

Profile Page



Name : Dr Monica Sikka

Designation : Professor

Department : Textile Technology

Qualification : PhD Textile Technology (NITJ)
M.Tech Textile Engineering and Management (NITJ)
B.Tech Textile Technology (NITJ)

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Research Interests :

Wound care materials, Healthcare textiles, Fabric designing, Technical Textiles, Fabric structure -property relationship

Other Profile Links :

Google Scholar Link :

Google Scholar [Click Here](#)

Journal Publications :

Year	Journal	Publication
2022	Asian Textile Journal, 44	Monica Sikka, Charvi Aggarwal, Avesh Mishra & Ashwin S, "Impact of Covid-19 on Textile Industries"
2022	Research Journal of Textile and Apparel	Monica Sikka, Alok Sarkar, Samridhi Garg "Artificial intelligence (AI) in textile industry operational modernization"
2022	Journal of Industrial Textiles	Gyana Behera, Arunangshu Mukhopadhyay, Monica Sikka, "Development of scheme to evaluate the performance of parachute canopy fabrics under tensile impact"
2022	Indian Journal of Fibre and Textile Research 47(1):70-77	Monica Sikka, Siddhi Vardhan Singh Rao, Samridhi Garg, "Silk biomaterial for skeletal tissue engineering"
2022	Journal of Industrial Textiles, Vol. 52, pp. 1-18	Garg S., Midha V. K. And Sikka M. P. ,Studies on thermal comfort of multi-layered fabric assembly after wetting with sweat and distilled water
2022	The Journal of the Textile Institute	Gyana Behera, Monica Sikka & Arunangshu Mukhopadhyay, Effect of fabric construction, seam angle and impact force on the performance of parachute canopy
2022	Research Journal of Textile and Apparel	S Garg, MP Sikka, VK Midha, "Review on fabric thermal comfort in wet conditions"

2021	Institute of engineers, Annual Technical Volume of Environmental Engineering Division, on "Technologies for Zero Waste in India: Current and Future Challenges", ISBN Number (978-81-952159-4-2), pp 84-89.	Monica Sikka, Samridhi Garg, "Minimizing Healthcare Waste"
2021	Indian Journal of Fibre & Textile Research Vol 46, March 2021, pp. 22-28	Payal Bansal , Monica Sikka & AK Choudhary, "Seam performance of knitted fabrics based on seam strength and seam efficiency"
2021	Asian textile journal	Sikka, M., Meena, A., Ashwin., S., Mishra, A., Aggarwal, C., "Impact of Covid-19 on Textile Industries"
2021	Research Journal of Textile and Apparel	Sikka, M.P. and Mondal, M., "A critical review on cleanroom filtration"
2021	Indian journal of fibre & textile research, vol. 46, June 2021, pp. 120-126.	Payal bansal, AK Choudhary, Monica sikka, "Seam grinning behaviour of single jersey fabric"
2020	Indian Journal of Fibre & Textile Research, Vol 45, No 4 (2020)	Bansal, Payal; Sikka, Monica; Choudhary, A K," Effect of yarn count and loop length on needle penetration force and needle cut index in single jersey fabrics"
2020	Research journal of textile and apparel, accepted on 22 April 2020.	Sikka, Monica; Garg, Samridhi, "Functional Textiles for Prevention of Pressure Ulcers - A Review"
2020	Asian Textile Journal, accepted on Feb., 2020	Monica sikka, Payal Bansal, Kirandeep Kaur, kirat Chauhan, "Role of auxetic fibers in controlled drug delivery system"
2020	Asian Textile Journal, accepted Jan., 2020.	Awadhesh Kumar Chaudhary, M.P. Sikka, Payal Bansal, "Seam quality of polyester spandex half plated knitted fabric"
2019	Asian Textile Journal, Vol. 28(10) 39-43	Monica Sikka, Samridhi Garg "Impact of mobile phone radiation on the human body and textile remedies"
2018	Research Journal of Textile and Apparel, Emerald Publication, DOI 10.1108/RJTA-08-2017-0041	Choudhary AK, Sikka MP and Bansal P., "The study of sewing damages and defects in garments"
2016	Med Eng Phys. 38(9):917-21. doi:10.1016/j.medengphy.2016.05.006. Elsevier pub 2016 Jun 1.	Sikka MP, Ghosh S, Mukhopadhyay A., " Mathematical modeling to predict the sub-bandage pressure on a conical limb for multi-layer bandaging"
2016	Journal of Fibre Bioengineering and Informatics, 9 (3): 155-165. DOI: 10.3993/jfbim00242	Sikka MP, Mukhopadhyay A," Sub Bandage Pressure Measurement on a Compressible Limb for Treatment of Leg Ulcer"
2016	Journal of Fashion Technol and Textile Engg 4:1. doi:10.4172/2329-9568.1000131	Sikka MP, Mukhopadhyay A , " Neural Network Model for Predicting Sub Bandage Pressure of High Compression Bandages'.
2016	The Asian Textile Journal, 25 (8), 53-57	Sikka MP, Devendra Kumar "Artificial skin grafts"
2015	The Asian Textile Journal, vol.24 no. 3.,54-62	MP Sikka and S Tharakeswari, "Cosmetotextiles and microencapsulation"
2015	The Asian Textile Journal, vol.24 no. 12, 53-59.	MP Sikka and Gyana Ranjan Behra,"Tissue Engineering"
2014	Fibers and Polymers, Vol.15, No.8, 1779-1785	M P Sikka, S Ghosh, and A Mukhopadhyay, "The Structural Configuration and Stretch Property Relationship of High Stretch Bandage Fabric",
2014	Journal of Environmental Research and Development, Vol. 8 No. 3, 510-513	M P Sikka, S Ghosh and A Mukhopadhyay, "The role of compression in treatment of leg ulcers",

2013	International journal of advanced research in engineering & technology, volume:4, issue: 2,259-270.	Srinivasulu k, Monica Sikka and J Hayavadana , “Study of loop formation process on 1x1 v-bed rib knitting machine: the factors affecting loop length and validation of model”,
2013	International journal of textile and fashion technology ,vol. 3-2,1-14	Srinivasulu k, Monica Sikka and J Hayavadana , “ Study of Loop Formation Process on 1 1 V-Bed Rib Knitting Machine : A Mathematical Model for Loop Length” ,
2013	Journal of Biomedical Science and Engineering Vol.6 No.12	M P Sikka, S Ghosh, A Mukhopadhyay , “Geometry of the bandaging procedure and its application while wrapping bandages for treatment of leg ulcers”,
2008	Journal of tissue viability 82-94, 17	M Sikka, A Mukhopadhyay, S Ghosh, K S Nagla, “Comparative performance of compression bandages and garments for the treatment of venous leg ulcer”
2004	International journal of clothing science and technology vol.16 pp 394-403	A Mukhopadhyay ,M Sikka, A K Karmakar ,”Impact of laundering on the seam tensile properties of suiting fabric”
2004	Prestige journal of management and research pp119-124	V Midha and M Sikka, “Entrepreneurship development in India: challenges and opportunities”
2003	The Indian Textile Journal, vol.11., 23-28,	V Midha and M Sikka, “Principles of factory location and layout”

Conference Publications :

Year	Conference	Publication
2022	International conference on Innovations in Technology and Management held on 21-23 December 2022	Kumari Neha and Monica Sikka, "Parachute textiles and their performance characteristics"
2022	International conference on Innovations in Technology and Management held on 21-23 December 2022	30. Monica Sikka and Shubham Singh , “HPPE and HPPE- Reinforced water-based PU-coated cut resistant protective gloves”
2021	"TEXCON- 2021" a National Conference on "NEW WORLD OF TEXTILES: SHAPING FOR THE FUTURE" held on 18th & 19th February, 2021.	Monica sikka, Gyana Ranjan Behera, “Nano technology based self-cleaning effect on textiles”
2021	"TEXCON- 2021" a National Conference on "NEW WORLD OF TEXTILES: SHAPING FOR THE FUTURE" held on 18th & 19th February, 2021.	Monica sikka, Samridhi garg, “Nano-material Based Clothing to Combat COVID-19”
2021	International Online Conference on Advances in Textile, Fashion and Crafts [ATFC-2021] March 22-24, 2021.	Gyana Ranjan Behra, Monica sikka, “Sustainable shopping bag”
2021	International Online Conference on Advances in Textile, Fashion and Crafts [ATFC-2021] March 22-24, 2021.	Monica sikka, Samridhi garg, “Impression of Covid-19 on Textile Industries”
2021	APA Bioforum International e-Conference on Polymeric Biomaterials & Bioengineering	Monica Sikka, Samridhi Garg, ‘37.5 yarn technology for enhancing thermo-physiological comfort of textile product’
2020	International Conference ASTMLS' 20, 11-12 DECEMBER 2020.	Monica sikka, Thallapally Vinodini Charan, “Recent developments in personal protective equipments”
2020	International Conference ASTMLS' 20, 11-12 DECEMBER 2020.	Monica sikka, Samridhi garg, “BIOSENSING TEXTILES FOR MEDICAL SECTOR”
2020	5th international conference on INDUTECH 2020, 21st -23rd August.	Monica Sikka, Sourav Kar and Gyana Ranjan Behera, “Development of lint-free nonwoven abdominal sponges”

2020	AICTE sponsored International E- Conference on “Recent Trends in Textiles – A Paradigm for Innovative and Sustainable Fibers, Yarns, Fabrics and Garments Production, Processing & Designing Aspects”, 18-19 September, 2020, TIT&S, Bhiwani.	Deepak kumar Bhati & Monica Sikka, “Fabrication and properties evaluation of banana-based hybrid composite material”
2020	AICTE sponsored International E- Conference on “Recent Trends in Textiles – A Paradigm for Innovative and Sustainable Fibers, Yarns, Fabrics and Garments Production, Processing & Designing Aspects”, 18-19 September, 2020, TIT&S, Bhiwani.	Monica Sikka & Samridhi Garg, “Nanofiber materials as Burn Wound Dressing”
2019	34th Indian Engineering Congress, The Institution of Engineers (India) during 27th -29th December, 2019 Hyderabad Convention Centre.	Monica Sikka, Suraj Khushwaha and Sudhanshu Maurya, "Moisture management properties of washed bi stretch denim fabric”
2019	International Conference on Material Science and Engineering popularly known as ICMSE 2019 during 11-12 June 2019, NIT Jalandhar, 2019.	Monica Sikka, Sumit Kumar and Mehak Gupta, "Fabrication of Triboelectric based stockings for high altitudes
2019	International Conference on Emerging Trends in Technical and Traditional Textiles (ICETT) 01-03 November 2019, NIT Jalandhar, 2019 Page 18	Monica Sikka, Mamta Devi, Samridhi Garg "Effect of structural parameters on pressure behavior of tubular bandages”
2019	ADVANCES IN TEXTILE MATERIALS AND PROCESSES (ATMP) 02-03 December, 2019, UPTTI, Kanpur	Monica Sikka, Harish, Samridhi Garg "Study on the effect of constructional parameters on the color value of handloom woven fabrics"
2019	International Conference on Emerging Trends in Technical and Traditional Textiles (ICETT) 01-03 November 2019, NIT Jalandhar, 2019, Page 42	Payal Bansal, Monica Sikka and Awadhesh Kumar Choudhary , "Automate fabric defects inspection using different techniques”
2019	International Conference on Emerging Trends in Technical and Traditional Textiles (ICETT) 01-03 November 2019, NIT Jalandhar, 2019, Page 66	Monica Sikka and Gyana Ranjan Behra, "Development of multilayer bed sore mattress to prevent pressure ulcers”
2019	International Conference on Emerging Trends in Technical and Traditional Textiles (ICETT) 01-03 November 2019, NIT Jalandhar, 2019, Page 26	Monica Sikka, Mahendra Sahu and Deepak Kumar Bhati, "Studies on functional properties of bioactive composite footwear insole”
2018	International conference on advancement in engineering , applied science and management, Punjab University, Chandigarh, May, 2018	Monica P Sikka, Payal Bansal ,khin su lwin , "Studies on the pressure behavior of crepe bandage on repeated usage and washing"
2018	International Conference on Seamless Chemical Engineering in Service of Humanity: Innovations, Opportunity and Challenges, popularly known as CHEMCON, December, 2018	Monica Sikka and Samridhi Garg, “Green Textiles- The future”
2018	The 11th Textile bioengineering and informatics symposium, TBIS 2018, Manchester, UK, July 25-28, 2018	Monica Sikka. Thallapally V Charan, ‘Development of reusable cost-effective incontinence pads for light urinary incontinence’
2018	International conference on Advances in Textile Materials and Processes, UPTTI in collaboration with IIT KANPUR	Monica Sikka and Payal Bansal, "Effect of inlay yarn on the pressure performance of medical compression stockings"
2016	International conference on Redefining Textiles :a cutting edge technology of future, NIT Jalandhar, April 8-10.	Hyder Khan and MP Sikka “Textiles for cure of pressure ulcers in elderly, disabled and bedridden persons”
2016	TBIS 2016, Melbourne, Australia	Sikka MP, Mukhopadhyay A Neural Network Model for Predicting Sub Bandage Pressure of High Compression Bandages.
2014	International Conference on Emerging Trends in Traditional and Technical Textiles, NIT Jalandhar	M Sikka, S Ghosh, A Mukhopadhyay, “Modelling of the bandaging procedure and its application while wrapping the high stretch bandage”

2014	International Conference on Technical Textiles and Nonwovens, IIT Delhi	M Sikka, S Ghosh, A Mukhopadhyay . “The structural and stretch property of high stretch bandages”
2013	Futuristic and emerging areas in technology: issue and challenges’, FEAT 2013, Department of Textile Engineering, PTU, GZSC CAMPUS BATHINDA	M Sikka, Sidharth Mahajan , Harbansh Singh, ‘Medical compression stockings’
2012	International conference & exhibition for filtration and separation technology, Graz, Austria	M Sikka, “Effect of the design of filter fabric on solid/liquid separation.”
2011	International conference & exhibition for filtration and separation technology, Wiesbaden, Germany	M Sikka, “Comparison of various filter media used in bag filters.”
2007	MEDTEX 07, CMIR Bolton university	M Sikka, A Mukhopadhyay, S Ghosh, K S Nagla, ”Comparative performance of compression bandages and garments for the treatment of venous leg ulcer”
2007	Fibre society technical fall conference, University of California , Davis, USA	M Sikka, A Mukhopadhyay, S Ghosh, “Pressure performance of compression materials”,
2007	International conference on Recent trends in textiles, NIT Jalandhar	M Sikka, A Mukhopadhyay, S Ghosh, “Pressure distribution of compression bandages in the treatment of venous leg ulcers”
2006	XVI National SBAOI Conference on Biomaterials , Tissue Engineering and Medical Diagnostics, IIT Delhi	M Sikka, A Mukhopadhyay, S Ghosh, “A study on creep performance of bandaging material for the treatment of edema”

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Book Chapter	“Natural antimicrobial and bioactive agents as additives in wound dressings”	ELSEVIER	Monica Sikka and Samridhi Garg	9780323905145	2022
Book Chapter	"Effect of structural parameters on pressure behaviour of tubular bandages”in Recent Trends in Traditional and Technical Textiles (Select Proceedings for ICETT 2019), Eds. Vinay Midha and A. Mukhopadhyay	Springer	Monica Sikka, Mamta Devi and Samridhi Garg	978-981-15-9994-1	2020
Book chapter	"The role of biopolymers and biodegradable polymeric dressings in managing chronic wounds", in Advanced Textiles for Wound Care, edited by S . Rajendran	Elsevier, Cambridge, UK.	Monica Puri Sikka and Vinay Kumar Midha	978-0-08-102192-7	2019
Book chapter	"Speciality dressings for managing difficult-to-heal wounds" in Advanced Textiles for Wound Care, edited by S . Rajendran	Elsevier, Cambridge, UK.	A. Mukhopadhyay, MP Sikka, and VK Midha	978-0-08-102192-7	2019
Book Chapter	‘Nonwovens and Recent Developments’ in Fibres to Smart Textiles: Advances in Manufacturing, Technologies and Applications, 1st Edition, Eds. Asis Patnaik and Sweta Patnaik	CRC Press	Midha, V K and Sikka Monica	9781138332515	2019
Edited book	Manikins for medical Textile evaluation” in Manikins for textile Evaluation	Woodhead Publishing ltd	Monica P Sikka	978-0-08-100909-3	2017

Edited book	A study of the pressure profile of compression bandages and compression garment for treatment of venous leg ulcers' Medical and healthcare textiles	Woodhead Publishing ltd	M Sikka, S Ghosh, A Mukhopadhyay	978-1-84569-224-7	2010
Edited book	'Compression Bandages" in Progress in Textiles: Science and Technology,	IAFL publications	S Ghosh, A Mukhopadhyay, M Sikka	978-81-901033-4-3	2008

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	International	Futuristic trends in Textiles	Department of Textile Technology, NIT Jalandhar	10/12/2007	12/12/2007	Coordinator
STC	National	Garment Technology	Dr. B R Ambedkar NIT Jalandhar	10/06/13	14/06/13	Organizing secretary
Conference	International	Emerging Trends in Traditional and Technical Textiles	Dr. B R Ambedkar NIT Jalandhar	11/04/14	12/04/12	Coordinator
Conference	International	'Redefining Textiles: Cutting edge technology of the future	Organized three days International Conference on 'Redefining Textiles: Cutting edge technology of the future' at NIT Jalandhar on April 8-10, 2016.	08/04/16	10/04/16	Co-convenor
GIAN COURSE	International	Medical Textiles and Tissue Engineering	Dr. B R Ambedkar NIT Jalandhar	20/07/16	30/07/16	Coordinator
Guest lecture	National	'Recent developments/innovations in machines /technology and new fibres'	NIT Jalandhar	16-04-2019	16-04-2019	Coordinator
STC	National	Advancements in Garment Technology	Dr. B.R. Ambedkar NIT, Jalandhar	22-05-2019	26-05-2019	Coordinator
Short term course	National	'Medical textiles and Tissue Engineering'	NIT Jalandhar	07-11-2019	11-11-2019	Coordinator
Short term course	National	'Clothing Comfort'	NIT Jalandhar	02-11-2019	06-11-2019	Coordinator
International Conference	International	'Emerging Trends in Traditional and Technical Textiles'	NIT Jalandhar	01-11-2019	03-11-2019	Organizing secretary
Guest Lecture	National	'Inkjet printing on textiles;' by kushal sen, IIT, New Delhi	NIT Jalandhar	30-08-2019	30-08-2019	Organizing secretary
Guest Lecture	National	'Hybrid yarns and thermoplastic composites;' by Aligarusamy, IIT, New Delhi	NIT Jalandhar	14-08-2019	14-05-2019	Organizing secretary

Guest Lecture	National	‘Science behind clothing comfort;’ by Apurba Das, IIT, New Delhi	NIT Jalandhar	28-08-2019	28-08-2019	Organizing secretary
Guest Lecture	National	‘Broad spectrum sourcing in Apparel and home textiles;’ by Shalini Madan, Consultant at INDIAN ACCENTS, New Delhi	NIT Jalandhar	04-04-2019	04-04-2019	Organizing secretary
FDP	National	Textile Design	NIT, Jalandhar	09-08-2021	13-08-2021	Coordinator
Workshop	National	Design of experiments	NIT Jalandhar	21-04-2022	22-04-2022	Coordinator

Professional Affiliations :

Designation	Organization
Life member	Textile Association of India (TAI)
Life Member	The Indian Society for Technical Education (ISTE)
FELLOW F-123341-2	The Institute of Engineers (INDIA)

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Kumari Neha	Impact behaviour of textiles	ongoing	2022	Dr A Mukhopadhyay
Meghana Kammata	Impact behaviour of textiles	ongoing	2022	Dr A Mukhopadhyay
Manoj kumar		Ongoing	2020	
Vinodini		Ongoing	2020	Dr A Mukhopadhyay
Samridhi Garg	Thermo-physiological comfort of seamed multilayered fabric	Ongoing	2018	Dr. Vinay Midha
Gyana Ranjan Behra	Studies on impact loading of textiles	Ongoing	2017	Dr. A Mukhopadhyay
Payal	Study on needle cut in knitted garments	Completed	2015	Dr. A K Choudhary
Sapna Khushwaha	To study the wet abrasion behavior of lycra and non lycra fabric	-	2015	Dr. A Mukhopadhyay

Admin. Responsibilities :

Position Held	Organization	From	To
Faculty Incharge PHOTOGRAPHY CLUB	NIT Jalandhar	2015	till date
Member Entrepreneurship Development Cell	NIT Jalandhar	2007	2008
Member Alumni Coordination cell	NIT Jalandhar	2010	2012
Member Post Graduate Committee	NIT Jalandhar	2014	2015
Student Councilor (First Year)	NIT Jalandhar	2017	Till date
Coordinator college magazine	NITJ	2019	
Member, ICC	NITJ	2018	
Associate Dean (Academics)	NIT Jalandhar		till date

Award and Honours :

Title	Activity	Given by	Year
Outstanding Teacher Award in Textile Engineering	STAIR Awards 2021	STAIR (Science and technology academic, innovation and research award)	2021
Expert Lecture	“Recent knitted fabric development”	ATAL FDP in Apparel Design (Advance), NIIFT, Ludhiana	2021
Guest lecture	“Smart textiles- New possibilities in textile engineering”	Pushpa Gujral Science City	2021
Member of Technical Advisory Committee	International e-conference on Sustainability in Technical Textiles	Bannari Amman Institute of Technology, Sathyamangalam, Erode, Tamilnadu	2021
Member of advisory committee	Science and Technology Academic, Innovation and Research Awards		2021
Expert lecture	‘Weaves for fabric design’ , NIT Jalandhar, Atal FDP on “Textile design”	NIT Jalandhar	2021
Expert lecture	‘Computer aided knitted fabric’ , Atal FDP on “Textile design”	NIT Jalandhar	2021
Session Chair for International Conference	"Recent Development on Materials, Reliability, Safety and Environment Issues (IMRSE-2021)"	Dr B R Ambedkar National Institute of Technology (NIT), Jalandhar, India.	2021
Session Chaired	“International Conference on Industrial and Manufacturing Systems (CIMS-2020)”	B R Ambedkar National Institute of Technology (NIT), Jalandhar	2021
Best Teacher Award	17th Convocation of NITJ	Dr B R Ambedkar National Institute of Technology (NIT), Jalandhar, India.	2021
Expert talk on, '3D Weaving: A New Paradigm’	Webinar	School of Design (Fashion), Lovely Professional University	2021
Panellist in TEQIP-III Sponsored Online Short-Term Course	“Recent Trends in Textile and Fashion”	Department of Textile Technology, DR B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY JALANDHAR GT Road Bypass, Jalandhar-144011	2020
Prof. Indira Parikh 50 Women in Education Leaders	extraordinary work and track record of the achievements in the field of expertise	World education congress	2019
Expert talk on , “Modelling and designing of medical Compression Garments”	Short term course on “Advancements in garment technology”	Department of Textile Technology, NIT Jalandhar under TEQIP III	2019

Expert talk on "Smart and Innovative Textiles"	Faculty Development Programme on "Visual and Performing Arts"	HMV Jalandhar	2019
Expert talk on "Speciality wound dressings for specific wound types"	Faculty development programme on "Recent Advancement in Biomaterials and Nanotechnology for Biomedical Applications"	Department of Biotechnology, NIT Jalandhar	2019
Best paper award	Monica Sikka, Mamta Devi and Samridhi Garg, "Effect of structural parameters on pressure behavior of tubular bandages"	International conference on emerging trends in traditional and technical textiles during 1st-3rd November, 2019 at NIT Jalandhar	2019
Chaired a plenary session	"Advanced medical fibers and their application in specialty healthcare products"	International conference on emerging trends in traditional and technical textiles during 1st-3rd November, 2019 at NIT Jalandhar	2019
Expert talk on "Medical Compression Garments"	Faculty development programme on "Product Design"	Department of Textile Technology, NIT Jalandhar	2016
Indian expert talk on modelling of bandaging procedure using compression bandages	GIAN course on Medical Textiles and Tissue Engineering	Department of Textile Technology, NIT Jalandhar	2016
Expert talk on "Surface ornamentation of fabrics using different weaves",	UGC sponsored 2 day National Workshop on Surface Ornamentation of Garment	Fashion Designing Department, PCM SD College for Women, Jalandhar	2015