

## Resumé

Name : Dr. Ashis Mitra  
Father's Name : Late Jitendranath Mitra  
Address (Office) : Department of Silpa-Sadana, PSV, Visva-Bharati,  
P.O.-Sriniketan, Dist – Birbhum, W.B. – 731236.  
Date of Birth : 31/12/1972  
Designation : Assistant Professor (Stage 3), Textile Section.



### **Academic Qualification :**

Name of Examinations passed	Name of Board/University/ Institute	Division/ Class	Year of passing	% of Marks obtained	Subject(s) taken
Madhyamik	W.B.B.S.E	1	1989	81.0	General
Higher Secondary	W.C.H.S.E	1	1991	71.6	Beng, Eng, Physics, chemistry, Mathematics, Biological Science.
B.Sc.(Tech) in Textile Technology	University of Calcutta	1	1996	65.6	Textile Subjects
M.Sc.(Tech) in Mechanical Processing of Textiles.	University of Calcutta	1	1999	76.2	Spinning, Weaving, Fibre Sc, Industrial Textiles, Texturising, Knitting and other subjects related to Mechanical processing of Textiles.
PhD (Engineering)	Jadavpur University		2013		

**Residence** : Natumpally, (Arabinda Pally), Rabindra Sarani 1<sup>st</sup> Lane,  
P.O.- Bolpur, Dist - Birbhum, WB – 731204.

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### **Research areas of interest:**

Mechanical processing of Textiles (Yarn manufacturing, Fabric manufacturing and designing); Weaving and Fabric structure; Diversification of Handloom products; CAD/CAM applications in textile designing; Soft computing applications (ANN, Fuzzy Logic and Genetic Algorithms) in textile/fabric engineering; Optimization of process parameters using DOE and MCDM methods like AHP, MAHP, and TOPSIS.

**Teaching experience (Chronological details):**

Designation	Department	From	To
Lecturer in Textile Technology (Contract basis)	GCETT, Serampore (formerly CTTS)	14/07/2000	16/03/2001
Lecturer in Textile	Silpa-Sadana	17/03/2001	31/12/2005
Assistant Professor-I	Silpa-Sadana	01/01/2006	16/03/2007
Assistant Professor-II	Silpa-Sadana	17/03/2007	16/03/2012
Assistant Professor-III	Silpa-Sadana	17/03/2012	Till date

**Research experience (Chronological details):**

- *Fabricated a low cost "Fabric Stiffness Tester" in the academic year 2001–2002.*
- *Fabricated a low cost "Drape Meter" for measuring draping behaviour of textile fabrics in the academic year 2003–2004.*
- *"A Study of Some Mechanical Properties of Eri Fabric and Comparative Study with Wool Fabric" [in the academic year 2004–2005].*
- *"Diversification of Plain Woven Structures Meant for Apparel Purpose and Enhancement of Their Aesthetic Appeal by the Introduction of Fancy Yarns" [Diploma Project 2004-2005].*
- *"A Study of Thermal and Some other Mechanical Properties of Hand-woven Eri Fabric, and Comparative Study with Hand-woven Cotton Fabric" [in the academic year 2005–2006].*
- *"Effect of Cover Factor on Tensile Properties of Hand-woven 100% Wool Fabrics Woven in Plain" [in the academic year 2006–2007].*
- *"A Comparative Study of the Effect of Cover Factor on Thermal Properties of Hand-Woven Eri and Wool Fabric" [in the academic year 2007 – 2008].*
- *"Present Status of Co-operative Societies of Birbhum Silk Industry — A Statistical Survey" [Diploma Project 2007-2008].*
- *Rendered services as a technical expert to formulate a sustainable Business Plan, Marketing Plan as well as scope and strategy of technological upgradation, product diversification, etc. for the Handloom Cluster of Shantipur, Nadia, W.B. in a Project (from 18 – 24<sup>th</sup> February, 2008) of Textiles Committee, Ministry of Textiles, Govt. of India.*
- *"A Diagnostic Report on the Field Study of Fulia Handloom Cluster" [Diploma Project 2008-2009].*
- *"Evolution of Shantipuri Saris" [Diploma Project 2009-2010].*
- *"Development of an Indigenous Single-end Sizing Machine for handloom Sector" [Diploma Project 2010-2011].*

- *“Design Development of Home Furnishing Fabrics in Handloom — An Approach towards Product Diversification”* [Diploma Project 2011-2012].
- *Developed a software on “An Expert System on Chemical Processing of Textiles”.*
- *Developed a software on “An Expert System on Mechanical Processing of Textiles”.*
- *Developed a simulation-cum-analysis software “CAD Beat-up” on Loom Beat-up Mechanisms.*
- *Developed a software on “Computerised Simulation and Analysis of Loom Tappet Shedding Mechanism”.*
- *Developed a software “TEX Math Plus” on Mechanical Processing of Textiles.*

**Administrative experience (chronological details):**

1. Worked as Teacher Worden, CIT Boys’ Hostel, Silpa-Sadana from 13/12/2006 to 31/04/2010.
2. Worked as Teacher In-charge, Textile section from 01/08/2010 to 08/07/2013.
3. Working as Co-ordinator, Computer and Audio-visual, Silpa-Sadana.

**Research projects completed/ongoing** : N/A

**Doctoral Supervision Ph.D/M.Phil students awarded/ongoing** : N/A

**Conference/Seminar/Symposia/Academic or consultancy Program attended:**

**International Conference/Seminar:**

1. Presented a paper titled “Prediction of draping behaviour of handloom cotton fabrics by artificial neural network”, in the International Conference on Intelligent Infrastructure, CSI-2012, Organized by Computer Society of India at Science City, Kolkata during December 1-2, 2012.
2. Presented a paper titled “Application of Multi-Criteria Decision Making (MCDM) techniques for ranking of handloom fabrics as summer clothing” in 2<sup>nd</sup> International Science Congress (ISC-2012) at Bon Maharaj Engg. College, Vrindavan, Mathura, UP during December 8-9, 2012.
3. Presented a paper titled “Artificial neural network models for the prediction of air permeability of handloom fabrics” in the 3<sup>rd</sup> international Science Congress (ISC-2013) at Karunya University, Coimbatore, Tamil Nadu, India during 8th - 9th December 2013.

**National Conference/Seminar:**

1. Presented a paper entitled “*Handlooms and Natural Dyes*” in the National Conference on Traditional Knowledge System of India, held on 9<sup>th</sup> – 11<sup>th</sup> January, 2004, and organized by IIT, Kharagpur. The paper has also been published in the Book of Papers and e-Proceedings.

2. Presented a paper titled *“Need for Quality Assurance and Fabric Grading System, and Application of IT in Handloom Sectors”* in the 5<sup>th</sup> All India Peoples’ Technology Congress held on 19<sup>th</sup> – 20<sup>th</sup> February, 2005 at Science City, Kolkata, and organized by Forum of Scientists, Engineers and Technologists [FOSET].
3. Presented jointly a paper titled *“A New Technique of Manufacture, Preservation and Application of Vegetable Dyes in Bulk for Rural Cottage Industries”* in the 5<sup>th</sup> All India Peoples’ Technology Congress held on 19<sup>th</sup> – 20<sup>th</sup> February, 2005 at Science City, Kolkata, and organized by FOSET.
4. Paper entitled *“CAD/CAM Technology ——— A Cutting-Edge Tool Revolutionizing Textile Designing & Manufacturing; Part-I: CAD/CAM Module for Dobby Industry”* presented jointly in the National Conference on Emerging Trends in Textile, Fibre & Apparel Engineering held on March 18–19, 2006, organized by Govt. College of Engg. & Textile Tech. (GCETT), Berhampore. The paper published in the Book of Papers and e-Proceedings.
5. Paper entitled *“Effect of Weave on Some Mechanical Properties of Hand-woven Cotton Fabrics”* presented jointly in the National Conference on Emerging Trends in Textile, Fibre & Apparel Engineering held on March 18–19, 2006, organized by Govt. College of Engg. & Textile Tech. (GCETT), Berhampore. The paper published in the Book of Papers and e-Proceedings.
6. Presented a paper titled *“CAD/CAM Technology ——— A Revolutionary Tool for Textile Designing & Manufacturing”* in the All India Seminar on Exportable Jute & Textile Products held on 29–30<sup>th</sup> March, 2006 organized by Textile Engg. Division, West Bengal State Centre, IE(I) in collaboration with Jute Manufacturers Development Council, Kolkata (Ministry of Textiles, Govt. of India). The paper has been published in the Book of Abstracts and in the e-Proceedings.
7. A paper titled *“Some Technological Interventions or Measures to Survive the Indian Handloom Sector in the Era of Global Competitiveness”*, has been published in the Book of Papers and Proceedings of the All-India Seminar organized by Textile Engg. Division, The Institution of Engineers (India), held at Bhubaneswar, Orissa on 7 – 8 August, 2009.
8. Presented a paper titled *“Geotextiles and its role in coastal protection and erosion control”*, in the Seminar of UGC sponsored Refresher Course organized by ASC-CU the paper has been published in the Book of Papers, pp 159-162, (2011).
9. Presented a paper titled *“Mordants and their impacts on environment”* in the National Workshop and Seminar on ‘Vegetable dye and its application on textiles’ held on Dec. 2 – 4, 2011 at Silpa-Sadana, Visva-Bharati.
10. Presented a paper titled *“Fabric Engineering using Artificial Neural Network Genetic Algorithm Hybrid Model”* in the 2<sup>nd</sup> National Conference on Emerging Trends in Textile, Fibre & Apparel Engineering held on December 21–22, 2013, organized by Govt. College of Engg. & Textile Tech. (GCETT), Berhampore, WB.

**Publication of Books** : N/A

**Book chapter and monograph** : N/A

**Conference articles** : Mentioned above.

## Publications in Reputed Journals:

### International Journals: 18

1. Bhattacharyay S.K., Majumdar P.K., and Mitra A., 'Some Studies on *Fabric Assistance of Jute Plain Fabric*', IE(I) Journal, TX, 82, 27 – 32, (2002).
2. Mitra A., '*CAD/CAM Technology offers no-limit solution for textile designing and manufacturing: CAD/CAM module for Dobby Industry*', Asian Textile Journal, **Print ISSN: 0971-3425**, 15(7), 80–84, (2006).
3. Mitra A., '*Computer Aided Design/Computer Aided Manufacturing Technology in Textile Industry —— An Overview*', Science & Culture, Indian Science News Association (ISNA), **ISSN: 0036-8156**, 74(1 – 2), 77 – 80, (2008).
4. Mitra A., and Mukherjee A., '*On-loom finishing of handloom products —— An innovative & indigenous approach*', Indian Journal of Traditional Knowledge, **NISCAIR (CSIR), ISSN: 0975-1068 (Online) ISSN: 0972-5938 (Print)** 7(1), 172 – 177, (2008).
5. Mitra A., Choudhuri P.K., and Mukherjee A., '*A Diagnostic Report on Cluster Development Programme of Shantipur Handloom Cluster, Nadia, West Bengal: Part I – Evolution of the Cluster and Cluster Analysis*', Indian Journal of Traditional Knowledge, **NISCAIR (CSIR), ISSN: 0975-1068 (Online) ISSN: 0972-5938 (Print)**, 8(4), 502-509, (2009).
6. Majumdar A., Mitra A., Majumdar P.K., and Banerjee D., '*Soft Computing Applications in Fabrics and Clothing: A Comprehensive Review*', Research Journal of Textile & Apparel, **ISSN: 1560-6074 (Print)**, 14(1), 1-17, (2010).
7. Mitra A., Majumdar A., Majumdar P.K., and Banerjee D., '*Forecasting Comfort in Clothing Textile Materials Using Soft Computing Tools*', Asian Textile Journal, **Print ISSN: 0971-3425**, 19(9), 66-69, (2010).
8. Mitra A., Majumdar A., Majumdar P.K., and Banerjee D., '*Comparative Analysis of Regression and ANN Models for Predicting Drape Coefficient of Handloom Fabrics*', Indian Journal of Fibre and Textile Research, **NISCAIR (CSIR), ISSN: 0971-0426**, Vol 37, December, 313-320, (2012).
9. Mitra A., '*Geotextiles and its application in coastal protection and off-shore engineering*', Journal of the Textile Association, **ISSN 0368-4636**, May-June, 5-11, (2013).
10. Mitra A. '*Selection of handloom fabrics for summer clothing by AHP method of Multi-Criteria Decision Making (MCDM) Techniques*', International Journal of Management, IT and Engineering (IJMIE), **ISSN 2249-0558**, August, Vol 3, Issue 8, 265-277, (2013).
11. Mitra A., Majumdar A., Majumdar P.K., Bannerjee D., '*Predicting thermal resistance of cotton fabrics by artificial neural network model*', Experimental Thermal and Fluid Science, **Elsevier, ISSN: 0894-1777**, Vol. 50, October, 172-177 (2013).
12. Mitra A., Majumdar P.K., Bannerjee D., '*Predicting Air Permeability of Handloom Fabrics: A Comparative Analysis of Regression and Artificial Neural Network Models*, Journal of The Institution of Engineers (India): Series E, **Springer, ISSN 2250-2483**, Vol. 94, Number 1, DOI 10.1007/s40034-013-0018-5, 29-36, March-August 2013.
13. Mitra A., '*CAD/CAM Solution for Textile Industry —— An Overview*', International Journal of Current Research and Academic Review (IJCRAR), **ISSN: 2347-3215**, Vol. 2, No. 6, June, 41-50 (2014).

14. Mitra A., and Choudhuri P.K., 'Effect of Weave on Some Mechanical Properties of Handloom Cotton Fabrics', International Journal of Engineering, Science & Mathematics (IJESM), **ISSN: 2320-0294**, Vol. 3, Issue 3, September, 59-67 (2014).
15. Mitra A., Majumdar A., Ghosh A., Majumdar P.K., and Bannerjee D., 'Selection of Handloom Fabrics for Summer Clothing Using Multi-Criteria Decision Making Techniques', Journal of Natural Fibres, **Taylor & Francis**, **ISSN: 1544-0478 (Print), 1544-046X (Online)**, 12:1, 61-71, DOI: 10.1080/15440478.2014.892464.
16. Mitra A., 'Some technological measures to revive our moribund handloom sector in the context of globalization', Journal of the Textile Association, **ISSN 0368-4636**, In Press.
17. Mitra A., 'Overall Clothing Comfort of Textile Fabrics and the Various Factors at Play —— A Comprehensive Review', Journal of the Textile Association, **ISSN 0368-4636**, In Press.
18. Mitra A., Majumdar P.K., Banerjee D., 'Production of Engineered Fabrics using Artificial Neural Network-Genetic Algorithm Hybrid Model', Journal of The Institution of Engineers (India): Series E, **Springer**, **ISSN 2250-2483**, In Press.

#### **National Journals: 13**

1. Roy Moulik S., Mukherjee A., Mitra A., and Choudhuri P.K., 'Application of Natural Dyes in Handloom Sectors', Textile trends, **ISSN: 0040-5205**, 67, 37 – 45, (2005).
2. Mukherjee A. and Mitra A., 'A New Technique of Manufacture, Preservation & Application of Vegetable Dyes in Bulk for Rural Cottage Industries', Man Made Textiles in India, **ISSN: 0377-7537**, 67, 263 – 266, (2005).
3. De S.K., and Mitra A., 'A Comparative Study of Some Mechanical Properties of Eri & Cotton Fabrics', Man Made Textiles in India, **ISSN: 0377-7537**, 430 – 434, (2005).
4. Mitra A., 'Need for Quality Assurance & Fabric Grading System in Handloom Sector', Man Made Textiles in India, **ISSN: 0377-7537**, 69, 15 – 18, (2006).
5. Mitra A., Choudhuri P.K., Mukherjee A., and Roy Moulik S., 'Evolution of Handloom Techniques', Textile Trends, **ISSN: 0040-5205**, 67, 29 – 33, (2006).
6. Mitra A. and Mukherjee A., 'An Innovative Technique for Loom Stage Application of Softeners on Handloom Textiles', Textile Trends, **ISSN: 0040-5205**, 67(11), 37–41, (2006).
7. Mitra A., 'CAD/CAM: Ultimate solution for textile excellence', The Indian Textile Journal, **ISSN: 0019-6436**, September, 2007; Vol. CXVII, No. 12, 39–44, (2007).
8. Mitra A., 'CAD/CAM Solution for Textile Industry —— an Overview', Buletinul Institutului Politehnic Din Iasi, LIII (LVII), 21 – 32, (2007). [The paper was selected for presentation at The XIIIth Romanian Textile & Leather Conference, CORTEP 2007, Iasi, Romania, October 18 – 20, 2007].
9. Mitra A., 'Effect of Moisture on the Quality of 100% Viscose Yarn', Man Made Textiles in India, **ISSN: 0377-7537**, Vol. LII, No. 5, 153-156, (2009).
10. Mitra A., 'CAD/CAM Support for Jacquard Based Textile Industry', Indian Textile Journal, **ISSN: 0019-6436**, Vol. CXXIIO, No. 1, October, 53-58, (2011).

11. De S., Mitra A., 'A study of some mechanical properties of eri fabric and comparative study with wool fabric', Man Made Textiles in India, May 2013, Vol. 41 Issue 5, p162, **ISSN: 0377-7537**.
12. Mitra A., 'Multi-Criteria Decision Making processes and its application in textile —— a comprehensive review', Man-Made Textiles in India, **ISSN: 0377-7537**, Vol. XLII, No. 8, August, 295-299 (2014).
13. Mitra A., and Choudhuri P.K., 'A Diagnostic Report on Cluster Development Programme of Shantipur Handloom Cluster —— Part –I: Existing Production Processes', Textile Trends, **ISSN: 0040-5205**, 57th Year of Publication, No. 6, September, 37-44 (2014).

**Acting as Editor/Reviewer:**

- Reviewed a paper entitled "Machinery for extraction and spinning of plant fibres" for Indian Journal of Traditional Knowledge, NISCAIR, CSIR in the year 2008.
- Reviewed a paper entitled "Rogan, the traditional hand painted textiles of Gujarat" for Indian Journal of Traditional Knowledge (IJTK), NISCAIR, CSIR in the year 2009.
- Selected as referee for the IJTK, NISCAIR, CSIR, New Delhi to review an article titled "An insight into the Traditional *Bandhej* craft of Sikar city of Rajasthan".
- Acted as the Editor of the Book of Abstracts and E-Proceedings of the National Workshop and Seminar on 'Vegetable Dye and its Application on Textiles' held on December 2 – 4, 2011 at Silpa-Sadana, Visva-Bharati.

**Membership of Professional bodies**

:

- Life Member, Forum of Scientists, Engineers & Technologists (FOSET) [Membership No. LM2005 – 1539 – HLY].
- Life Member, Indian Science News Association [ISNA].
- Member of the Institution of Engineers (India) [Membership No. M – 13929 – 8].
- Patron Member of The Textile Association (India) [Membership No. WB/PM/1357].
- Life Member, The Indian Natural Fibre Society [Membership No. TINFS/LM 130/0214]

**Refresher Course/Orientation Program/Staff Development Program/Short Term Course attended:**

Name of the Course/Summer School	Place	Duration	Sponsoring Agency
Refresher Course on "Rural Development in India: recent trends"	Visva-Bharati University	February 3 – 23, 2003.	UGC
63 <sup>rd</sup> Orientation Programme	Academic Staff College, University of Calcutta	May 30 – June 25, 2005.	UGC
Refresher Course on "Computer Applications".	UGC-Refresher Course Centre, University of Kalyani.	January 08-28, 2008.	UGC
Refresher Course on "Environmental Studies".	UGC-Academic Staff College, University of Calcutta.	10 <sup>th</sup> February to 3 <sup>rd</sup> March, 2011	UGC

Staff Development Program on 'Advanced optimization Techniques and it's application in Textile Engineering'	Govt. College of Engg. and Textile Technology, Berhampore	June 14 – 18, 2011.	AICTE
Short Term Course on 'Computational Tools & Open Source Software'	UGC-Academic Staff College, University of Burdwan	29/08/2013 to 04/09/2013	UGC

**National/International Award :**

- **National Scholarship** [Rank: 91] awarded by MHRD, GOI.
- **GATE Scholarship** awarded by MHRD, GOI.
- *Ranked 1<sup>st</sup> in the Master Degree in the University of Calcutta.*
- **Dr. Triguna Charan Sen prize** awarded for the year 2013-2014 by The Institution of Engineers (India) for the paper titled "Predicting Air Permeability of Handloom Fabrics: A Comparative Analysis of Regression and Artificial Neural Network Model" published in the Journal of the Institution of Engineers (India): Series-'E', **Springer**, Vol. 94, Issue 1.