

## GLIMPSES OF THE 62<sup>nd</sup> JOINT TECHNOLOGICAL CONFERENCE



### Northern India Textile Research Association

(Linked to Ministry of Textiles, Govt. of India)

Sector-23, Raj Nagar, Ghaziabad-201 017 (India)

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## NITRA NEWS

...with industry always



Issue: Oct.-Dec. 2024

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### FROM DIRECTOR GENERAL'S DESK



Dear Patrons,

To begin this last quarter edition of NITRA News 2024, I want to wish you a happy new year 2025 which is already underway. I also hope you were hale and hearty the whole year through.

During this period NITRA, in their golden jubilee year (1974-2024), hosted the 62<sup>nd</sup> JTC, a jointly organized techno-conference of India's premier TRAs ATIRA, BTRA, SITRA and NITRA, at its campus in Ghaziabad on 24th-25th October, 2024. This is a prestigious meet in which delegates from the textile & clothing industry take part. The major technical developments in the field of textile technology, based on the R&D works carried out by TRAs during the year, are presented and deliberated in the conference. For the first time in history of JTC, scientists from all eight TRAs together presented 26 papers on conventional and technical textile technology including 6 papers presented by NITRA scientists that were well acclaimed by delegates.

Sh. Giriraj Singh, Hon'ble Union Minister for Textiles graced the occasion as Chief Guest. He was accompanied by Sh. Rajeev Saxena, Jt. Secretary and Smt. Roop Rashi, Textile Commissioner. Chairman, NITRA Sh. Vidit Jain, Dy. Chairman, Shri Sandeep Hora, Directors of ATIRA, BTRA & SITRA Sh. Pragnesh Shah, Dr. T. V. Sreekumar, and Dr. Prakash Vasudevan, many research scientists, delegates from industry, and senior personnel from military and para-military forces were also present.

The textile minister inaugurated this mega techno-conference and a textile products & technology related exhibition organized on this occasion. Besides, he also inaugurated new Fibre Spinning Plant, Non-woven Plant and Melt Spinning in NITRA. He expressed happiness over the activities and achievements of the TRAs. The Chief Guest was particularly satisfied with NITRA's R&D and new product developments in the area of Protective & Automotive Textiles. The hon'ble minister felicitated 25 NITRA employees who have completed 25 years of dedicated service to NITRA.

In this quarter, for three successive years, CII recognized NITRA as one of Top 5 Innovative Institutes in India for the year 2024, based on its innovations and transfer of technologies to industry. The 25<sup>th</sup> RAC meeting was also held. NITRA scientists presented 14 R&D projects to textile experts from industry and academia. Developmental projects were aimed for steel & automotive industry / armour sector / specialized fire suits/agro textiles/extreme cold climate clothing/protective textiles/sports textiles / development of nylon 66/ conversion of natural resources to industrial products/sustainability etc. Extensive discussions were held and new ideas were also shared.

During this quarter NITRA applied for patent of the technology 'An improved method for processing sunnhemp (Crotalaria Juncea) plants to produce fine-grade fibers' and also signed MoU and Non-Disclosure Agreement with renowned companies.

Regards,

**Dr. Arindam Basu**  
Director General

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conventional and technical textile technology.

Sh. Giriraj Singh, Hon'ble Union Minister for Textiles was the Chief Guest in the 62nd JTC. Sh. Rajeev Saxena, Jt. Secretary and Smt. Roop Rashi, Textile Commissioner, also joined the conference. Chairman, NITRA Sh. Vidit Jain, Dy. Chairman, Shri Sandeep Hora, Directors of ATIRA, BTRA and SITRA, Sh. Pragnesh Shah, Dr. T. V. Sreekumar, and Dr. Prakash Vasudevan, Director General, NITRA, Dr. Arindam Basu, many research scientists, delegates from industry, and senior personnel from military and para-military forces were also present.

Hon'ble Textile Minister inaugurated this mega techno-conference and a textile products & technology related exhibition organized on this occasion. Besides, he also inaugurated new Fibre Spinning Plant, Non-woven Plant and Melt Spinning Lab in NITRA along with a Poster Presentation event. He expressed happiness over the activities and achievements of the TRAs. The Chief Guest was particularly satisfied with NITRA's R&D and new product developments in the area of Protective & Automotive Textiles. The hon'ble minister felicitated 25 NITRA employees who have completed 25 years of dedicated service to NITRA.

**NITRA Scientists Present Six Research Papers in 62<sup>nd</sup> Joint Technical Conference**



**NITRA Scientists Presents research papers on October 26-27, 2024 in National Conference on "Advent of Emerging Technologies in Textile Industry" on the occasion of 110 Years of Heritage of GCTI, Kanpur Organized by Old Boys' Association (Rgt.)- G.C.T.I., Kanpur in Association with Uttar Pradesh Textile Technology Institute (GCTI) & The Textile Association (India)-UP Unit, Kanpur**

**25<sup>th</sup> Research Advisory Committee (RAC) Meet at NITRA**

25<sup>th</sup> RAC meeting was held at NITRA on December 14, 2024. NITRA scientists presented 14 R&D projects to experts from T&A industry and academia. Developmental projects were aimed for industries such as steel, automotive, armour sector, specialized fire suits, agro textiles, extreme cold climate clothing, protective textiles, sports textiles, development of nylon 66, conversion of natural resources to industrial products, sustainability etc. Extensive discussions were held and new ideas were shared. DG NITRA asserted that NITRA has always been working on R&D in the area which are directly going to benefit textile and apparel industry. The meet was chaired by Sh. Nitin Nolkha, JMD, Nitin Spinners Ltd. Dr. M.S. Parmar, Director NITRA, proposed the vote of thanks.



**RESEARCH PAPER PUBLISHED/PRESENTED**

S. No.	Title	Author(s)	Publication/Place	Date
1.	A Mood-Based Movie Recommendation System Using Positive and Negative Affect Schedule and Machine Learning Algorithms	Anand Prakash Srivastava , Dr. Sakuldeep Singh	Nanotechnology Perceptions Journal, ISSN: 1660 -6795 (Accepted)	December 23, 2024
2.	Web based Payroll Management System	Apoorv Deep Sahu. N.K. Sharma, Krishan Dewan & Dr, B.K. Sharma	International Conference on Sustainable Future, Organized by IPEM, Ghaziabad (Accepted)	December 24, 2024
3.	A Review on Public Transport and Traffic System using AI Techniques.	Nitesh Kr, Amrita Rajvanshi & Dr. B.K. Sharma	International Conference on Sustainable Future, Organized by IPEM, Ghaziabad (Accepted)	December 24, 2024
4.	Presentation on "Development of Jute-cotton-based molten metal splash-resistant workwear"	M.S. Parmar	Durgapur Steel Plant, Durgapur	December 12, 2024
5.	Presentation on "Application of milkweed fibre in different areas" at	M.S. Parmar	The National Botanical Research institute, Lucknow	December 20, 2024
6.	Thermal Protective Layer of Protective Textiles	Arindam Basu	Annual Volume of Institution of Engineers Textile Division	December, 2024
7.	A chapter written on 'Microencapsulation Moringa Oleifera Essential Oil for Antibacterial Properties on Cotton'	Rupali Kakaria, Neha Singh and M.S. Parmar	Polymer for Advanced Technology, Springer Proceedings in material, Vol 1, pp 83-95	December 2024
8.	Investigation of weave influence on flame retardancy of jute fabrics	Setara Begum, Michael Hummel, Ayub Nabi Khan, M.S. Parmar, Rimvydas Milašius, \)	AUTEX Research Journal, Vol. 24, No. 1, 2024, 20230035, DOI 10.1515/aut-2023-0035	2024
9.	Importance of machine learning techniques for effective decision making and corrective action in industry	B.K. Sharma	4th International conference on advancement in electronics & Communication engineering, RKGIT, Ghaziabad	November 23, 2024
10.	Optimization of kraft pulping process for Sesbania aculeata (dhaincha) stems using RSM.	Surabhi Das, Anita Rani, Nidhi Sisodia & Manisha Gahlot Arvind sharma .	Nordic Pulp & Paper Research Journal	November 2024

11.	Effect of bleaching on optical properties of dhaincha (Sesbania aculeata) pulp	Surabhi Das, Anita Rani, Nidhi Sisodia	Pantnagar Journal of Research	November 2024
12.	Biodegradable Agrotexiles: Exploring the role of Banana and Sunhemp Fibers in Agriculture	Nidhi Sisodia, AK Pandey & A Basu	National Conference on "Advent of Emerging Technologies in Textile Industry & Industry" on the occasion of 110 years of Heritage of GCTI, Kanpur	October 27, 2024
13.	A Critical Review of Water and Chemical Consumption in Textile Processing Industries: Case Studies	Pankaj Kumar, Arindam Basu & Jeeshan	National Conference on "Advent of Emerging Technologies in Textile Industry & Industry" on the occasion of 110 years of Heritage of GCTI, Kanpur	October 26, 2024
14.	Optimisation of various layers of Specialized firefighter suits	M.S.Parmar, Nidhi Sisodia, Kuldeep Yadav and Swami Sharan	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
15.	Investigating the potential use of banana and sunnhemp fibers in Agrotexiles	Nidhi Sisodia, A.K. Pandey and Arindam Basu	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
16.	Development of extreme cold climate clothing from Cellulose-based high Clo value and low-density natural fibre	M.S. Parmar, Preeti Kaur Sachdeva, and Nidhi Sisodia	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
17.	Impact protection and comfort characteristics of STF-infused 3D knitted fabrics for sports textile	Roopam Chauhan and Arindam Basu	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
18.	Spinning of yarns using mechanically recycled cotton fibre with virgin fibre	Lalit Giri Goswami, Arindam Basu	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
19.	Case Studies on Reducing Water and Chemical Consumption in Textile Processing	Pankaj Kumar & Arindam Basu	62 <sup>nd</sup> Joint Technological Conference 2024	October 24-25, 2024
20.	Opening & Cleaning of Fibres: latest developments	Arindam Basu	A Chapter in Developments in Yarn Spinning Technologies, published by Elsevier Ltd., London	October, 2024
21.	Compact Spinning: New Developments	Arindam Basu	A Chapter in Developments in Yarn Spinning Technologies, published by Elsevier Ltd., London	October, 2024

22.	Rotor Spinning	Sundaramoorthy P. & Arindam Basu	A Chapter in Developments in Yarn Spinning Technologies, published by Elsevier Ltd., London	October, 2024
23.	Air-vortex Spinning: New Developments	Arindam Basu	A Chapter in Developments in Yarn Spinning Technologies, published by Elsevier Ltd., London	October, 2024
24.	Developments in Worsted Spinning Systems	Arindam Basu	A Chapter in Developments in Yarn Spinning Technologies, published by Elsevier Ltd., London	October, 2024

### CONSULTANCY CORNER

**Inspection:** Vest Thermal (1unit), Coat Combat (2 units), Cloth Serge (1 unit), Shirting Angola (2 units), Cloth Disruptive (1 unit), Tent Glacier (1 unit), Cloth Gabardine (1 unit), Kit-bag Universal (1 unit), Polycarbonate Shield (1 unit), Body Protector (1 unit), Terry Towel (2 units), Woolen Jersey (3 unit), Blanket (3 units), T Shirt (2 units), and Sleeping Bag (1 unit).

### Consultancy:

- ❖ Capacity verification of Winter Jacket for Delhi Police, Noida in 1 industrial unit
- ❖ Modernization requirement assessment for plant machineries based on health & ageing in 1 industrial unit

### HRD FOCUS

#### Training Program/Workshop/Seminar Organized by NITRA

S. No.	Nature of Program and Date	Venue	Division	No. of Trainees
1	Students Development Program on Project Excellence- Mastering your Minor and Major Projects with Real World Case Studies (16 <sup>th</sup> Oct 2024)	Online	CSE, CSE (AI& ML)	105
2	IIT Ropar Webinar- Maximizing Jobs & Internship Opportunities (26 <sup>th</sup> Oct 2024)	Online	CSE, CSE (AI& ML)	208

### TESTING ZONE

During the period, total 2140 samples were tested in all the labs as par following table:

S. No.	Lab Name	No. of samples tested
1	Physical Quality Evaluation Lab	874
2	Chemical Quality Evaluation Lab including Heat & Flame lab	959
3	Microbiology lab	35
4	Polymer & Technical Textiles Lab	219
5	Eco Lab & Environment Lab	53

Total No of Fabric Defect Analysis under taken during the period: 03

### GLIMPSES

#### Textile Minister Giriraj Singh Graces 62<sup>nd</sup> Joint Technological Conference at NITRA

NITRA, in their golden jubilee year (1974-2024), hosted the 62<sup>nd</sup> Joint Technological Conference (JTC) at its campus in Ghaziabad on 24th-25th October, 2024. The major technical developments in the field of textile technology, based on the R&D works carried out by TRAs during the year, are presented and deliberated in the conference. For the first time in history of JTC, scientists from all eight TRAs together presented 26 papers on