Assessment and Evaluation
23. NITTT Module 7: Creative Problem Solving , Innovation and Meaningful R & D
24. NITTT Module 8: Institutional Management & Administrative Procedures

### Sponsored Research Projects/Consultancy

1. **“Awareness programe in Carpet making craft among school children”** funded by O/o DC(HC), MOT under design and technical upgradation scheme.Rs. 1 lakh. Vide sanction no J-12012/115/2014-15/DS/CR(Genl.), dated 30/12/2014. Held on 23-24 January 2015.
2. **“Seminar on carpet making craft for SC section of the society”** funded by O/o DC(HC), MOT sanction no. K- 12012/4 /110 /2014-15 /R&D dated 27.03.2015 under Research and Development scheme Rs. 4.8 lakh. held between 15-17 July, 2015.
3. **“Base woven textiles used for handicrafts at Bhadohi for SC category artisans”** Under the integrated Design and Technical development scheme of office of development commissioner (Handicrafts) New Delhi sanction no. J-12012/153 / 2015-16 /DS/CR (Intg)(SC)(2) dated 18.05.15 of Rs. 8.45 lakh. held 30<sup>th</sup> Oct, 2015 to 8<sup>th</sup> Feb 2016.
4. **Development of woven carpet in terry pile structure in loom in hand made carpet** funded by O/o DC(HC), MOT under Research and Development scheme sanction letter No. K-12014/4/75/2014-15/R&D dated 12.03.15. Rs. 5 lakh. 12.03.15 to 21.04.17.
5. **Backing cloth for tufted carpet”** for SC section of the society from 17<sup>th</sup> to 18<sup>th</sup> March 2017 sponsored by office of development commissioner (Handicrafts) New Delhi, sanction letter No. M-19014/116/2016-17/ MD(CR)/2093, Dated 27/12/16 of Rs. 1 Lakh, Held 17-18.03.2017.
6. Design and Technology Development workshop in **Backing cloth for tufted carpet** for 2 months duration, sponsored by office of Development Commissioner (Handicrafts) New Delhi, Rs. 4.8 Lakh. Yet to be started (fund not received).

### Ph.D./PG/UG Thesis supervision

#### 1. UG (B.Tech)

Sl. No.	Year	Tittle
1	2014-15	Study on the compressional behaviour of hand tufted carpet

2	2014-15	Influence of weave design on the characteristics of woven fabric
3	2015-16	Study on primary backing fabric of hand tufted carpet
4	2015-16	Study on dimensional property of single jersey fabric
5	2016-17	Recycling and Reusing of fibrous waste into composite material
6	2016-17	Development of handloom carpet in terry-leno structure
7	2016-17	Preparation of acoustic board by carpet waste
8	2017-18	Study on Acoustic Material from Carpet Waste and Its Analysis
9	2018-19	Study of woolen flat carpet
10	2018-19	Quality control in carpet manufacturing
11	2018-19	Effect of weave design on various properties of woven fabric
12	2019-20	Study on Mosquito Repellent Finish On Fabric
13	2019-20	Review on Reuse and recycling of carpet waste materials
14	2020-21	Study on Mosquito Repellent Finish On Fabric
15	2021-22	Studies on Jute flat floor covering
16	2022-23	Study on jute floor covering using wastage cloth
17	2023-24	Study on application of waste silk in carpet

## 2. PG (M.Tech)

Sl. No.	Year	Title
1	2019-2021	Sustainable utilization of post-consumer carpet waste to prevent environmental pollution

## 3. Ph.D. NA



### **Memberships of Professional Bodies**

1. The Indian Natural Fibre Society (Membership Id : LM-269)
2. The Institute of Engineers (India) (Membership ID No: M-1752728)

### **Awards received**

1. Post Doctoral Fellowship for Women Candidates from UGC
2. Scholarship from MHRD during Ph.D studies 2008-2012
3. Scholarship from MHRD during M.Tech studies 2006-2008
4. 29<sup>th</sup> rank (score 406) in GATE 2006 Examination.
5. 3<sup>rd</sup> rank in poster presentation at 23<sup>rd</sup> national convention of textile engineers, New Delhi, India, 26-27<sup>th</sup> March, 2010.
6. Bronze medalist at Calcutta University in the year of 2003 for 3<sup>rd</sup> rank in “Jute and Fibre Technology”.

### **Additional Responsibilities**

1. Warden Girls Hostel
2. Cultural Incharge
3. 2<sup>nd</sup> year class co-ordinator
4. Weaving Lab In-charge
5. ICC member

### **Reviewing Activities (Thesis/Journals/Professional Societies etc.)**

1. Journal of The Institute of Engineers (India): Series E
2. The Journal of Textile Institute
3. Journal of Industrial Textile

### **Declaration**

I hereby declare that the details stated above are true and correct to the best of my knowledge.