

2026 Conference

AI IN THE TEXTILE AND FASHION INDUSTRIES CONFERENCE

**Venue: Convocation Center (2225)
Wilson College Textiles Complex
1020 Main Campus Drive
North Carolina State University**

March 31, 2026 (Tues)

Optional Pre-Conference Workshop: 2 – 5 pm
Welcome Reception: 6 pm (Atrium)

April 1, 2026 (Wed)

Conference: 8 am – 5:10 pm

April 2, 2026 (Thurs)

Conference: 8 am – 12:20 pm
Wilson College of Textiles Tour: 12:30 pm
Optional Post-Conference Workshop: 2 – 5 pm

Hosted by

NC STATE

Fashion and Textile Business
Excellence Cooperative

Conference Planning Committee

B. Ellie Jin (Chair)
Abdel-Fattah Seyam (Co-Chair)
A. Blan Godfrey (Co-Chair)
Minyoung Suh (Co-Chair)

**Wilson College of Textiles
North Carolina State University**

Pre-Conference Hands-On Workshop

2 PM – 5 PM on Tuesday, March 31, 2026

Hosted by [FTBEC \(Fashion and Textile Business Excellence Cooperative\)](#)

Venue: **Convocation Center (Room 2225), Wilson College of Textiles**

Workshop Summary

The basics of generative AI - what it is, ethical and logistical considerations around deciding whether to use it, and relevant publisher and campus policies regulating its use.

AI-powered literature review and productivity tools that enable you to discover and synthesize information.

How to use AI tools in basic data applications, including choosing the right platform, cleaning data, writing prompts, & coding.

Presented By:



Shannon Ricci

Associate Head
Data Science Services
NC State Libraries



Kristy Borda

Research Librarian
Sciences and Instructional Strategy
NC State Libraries



Alp Tezbasaran

Data Science Librarian
NC State Libraries

Workshop Takeaways

This will be a hands-on session geared towards beginners & those curious about AI-assisted research!

Attendees will learn how to use AI to enhance the literature review process, information synthesis, data cleaning & coding, and general productivity.

- \$50 for workshop registration
- Limited to 50 participants
- First come, first served

Early registration is encouraged, as workshop spots are limited!

To help everything run smoothly during our hands-on activities, please remember to bring your own laptop. It's also a great idea to make sure it's fully charged before you arrive.

Pre-Conference Hands-On Workshop

2 PM – 5 PM on Tuesday, March 31, 2026

Hosted by [FTBEC \(Fashion and Textile Business Excellence Cooperative\)](#)

Venue: **Convocation Center (Room 2225), Wilson College of Textiles**

Workshop Agenda

Setting the Stage

Define AI and identify the differences between LLMs, GenAI, and related technologies. Consider the publisher policies, institutional policies, standards for collegial use, relevant legal considerations and status, and the ethics of when to apply AI into your work.

Literature Review

An introduction to the strengths and weaknesses of available AI tools:

- Use LLMs to assist with keyword generation and brainstorming
- Apply Keenious to identify relevant articles
- Employ Elicit and SciSpace to support article discovery and synthesis
- Utilize Research Rabbit for citation mapping

A live demo and hands-on practice on crafting effective AI prompts for literature review

Information Synthesis and Notetaking

An overview of using NotebookLM to support research through information synthesis.

Live demo on NotebookLM workflow, including research resource inputs, prompt guidance, and generate timeline and briefing outputs.

Data Preparation, Analysis, & Visualization

Identify the strengths and weaknesses of available tools

- Choosing the right tools for coding versus non-coding solutions, project goals, subscription tiers, data security considerations, and accuracy.
- An overview of all-purpose Chatbots like ChatGPT, Gemini, and Claude and specialized Chatbots like RShiny Assistant and Julius.
- Utilizing in-line coding assistants, including GitHub Copilot, Gemini, Colab, and Positron (R Integrated Development Environment)
- Introduce context-aware coding Integrated Development Environment assistants such as Cursor, JetBrains, and Positron and AI models such as Gemini, ChatGPT, and Claude

Live demo and hands-on practice on applying AI for data preparation, analysis, and visualization

- Use a Chatbot to acquire clean data by engineering and running the pre-developed prompts locally.
- Select in-line tools to complete and add codes based on contexts (reads variables and other workplace codes and files)

Conference Program

Tuesday, March 31, 2026

2:00 – 5:00 p.m. Optional Pre-Conference Hands-On Workshop

6:00 p.m. Welcome Reception in the Atrium
(Sponsored by Youngone Corporation)

Wednesday, April 1, 2026

(**Presider: Kristin Thoney-Barletta, Ph.D.**)

8:00 a.m. Breakfast & Registration

9:00 a.m. Opening Remark



David Hinks, Ph.D.

Dean, Wilson College of Textiles,
North Carolina State University

9:15 a.m. Welcoming from the Planning Committee

9:20 a.m. Keynote Speech: AI Transformation in Supply Chains: A Revolution or an Over-Reaction?



Robert Handfield, Ph.D.

Bank of America University Distinguished Professor of Supply Chain Management, North Carolina State University
Executive Director of the Supply Chain Resource Cooperative

10:00 a.m. Break

10:10 a.m. Session I: Apparel Product Development & Manufacturing
(Session Chair: Minyoung Suh, Ph.D.)



Steven Hauser, Ph.D.

Principal Data Scientist, Size Stream

3D Body Scanning and the Future of Made to Measure Apparel with AI



Kerry Maguire King

Consultant

Reimagining Textile Print Design Workflows in the Era of AI



Ganesh Subramanian

Founder and CEO, Stylumia

Seeing through the Consumer's Eyes: How AI Agents are Rewriting Fashion Prediction

11:25 a.m. Break

11:35 a.m. Session I Panel Discussion

(Moderator: Michael McDonald, President, SPEASA)



Amber Isaac

Global Director Digital Product Creation,
Artistic Milliners, SFI Studio



Christopher Baughan

Director of Data and Analytics,
Peter Millar, G/FORE

Conference Program

Wednesday, April 1, 2026 (Cont'd)

12:15 p.m. Lunch

1:30 p.m. **Session II:**

Consumer Insights, Start-ups, & Workforce Development

(Session Chair: Zahra Saki, Ph.D.)



Jeanne McClure, Ph.D. and *Sungwhan Byun, Ph.D.

Postdoctoral Fellow, Data Science and AI Academy

*Assistant Professor, Department of STEM Education/ Director of Educational Research, Data Science and AI Academy, North Carolina State University

Supporting Employee AI Adoption with Prompt Templates



Gart Davis

Co-founder and past-CEO/COO of Spoonflower

Practical Applications of AI in Digital Textile Products and Ecommerce



B. Ellie Jin, Ph.D.

Albert Myers Distinguished Professor, North Carolina State University

Founding Director, Fashion and Textile Business Excellence Cooperative (FTBEC)

Beyond Generative: Navigating the Shift to Agentic AI in Fashion Retail



Yasir Nawab, Ph.D.

Vice Chancellor of the University of Kamalia, Pakistan

Adjunct Professor, North Carolina State University

Integrating Artificial Intelligence into Textile Engineering and Textile Design Education: A University Perspective

3:10 p.m. Break

3:20 p.m. **Session III: Supply Chain & Sustainability (Panel Discussion)**

(Moderator: Michael McDonald, President, SPEASA)



Daniel Finkenstadt

Vice President of Research and Senior Fellow, Commerce and Contract Management Institute
Founder and Principal, Wolf Stake Consulting



Katy Salamati, Ph.D.,

MBA

Global Solution Lead – IoT in Government and Infrastructure, SAS



Rebecca Geppert

Director of Partnerships, Refiberd, Inc.

4:00 p.m. Break

Conference Program

Wednesday, April 1, 2026 (Cont'd)

4:10 p.m. Session IV: Ethical & Legal Issues

(Session Chair: A. Blan Godfrey, Ph.D.)



Kevin P. Lee, J.D.

Director, Institute for AI and Democratic Governance

Unraveling AI: Legal Exposures and Ethical Frameworks for the Textile Industry



W. Lyle Gravatt, J.D.

Managing Partner, Raleigh Office of Michael Best & Friedrich, LLP

Responsible AI: Understanding Ethical, Legal and Governance Risks and Liabilities

5:00 p.m. Sessions Conclude

5:30 – 7:00 p.m. Networking Reception

Drinks on SPEASA at

Crafty Beer, Wine & Spirits

2005 Fairview Rd, Raleigh, NC 27608

Conference Program

Thursday, April 2, 2026
(**Presider: Kristin Thoney-Barletta, Ph. D.**)

8:00 a.m. Breakfast & Registration

8:45 a.m. Keynote Speech 1: AI in Apparel: From Isolated Tools to System-Level Transformation



Brad Ballentine
CEO, MAS USA

9:15 a.m. Keynote Speech 2: AI Ethics and Its Implications for the Industry



Veljko Dubljević, Ph.D.
Joseph D. Moore Distinguished Professor of Philosophy, and Science, Technology and Society, North Carolina State University

9:45 a.m. Break

10:00 a.m. Session V: Textile Technology & Advanced Manufacturing
(Session Chair: Abdel-Fattah Seyam, Ph.D.)



Renzo Shamey, Ph.D.
CIBA Distinguished Professor, North Carolina State University
Data-Driven Insights into the Effect of Moisture on Apparel Color Appearance



Abdel-Fattah Seyam, Ph.D. and *Constantino Raptis
Charles A. Cannon Professor of Textiles, Alumni Distinguished Graduate Professor
*Ph.D. Candidate, North Carolina State University
AI in Weaving



Luis Negrón Naldos, Ph.D.
Business Analytics and Engineering Manager, Creditex S. A.
AI Applications in Textile Technology and Advanced Manufacturing

11:00 a.m. Break

11:10 a.m. Session V Cont'd



Oliver Meier
Executive Vice-President, Lindauer DORNIER
AI-Driven Product Innovation for Weaving Mills



Angie Peterson
Senior Director of IT – AI, Data and Analytics, Milliken & Company
Leveraging AI and Automation in Textiles

Conference Program

Thursday, April 2, 2026 (Cont'd)

11:50 a.m. *Session V Panel Discussion*
(Moderator: A. Blan Godfrey, Ph.D.)



Tricia Carey
Chief Commercial Officer, Avalo



Patrick Hawks
Director of R&D, Glen Raven Inc.

12:20 p.m. Ending Remark

12:30 p.m. Tour to Wilson College of Textiles

1:30 p.m. Boxed Lunch for Post-Conference Workshop
Participants ONLY

2:00 – 5:00 p.m. Optional Post-Conference Hands-On Workshop

Speakers and Panelists

Robert Handfield, Ph.D.

Bank of America University Distinguished Professor of Supply Chain Management, North Carolina State University
Executive Director, Supply Chain Resource Cooperative

Rob Handfield is the Bank of America University Distinguished Professor of Supply Chain Management at North Carolina State University, and Executive Director of the Supply Chain Resource Cooperative (<http://scm.ncsu.edu/>). Handfield is considered a thought leader in the field of supply chain management and has extensive knowledge in the fields of sourcing, supply market intelligence, and supply chain resilience. Handfield has published more than 150 peer reviewed journal articles and is regularly quoted in global news media such as the New York Times, Wall Street Journal, LA Times, Bloomberg, NPR, Washington Post, the Financial Times, Fox Business News, and CNN.

Steven Hauser, Ph.D.

Principal Data Scientist, Size Stream

Steven Hauser is a Principal Data Scientist at Size Stream, where he applies advanced AI techniques to further the development of 3D body scanning technology for applications in apparel, health and research. He brings more than a decade of experience in machine learning and computer vision, including six years working with research companies in North Carolina's Triangle region. His work focuses on the measurement of biomedical and anthropometric data using mobile devices, including PPG and smartphone camera-based systems. Prior to relocating to Raleigh, he earned a B.A. in Computer Science and an M.S. in Biomedical Engineering, followed by a Ph.D. in Systems and Information Engineering from the University of Virginia.

Kerry Maguire King

Consultant

For more than 10 years Kerry led research and development efforts for the Spoonflower brand where she advanced the company's manufacturing platform for digital print-on-demand production of fabric, wallpaper and home decor products. Prior to Spoonflower she spent over 15 years at [TC]2, a not-for-profit company that specialized in technology development and supply chain improvement within the soft goods industry. Kerry is currently in the process of completing a PhD in Textile Technology Management within the Wilson College of Textiles at North Carolina State University and consults full time. She is also a past president, current board member, and active participant in AATCC (The American Association of Textile Chemists and Colorists).

Ganesh Subramanian

Founder & CEO, Stylumia

Ganesh Subramanian is the Founder and CEO of Stylumia, a deep technology venture solving real-world challenges in fashion and lifestyle businesses using cutting-edge artificial intelligence. Stylumia operates across the USA, Europe, UK, Middle East, Brazil, and India. An experienced retail professional, Ganesh has held leadership roles in supply chain and P&L across leading global and Indian fashion and general merchandise companies. He previously served as Chief Operating Officer of Myntra, India's largest fashion e-tailer, where he scaled the business from USD 20M to USD 1B. During his tenure, he built the world's first AI-driven fashion brand, now recognized as a global case study. Prior to this, he led the Fashion & Softline business at Walmart India JV and held senior leadership roles at VF Corporation, Tommy Hilfiger, Reliance Trends, Arvind Brands, Indus League Clothing, and Coats Viyella. He is passionate about solving real-world problems using technology. Ganesh is a global thought leader in fashion and technology who shares weekly insights with an international audience, with his thought-starter series surpassing 200 consecutive weeks.

Speakers and Panelists

Amber Isaac

Global Director DPC (Digital Product Creation), Artistic Milliners, SFI Studio (Star Fades International Studio)

Amber Isaac is a Digital Product Creation leader at Artistic Milliners, specializing in the integration of 3D workflows, AI assisted design, and digital materials within global apparel supply chains. She oversees digital teams focused on virtual garment engineering, 3D modeling, digital material development, and virtual finish and photography. Amber is known for creating structured training systems and scalable processes that improve quality, speed, and collaboration between brands and manufacturing partners.

Christopher Baughan

Director of Data & Analytics, Peter Millar, G/FORE

Christopher Baughan has eight years of experience in the retail apparel industry, holding data and analytics roles at Vineyard Vines and Peter Millar (including G/FORE). Across both organizations, Christopher's work has focused on translating data into actionable insights and building the data infrastructure and tools that enable those insights at scale. This has often meant working across data engineering and data science—developing robust data environments while supporting ad-hoc and advanced analytics on top of them. In his current role at Peter Millar, Christopher leads consumer insights and advanced analytics to inform brand strategy, product development, and the end-to-end consumer experience.

Jeanne McClure, Ph. D.

Postdoctoral Fellow, Data Science and AI Academy, North Carolina State University

Dr. Jeanne McClure is a Postdoctoral Fellow at Data Science and AI Academy (DSA), North Carolina State University. Her work focuses on prompt engineering, AI evaluation methodologies, and human-in-the-loop workflows for applied generative AI systems. She has led numerous AI trainings across higher education and industry, and also consults through her startup Ars Innovate.

Sunghwan Byun, Ph.D.

Assistant Professor, Department of STEM Education

Director of Educational Research, Data Science and AI Academy, North Carolina State University

Dr. Sunghwan Byun facilitates educational research programs to inform Data Science and AI Academy (DSA), North Carolina State University at all levels, particularly for improving DSA courses and supporting DSA instructor development. His research focuses on examining discipline-specific teaching practices and related professional development for DSA instructors.

Gart Davis

Co-founder and past-CEO/COO of Spoonflower

Gart is an entrepreneur, problem solver, and a nerd at heart. In a family of .gov, .org, .mil and .edu emails he is a lonely .com, choosing startups as his instrument of impact. His works have focused on teaching, mortgage access, and publishing. Since 2008 he has been smitten by the opportunity to bring digital technology to the textile industry for the benefit of creators, consumers, and the planet.

Speakers and Panelists

B. Ellie Jin, Ph.D.

Albert Myers Distinguished Professor, North Carolina State University
Founding Director, FTBEC (Fashion and Textile Business Excellence Cooperative)

Byoungho “Ellie” Jin, Albert G. Myers Distinguished Professor at NC State University, is the Founding Director of the Fashion and Textile Business Excellence Cooperative (FTBEC) and a former President of the International Textile and Apparel Association (ITAA). With approximately 160 refereed publications, she is a leading scholar in fashion marketing and global apparel business, reflected in her textbook, Global Fashion Business. Dr. Jin spearheaded the 1st AI in the Textile and Fashion Industries Conference in 2024. Guided by clear vision and deep passion, she bridges industry, academia, and students to drive innovation and create meaningful, real-world impact through industry-funded projects.

Yasir Nawab, Ph.D.

Vice Chancellor of the University of Kamalia, Pakistan / Adjunct Professor, North Carolina State University

Dr. Yasir Nawab is an accomplished academic leader, scientist, and innovator with over two decades of experience in textile engineering, composite materials, sustainable fibers, and higher education transformation. He is a highly cited researcher who has published 200+ high-impact papers, authored numerous books and book chapters, and secured multiple patents that have been commercialized internationally. He is consistently ranked among the Top 2% of highly cited scientists worldwide and is a recipient of the Pakistan Academy of Sciences Gold Medal (2025) and multiple national engineering and innovation awards. His current research focus includes AI-driven textile engineering, digital fashion design, smart materials, and sustainability-centered innovation.

Daniel Finkenstadt

Vice President of Research and Senior Fellow, CCM Institute / Founder and Principal, Wolf Stake Consulting

Daniel Finkenstadt is a defense acquisition strategist, researcher, and educator with over two decades of experience across government, academia, and industry. He serves as Vice President of Research and Senior Fellow at the Commerce & Contract Management Institute, where his work focuses on acquisition reform, advanced contracting models, and the application of AI in procurement and negotiations. As Founder of Wolf Stake Consulting, he advises public and private organizations on complex sourcing, supply chain resilience, and AI-enabled decision systems. He also teaches at the Johns Hopkins University and George Mason University (among others), bridging operational defense challenges with commercial best practices and emerging technologies.

Katy Salamati, Ph.D., MBA

Global Solution Lead – IoT in Government and Infrastructure, SAS

Dr. Katy Salamati has over 15 years of experience improving infrastructure and transportation safety and mobility through applying innovative IoT, AI and advanced analytics, working with all modes of transportation from surface to air, rail, maritime and recently space. Katy leads the application of IoT and AI streaming analytics in transportation industry for SAS's IoT division and has worked with both public and private sector infrastructure, transportation and supply chain agencies. Katy has a PhD in Civil Transportation engineering and an MBA in technology commercialization and entrepreneurship from North Carolina State University. She also has a master's degree in industrial and systems engineering from University of Southern California. Before joining SAS, Katy worked as a program manager for Institute for Transportation Research and Education (ITRE) at North Carolina State University, where she worked on grants from USDOT, NSF and NCHRP projects. Katy has co-authored two NCHRP reports and has several best paper awards with TRB and many publications in TRR. She is also adjunct faculty of Civil Engineering at NCSU.

Speakers and Panelists

Rebecca Geppert

Director of Partnerships, Refiberd, INC.

With a background in apparel design, production, and startup operations, Rebecca has worked with companies such as Kohls, Best Made Company, and Revive to implement recycling, repair, and refurbishment programs across the textiles industry. She is currently the Director of Partnerships at Refiberd, a California based startup pioneering AI-powered technologies to enable circularity in the textiles industry through automated material identification and quality inspection of post-consumer materials.

Kevin P. Lee, J.D.

Director, Institute for AI and Democratic Governance

Kevin P. Lee is the Founding Director of the Institute on AI and Democratic Governance and a veteran legal educator with nearly two decades of experience. He previously served as the inaugural Intel Social Justice and Racial Equity Professor of Law at NCCU and founded the Campbell Law Innovation Institute. An expert in the relationship between jurisprudence, AI, and computational law, Lee was named one of the FastCase 50 leading legal innovators and served as the inaugural chair of the NC Bar Association's Future of Law Committee.

William Lyle Gravatt, J.D.

Managing Partner, Raleigh Office of Michael Best & Friedrich, LLP

Before beginning his legal career, Lyle worked in North Carolina's furniture industry, manufacturing fabric swatch books and importing leather from South America. He is now the Raleigh Managing Partner of the Michael Best law firm, and a Board member of the North Carolina Blockchain + AI Initiative. Lyle has spoken extensively to university, business and attorney organizations on the rapidly-evolving legal and ethical issues surrounding artificial intelligence. He generally focuses his legal practice in the area of intellectual property and transactional law, working closely with manufacturers and tech companies to align their intellectual property, internal governance and contractual relationships to their business priorities.

Brad Ballentine

CEO, MAS USA

Brad Ballentine is CEO of MAS USA, the U.S. innovation and orchestration platform of MAS Holdings, a global leader in apparel and textile manufacturing. With more than 35 years of experience across the entire apparel value chain, spanning fiber and textile manufacturing, apparel production, brand merchandising, and retail business development, Brad brings a systems level perspective shaped by hands on operational and commercial leadership. He focuses on applying AI, advanced analytics, and flexible manufacturing models to connect raw materials to the retail shelf with greater speed, resilience, and accountability. His work centers on demand driven production, digital supply chain orchestration, and aligning commercial performance with sustainability outcomes.

Veljko Dubljević, Ph.D.

Joseph D. Moore Distinguished Professor of Philosophy, and Science, Technology and Society, North Carolina State University

Veljko Dubljević, Ph.D., D.Phil., Joseph D. Moore Distinguished Professor of Philosophy, and Science, Technology and Society at NC State University, leads the NeuroComputational Ethics Research Group. He is the Editor-in-Chief of American Journal of Bioethics - Neuroscience, series co-editor for "Advances in Neuroethics," and serves on the Board of Directors of the International Neuroethics Society. He is a prolific author in Neuroethics and Ethics of AI, having published over 100 peer-reviewed articles and five books. He is the founding director of the Centering AI in Society and Ethics (CASE) Initiative at NC State.

Speakers and Panelists

Renzo Shamey, Ph.D.

CIBA Professor and Director of Color Science and Imaging Laboratories, North Carolina State University

Dr. Renzo Shamey is the CIBA Distinguished Professor of Color Science and Technology at the Wilson College of Textiles, North Carolina State University, and Director of the Color Science and Imaging Laboratory. His research spans color perception, color difference modeling, expert systems, and AI-driven approaches to textile coloration and process optimization. His work includes modeling, simulation, and control of wet processes, colorimetry, and deep learning solutions for real-world color and appearance challenges. Dr. Shamey has advised multiple AI-focused PhD projects, authored numerous publications in this area, and (co)developed software addressing complex color and appearance issues.

Abdel-Fattah Seyam, Ph.D.

Charles A. Cannon Professor of Textiles, Alumni Distinguished Graduate Professor, Alexander Quarles Holladay Medal for Excellence Award, North Carolina State University

Dr. Seyam is the Cannon Distinguished Professor of Textiles at NC State University Wilson College of Textiles. He is a globally engaged textile engineer and technologist and educator whose career spans academia and industry. His expertise focuses on the intersection of textile engineering (woven, nonwoven, composite structures), advanced manufacturing (3D printing, robotics, melt-blown processes), and smart materials (electrotextiles, fiber sensors). He places strong emphasis on graduate mentorship and translating textile research toward functional, advanced textile systems. His expertise relevant to AI includes developing relational databases (woven fabrics' specifications, yarn specifications, fiber data, in-process production monitoring, inventory, etc.) for engineered woven design combined with expert system and woven fabric manufacturing.

Constantino Raptis

Ph.D. Candidate in Textile Technology Management, North Carolina State University

Constantino Raptis is a Ph.D. candidate in Textile Technology Management at North Carolina State University, with a bachelor's degree in Computer Engineering and an in-progress Ph.D. minor in Statistics. His research focuses on developing supervised AI models for weaving within an Industry 4.0 framework, leveraging relational databases from vertically integrated textile companies to enable data-driven prediction and process optimization across the fiber-to-fabric production chain, bridging textile technology, machine learning, and statistical modeling.

Luis Negrón Naldos, Ph.D.

Business Analytics and Engineering Manager, Creditex S.A.

Doctor in Business Administration and Strategic Management from Maastricht School of Management (MSM), The Netherlands. He also holds Master's degrees in Business Administration and Philosophy from MSM, and a Master's degree in Artificial Intelligence from Tecnológico de Monterrey. He currently serves as Manager of Business Analytics and Industrial Engineering and is a lecturer and researcher in the academic area of Operations and Information Technology at CENTRUM Católica Graduate Business School. He is the leader of the company's technological innovation processes and has managed digital transformation projects. He has also participated in the project 'Implementing a blockchain technology for traceability and due diligence in the cotton value chain in support of a circular economy,' funded by UNECE.

Speakers and Panelists

Oliver Meier

Executive Vice-President, Lindauer DORNIER

Oliver Meier is the Executive Vice-President of American DORNIER Machinery Corporation, based in Charlotte, North Carolina, DORNIER's oldest subsidiary and the primary support center for the textile and composite industries across North and South America. He serves as a key liaison between American DORNIER and Lindauer DORNIER in Germany, overseeing sales, technical support, and customer relations throughout the Americas. Oliver holds a Master's degree in Textile Engineering from the University of Reutlingen, Germany, graduating in 1996, and began his career in the United States that same year. Prior to joining American DORNIER, he held leadership roles at Stäubli, Groz-Beckert, Lectra, and Collins & Aikman. Fluent in English and German, he brings nearly three decades of expertise in weaving machine technology to every customer engagement.

Angie Peterson

Senior Director of IT—AI, Data & Analytics, Milliken & Company

Angie serves as the Senior Director of IT—AI, Data & Analytics at Milliken & Company, where Angie leads the AI, Analytics, and Data teams and advances operational automation initiatives. Angie has held leadership roles across IT, Supply Chain, and Manufacturing, applying broad experience to drive practical, value-focused approaches to AI, Data and technology. Angie prioritizes aligning strategic business needs with the right solutions to deliver meaningful outcomes while continually strengthening organizational capabilities. She holds a Bachelor of Science from Furman University, an MBA from Clemson University, has completed executive training at the University of Virginia, and is a dedicated advocate for Inclusive Leadership.

Tricia Carey

Chief Commercial Officer, Avalo

Tricia Carey is the Chief Commercial Officer at Avalo, an ag-tech innovator accelerating crop evolution through AI to produce climate-resilient, low-input cotton. With a career rooted in sustainable innovation, Tricia has been instrumental in advancing fiber solutions—launching TENCEL™ globally with Lenzing and commercializing CIRCULOSE® at Renewcell. She brings deep expertise in brand-building, market strategy, and scaling disruptive technologies across the textile and apparel value chain. Tricia serves on the boards of Accelerating Circularity and the Transformers Foundation, and holds credentials from FIT, MIT, and Cornell.

Patrick Hawks

Director R&D, Glen Raven Material Solutions Group

Patrick Hawks is a textile & polymer chemist serving as the Director of R&D at Glen Raven Inc. in Burlington, NC. Glen Raven manufactures Sunbrella® performance fabrics for a variety of end uses, most notably, awnings, marine covers, and indoor/outdoor upholstery. A member of AATCC since college, Patrick holds B.S. and Masters of Textiles degrees in Textile Chemistry from North Carolina State University's College of Textiles. Named in five patents, Patrick has been responsible for textile R&D for six textile mills, with concentrated experience creating fabrics for upholstery, automotive, industrial, protective, and aerospace end uses, among others. As Director, it is Patrick's responsibility to activate AI-enhanced resources to advance the technical work at Glen Raven.

Abstracts

AI Transformation in Supply Chains: A Revolution or an Over-Reaction?

Robert Handfield, Ph.D. | Bank of America University Distinguished Professor of Supply Chain Management, North Carolina State University / Executive Director, Supply Chain Resource Cooperative

Handfield will present a roadmap that supports ethical, reliable, and resilient AI adoption in both AI-enabled procurement processes, AI-enabled supply chain resilience, AI-enabled cybersecurity, and AI-driven market transactions.

Topics covered will be:

- Supply Chains – Current State
- What is AI? How does it work?
- Applications of AI to Supply Chain Management
- Digital Literacy: An Enabler for AI Application
- "The Four R's of AI" – Guidelines
- AI and Cybersecurity
- AI for Supply Chain Stress Testing and Resiliency
- Future Applications of AI

3D Body Scanning and the Future of Made to Measure Apparel with AI

Steven Hauser, Ph.D. | Principal Data Scientist, Size Stream

Artificial intelligence is redefining the apparel industry, unlocking smarter design, better fit, and more confident purchasing. At Size Stream, advanced machine learning powers mobile 3D body scanning technology that brings highly accurate body measurement directly to consumers, whether at home or in-store, eliminating the need for costly legacy booth scanning systems. Our industry-leading measurement technology delivers accuracy and flexibility that surpass traditional tailoring, enabling truly personalized made-to-measure garments and precise sizing recommendations at scale. By continuously learning from consumer behavior, purchase outcomes, and post-purchase feedback, our AI-driven platform becomes smarter over time, adapting to diverse body shapes, fit preferences, and evolving consumer expectations. These insights power immersive virtual try-on experiences, allowing shoppers to visualize both fit and style before purchasing, reducing uncertainty and increasing conversion. With thousands of garments produced, our clients have achieved remake rates as low as 7%, dramatically outperforming industry averages that can reach as high as 24%. Together, these innovations usher in a new era for the apparel industry towards a more data-driven, personalized, and efficient experience.

Reimagining Textile Print Design Workflows in the Era of AI

Kerry Maguire King | Consultant

The application of generative AI in design fields is introducing both opportunity and uncertainty among creatives. How are emerging tools impacting design activities, and in what ways can AI be applied to enhance the creative process? Multi-modal AI applications that draw on language and image-based prompts are enabling new, efficient pathways for design research and creation. This presentation examines the rapidly changing landscape of generative AI capabilities for textile design with a focus on strategies for developing surface designs. The discussion includes AI-enabled research as a tool for deep exploration of design trends and themes and highlights use of AI for creative and efficient development of imagery, repeating patterns, and color optimization. The discussion will touch on themes of concern for creatives including design authenticity, ownership, and innovation.

Abstracts

Seeing through the Consumer's Eyes: How AI Agents are Rewriting Fashion Prediction

Ganesh Subramanian | Founder & CEO, Stylumia

Fashion has always chased the consumer. What if it could finally think like one? For decades, retail prediction has been built on what has already happened. Sales data, historical trends, markdown patterns. Useful, but always late. The consumer has moved on before the insight arrives. This session introduces a fundamentally different paradigm. One where AI agents do not just analyze consumer behavior, they see through the consumer lens in real time, capturing desire as it forms, not after it converts.

Drawing from live deployments with global fashion retailers, we explore how agentic AI systems now operate across the full prediction lifecycle. From early trend sensing to assortment decisions to demand forecasting. Not as dashboards. As thinking systems that act.

The session presents a conceptual framework for Consumer Lens Intelligence and demonstrates through a real customer story how this shift is already reducing waste, improving full price sell through, and closing the gap between what consumers want and what brands build. For brands and retailers, this is an operating model question. For academicians, it reopens foundational assumptions about demand science and behavioral signal extraction. The puck has moved. The question is whether your intelligence has moved with it.

Supporting Employee AI Adoption with Prompt Templates

Jeanne McClure, Ph.D. | Postdoctoral Fellow, Data Science and AI Academy
Sunghwan Byun, Ph.D. | Assistant Professor, Department of STEM Education / Director of Educational Research, Data Science and AI Academy, North Carolina State University

This session introduces prompt templates as a pathway toward supporting workplace AI adoptions, especially the use of GenAI in textile contexts. As employees increasingly experiment with tools such as ChatGPT and Gemini, organizations are exploring ways to move from informal ad hoc use toward more task-aligned and operational practices. We present the design features and key elements of prompt templates. The fillable structure of prompt templates can support employees with varying levels of experience. Prompt templates can guide prompt inputs without requiring advanced prompting expertise and develop employees' capacity over time. We will share how unstructured requests can be translated into reusable, adaptable prompt templates, which support more consistent and intentional workplace use of AI.

Practical Applications of AI in Digital Textile Products and Ecommerce

Gart Davis | Co-founder and past-CEO/COO of Spoonflower

The textile industry is changing fast, driven by the convergence of AI, eCommerce, on-demand manufacture. Following his experience working in code over the last year, the author will discuss and demonstrate practical applications of AI in three core "Technology Epics": Surface Design, Patterns, and Making. In Design, new tools and code are revolutionizing design discovery, enabling efficient indexing, and providing tools for design repair. In textile product development we will see product visualizations twinned with their production packages, prepared to simultaneously deploy to social media, to a Shopify store and to an on-demand print-cut-sew operation. Ultimately, this shift leads to moral questions that are getting real very quickly. How will we protect the work of makers and artists? How can we amplify the authentic stories and the tribal voice in our products and brands?

Abstracts

Beyond Generative: Navigating the Shift to Agentic AI in Fashion Retail

B. Ellie Jin, Ph.D. | Albert Myers Distinguished Professor / Founding Director, FTBEC (Fashion and Textile Business Excellence Cooperative), North Carolina State University

The fashion industry is shifting from Generative AI's content creation to Agentic AI's autonomous execution. Agentic AI functions as a digital workforce that independently reasons, plans, and acts to achieve complex business goals. This session explores how autonomous agents are transforming the fashion value chain in multiple ways—from streamlining product development and inventory control to enhancing supply chain resilience and consumer analytics. We will examine emerging startup cases that leverage agentic frameworks to automate critical operational tasks, including autonomous procurement, size-matching intelligence, and real-time logistics rerouting. As foundational tools like Gemini and ChatGPT evolve into "Action Agents" capable of handling sophisticated consumer requests—such as curating a full ensemble for a specific occasion—brands must transition toward "Agent-Ready" infrastructures. Heritage brands and disruptive startups are already navigating this shift by evolving their digital presence. This session provides strategic implications for how fashion brands and retailers can maintain distinct brand personas while ensuring their data remains seamlessly accessible to the autonomous AI shoppers of 2026.

Integrating Artificial Intelligence into Textile Engineering and Textile Design Education: A University Perspective

Yasir Nawab, Ph.D. | Vice Chancellor of the University of Kamalia, Pakistan / Adjunct Professor, North Carolina State University

Artificial Intelligence (AI) is transforming textile education by reshaping both engineering and design disciplines within universities. In textile engineering, AI enhances learning through predictive modeling of yarn and fabric behavior, enabling students to understand performance characteristics before physical trials. Intelligent optimization tools for spinning, weaving, dyeing, and finishing processes help learners grasp complex production dynamics while reducing traditional trial-and-error. The integration of digital twins, virtual simulations of machinery and manufacturing systems, provides a safe, interactive platform for experimenting with process parameters, improving analytical skills, and aligning academic training with emerging smart manufacturing environments. In textile and fashion design, AI supports creativity and efficiency through generative design, virtual draping, automated pattern development, and digital material visualization. Trend forecasting algorithms, color analytics, and sustainability assessment tools strengthen students' ability to make informed, data-driven creative decisions. These technologies speed up prototyping, enhance experimentation, and prepare learners for a global industry increasingly driven by digital innovation and circular design principles. By integrating AI across engineering and design curricula, universities can deliver a more interactive, personalized, and industry-relevant learning experience. AI not only improves creative and technical competencies but also promotes interdisciplinary thinking and readiness for the rapidly evolving textile sector. Ultimately, AI is redefining the educational standards needed for future textile professionals.

Unraveling AI: Legal Exposures and Ethical Frameworks for the Textile Industry

Kevin P. Lee, J.D. | Director, Institute for AI and Democratic Governance

As artificial intelligence moves from experimentation to infrastructure, industries that feel "far" from Silicon Valley—especially fashion and textiles—are discovering they are no longer peripheral to the AI revolution. This talk frames the accelerating adoption of AI in design, supply chains, marketing, and workplace management through the lenses of law, ethics, and jurisprudence. It examines how AI reshapes responsibility when decisions are distributed across models, vendors, and opaque data pipelines; how intellectual property and data governance strain under new forms of copying, synthesis, and personalization; and how labor, surveillance, and discrimination risks intensify in globalized production networks. The central claim is that "AI compliance" cannot be reduced to checklists: it requires institutional judgment about dignity, accountability, and the kind of industry we are building. Participants will leave with a clear map of the core legal exposures and a practical ethical framework for responsible innovation in fashion and textiles.

Abstracts

Responsible AI: Understanding Ethical, Legal and Governance Risks and Liabilities

W. Lyle Gravatt, J.D. | Managing Partner, Raleigh Office of Michael Best & Friedrich, LLP

After laying the foundation of how AI technologies generally work, we'll explore the evolving legal landscape surrounding AI, with an emphasis on intellectual property and data governance implications. Real-world use cases will illustrate how AI is being implemented, and the associated legal and ethical concerns will be discussed, such as bias and misinformation inherent in AI models. We'll conclude with key takeaways and best practices to guide responsible and compliant AI adoption and use.

AI in Apparel: From Isolated Tools to System-Level Transformation

Brad Ballentine | CEO, MAS USA

Artificial intelligence is rapidly entering every stage of the textile and apparel value chain, from design and product development to manufacturing, logistics, and retail analytics. Yet many AI initiatives struggle to move beyond pilot projects or isolated point solutions.

This keynote reframes AI not as a software upgrade, but as a system level transformation challenge. In apparel, value is rarely created by algorithms alone. It emerges when AI is embedded into decision flows that connect demand signals to sourcing, production, and fulfillment in real time.

Drawing on practical experience in AI enabled manufacturing and digital supply chain orchestration, this session addresses why many AI investments underdeliver, often due to fragmented data, siloed incentives, and operating models designed for stability rather than volatility. It outlines the structural conditions required for AI to scale, including shorter lead times, modular production, delayed differentiation, and cross functional alignment.

For industry leaders and academics alike, the discussion offers a grounded framework for moving beyond experimentation toward measurable operational impact. AI's promise is realized not in isolated tools, but in coordinated systems that increase agility, reduce working capital risk, and strengthen sustainability outcomes across the fashion and textile ecosystem.

AI Ethics and Its Implications for the Industry

Veljko Dubljević, Ph.D. | Joseph D. Moore Distinguished Professor of Philosophy, and Science, Technology and Society, North Carolina State University

Many industry actors, and especially financial institutions, seek to safely and effectively incorporate AI agents into their operations. However, implementation of Large Language Models and agentic AI by industry is hampered by lack of trustworthiness and predictability. Current development of ethical guardrails is dominated by bottom-up approaches, with results ranging from embarrassing in the cases of Google and XAI to dangerous in cases of Anthropic and OpenAI. This talk will introduce the Centering AI in Society and Ethics (CASE) initiative at NCSU and shortly present ongoing work on developing ethical guardrails for use in language-based AI interfaces and agents and designing an argument-analysis architecture in natural-language scenarios or interactions.

Data-Driven Insights into the Effect of Moisture on Apparel Color Appearance

Renzo Shamey, Ph.D. | CIBA Professor and Director of Color Science and Imaging Laboratories, North Carolina State University

Moisture exposure significantly alters the visual appearance of performance textiles, yet no industry-ready tools currently exist to predict wet-state color from standard dry-state measurements. This collaborative project between our industrial sponsor and the Color Science & Imaging Laboratory at North Carolina State University investigates moisture-induced color changes in dyed polyester fabrics and develops AI-driven predictive models to estimate wet-state appearance. A total of 405 polyester samples spanning six hue families were prepared and set under four controlled moisture levels (0%, ~20%, ~60%, and ~120% water uptake), yielding 1,620 instrumental measurements. Colorimetric analysis showed that overall color difference (ΔE_{00} and $\Delta E_{CMC}(2:1)$) increased monotonically with moisture content, primarily driven by darkening (negative ΔL) and modest chroma loss. Appearance shifts were strongly color-dependent, with green, blue, navy, and black fabrics exhibiting the largest changes. Psychophysical evaluation involving 9,720 observer responses confirmed that wet fabrics are perceived as darker and duller, with lightness judgments showing the strongest agreement with instrumental data. However, instrumental ΔE_{00} correlated only moderately with perceived differences, highlighting the need for perception-informed tolerances. Machine learning models, including linear regression, random forest, neural networks, and XGBoost, were trained to predict wet-state CIELAB values from dry-state features. XGBoost demonstrated superior performance, achieving mean errors of approximately 0.61 ΔE_{00} on 20 unseen validation samples, with 92% of predictions below 2 ΔE units. The resulting API-based prediction tool provides a scalable framework for integrating wet-state color forecasting into industrial color workflows, enabling improved material screening, risk assessment, and quality control.

AI in Weaving

Abdel-Fattah Seyam, Ph.D. | Charles A. Cannon Professor of Textiles, Alumni Distinguished Graduate Professor, Alexander Quarles Holladay Medal for Excellence Award, North Carolina State University
Constantino Raptis | Ph.D. Candidate in Textile Technology Management, North Carolina State University

At ITMA 2019 and 2023 shows, machine manufacturers, including weaving, demonstrated new weaving capable of the transition toward Industry 4.0, whose core purpose is to maximize productivity, efficiency, and product quality, while minimizing waste and energy, through automation and digitization of technologies that allow communication between machines, software systems, and people via IoT devices, throughout different stages of the pipeline required to manufacture a product. The target could be achieved by creating intelligent, interconnected, and flexible manufacturing processes and structuring cyber-physical systems to acquire real-time big data from sensors and integrate them for analytics and AI.

While the new development in weaving machines demonstrated their readiness to achieving Industry 4.0 and enabling AI applications, challenges remain in diversified products with significant number of processes of conversion of fibers to fabric, different structure of textile companies (vertically integrated, specialized manufacturers, converters, etc.), data standardization, machine-driven computer code standardization, lack of workforce with collective expertise in textile technology/engineering, machine learning, AI modeling, and mathematical and statistical modeling, the majority of weaving machine in production globally are not Industry 4.0 ready, and lack of well-structured relational databases (fabric, yarn and fiber specifications, off-loom fabric quality, size formulas, etc.).

The purpose of this talk is to share our experience in developing a supervised AI in weaving model with the Industry 4.0 objective in mind. The AI model is based on relational databases obtained from vertically integrated companies (from fiber to woven products).

Abstracts

AI Applications in Textile Technology and Advanced Manufacturing

Luis Negrón Naldos, Ph.D. | Business Analytics and Engineering Manager, Creditex S.A.

The application of Artificial Intelligence in the textile industry has made it possible to optimise decision-making processes through predictive and prescriptive models, from the application of fault detection models in review processes and the use of digital twins to the development of planning models using AI agents based on genetic models and deep Q learning. The development and results of predictive models for quality variables in yarn manufacturing using transform neural networks will also be presented.

AI-Driven Product Innovation for Weaving Mills

Oliver Meier | Lindauer DORNIER

An AI-driven smart assistant for weaving mills that automatically identifies new product opportunities, based on current market trends and the mill's own production capabilities. It continuously scans the textile sector for the latest innovations in equipment, materials, and technology, then offers practical guidance on how to adopt them or improve existing production processes. The mill's team stays in control throughout, choosing how much or how little input they want to provide. The more the system is used, the smarter and more precise its recommendations become.

Leveraging AI and Automation in Textiles

Angie Peterson | Senior Director of IT—AI, Data & Analytics, Milliken & Company

Textile manufacturing presents unique challenges that make it an ideal proving ground for deploying AI and advanced automation at scale. This talk will first highlight value-driven use cases that have progressed beyond pilots, emphasizing AI focus areas such as computer vision, machine learning, & large language models to demonstrate applications that enhance textiles. Then it will also cover how Milliken is leveraging data and enterprise-wide upskilling to embed AI into everyday decision-making, and conclude by connecting AI with automation to illustrate how these combined approaches deliver measurable impact.

Post-Conference Hands-On Workshop

2 PM – 5 PM on Thursday, April 2, 2026

Hosted by [FTBEC \(Fashion and Textile Business Excellence Cooperative\)](#)

Venue: Convocation center (Room 2225), Wilson College of Textiles

Workshop Summary

Move beyond basic chatbots and discover how to turn Generative AI into a practical advantage for your organization.

Explore how large language models (LLMs) can be shaped into intelligent assistants that understand context, deliver accurate responses, and align with real world business needs.

Gain a clear understanding of how Generative AI works, where it creates measurable value, and how to guide it to reflect your company's voice, policies, and goals through structured prompt design and contextual grounding.

Presented By:



Red Hat



Grant Shipley

Senior Director,
Red Hat AI

Workshop Takeaways

Leave the workshop with practical skills you can apply immediately in your daily work.

- Understand how Generative AI creates value.
- Learn how to craft effective prompts that generate clearer, more reliable, and actionable outputs.
- Gain hands-on experience applying AI tools to realistic organizational scenarios.

Early registration is encouraged, as workshop spots are limited!

To help everything run smoothly during our hands-on activities, please remember to bring your own laptop. It's also a great idea to make sure it's fully charged before you arrive.

- \$50 for workshop registration
- Limited to 50 participants
- First come, first served

Post-Conference Hands-On Workshop

2 PM – 5 PM on Thursday, April 2, 2026

Hosted by [FTBEC \(Fashion and Textile Business Excellence Cooperative\)](#)

Venue: **Convocation Center (Room 2225), Wilson College of Textiles**

Workshop Agenda

Generative AI Foundations

A clear and accessible overview of how LLMs work, what they do well, where they struggle, and how organizations are applying them today to improve productivity, decision support, and content generation.

The Red Hat AI Perspective

An introduction to the Red Hat AI portfolio and how Red Hat supports organizations in evaluating, deploying, and scaling AI responsibly – with a focus on openness, governance, and long-term sustainability.

Hands-On Prompt Engineering Lab

Participants will work directly in a live chat application interface to:

- Refine vague prompts into structured, high-quality instructions.
- Improve output consistency and reduce ambiguity.
- Guide tone, format, and reasoning.
- Compare weak vs. strong prompting approaches.

Hands-On exercises will include practical scenarios such as:

- Analyze sample sales data to generate insights and executive-ready summaries.
- Interpret image-based inputs and extract structured information.
- Transform raw content into audience-specific messaging.

Grounding AI with Organizational Context

An overview of how approaches like Retrieval-Augmented Generation (RAG) connect models to approved content – such as brand guidelines, internal documentation, and curated knowledge sources – to improve reliability and reducing hallucinations.

Please bring a fully charged laptop for the hands-on activities.

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The North Carolina Textile Foundation makes the groundbreaking, industry-leading work of the Wilson College of Textiles possible.



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Fashion and Textile Business Excellence Cooperative (FTBEC) is an initiative at the Wilson College of Textiles, North Carolina State University.

FTBEC is an industry–university partnership that advances the fashion and textile industry and connects professionals, academics, and students to drive real-world innovation.



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For inquiries and potential collaboration or projects, please contact Dr. B. Ellie Jin, Founding Director, bejin@ncsu.edu