



 **EXPO**
**ADVANCED
TEXTILES
CONFERENCE**

Nov. 1-4, 2021 | Nashville, TN USA
Show Floor: Nov. 2-4 | Music City Center

[IFAIexpo.com/AdvancedTextiles](https://www.ifaiexpo.com/AdvancedTextiles)

EDUCATION TRACKS INCLUDE

Innovations in E-Textiles
Sustainability
Medical Textile Breakthroughs
Advanced Manufacturing
in Textiles (Industry 4.0)
PPE Production

Save up to
\$200!
*When you register
by Sept. 30.*

Your Complete Textile Industry Experience

The Textiles of the Future

The Advanced Textiles Conference at IFAI Expo 2021 features three days of advanced textiles (AT) education sessions focusing on multiple important topics across the AT landscape. Hear from experts as they offer the latest insights on E-Textiles, wearables, medical textiles, PPE, sustainability and more. Connect with your peers and conference speakers at AT Networking Reception on Nov. 1 after the opening afternoon of the conference.

Advanced Textiles Exhibitors

The show floor features innovators, product developers in nontraditional markets (such as medical, smart textiles, aerospace, safety, protective and performance wear) showcase their ability to partner throughout the supply chain. See the show floor map to locate the AT area.

IFAI Expo 2021

In addition to enjoying the AT Conference, you will have full access to IFAI Expo Nov. 1-4, at the Music City Center in Nashville, TN, where a complete lineup of exhibitors, education sessions, demonstrations, workshops and networking events will keep you going all day. Connect with professionals in the advanced textiles, specialty fabrics and shade and weather protection industries.

More Than 300 Exhibitors

Join exhibitors offering fibers, yarns, equipment, fabric and technology solutions for the manufacturing of advanced textiles, specialty fabrics and shade and weather protection textiles.

Advanced Textiles Exhibitors

Products and Services

CHEMICALS AND COMPOUNDS
COMPUTER SOFTWARE/
HARDWARE
EQUIPMENT/TOOLS
FABRIC
FIBERS AND YARNS
FINDINGS/HARDWARE/
COMPONENTS
ORGANIZATIONS
SERVICES

Markets Served

AGRICULTURE, COVERS
ARCHITECTURE, SIGNAGE,
SHADING, STRUCTURES
CONSTRUCTION,
ENVIRONMENTAL,
GEOSYNTHETICS
INDUSTRIAL, FILTRATION,
GENERAL
MARINE, RECREATIONAL,
UPHOLSTERY
MEDICAL
MILITARY, GOVERNMENT
PERFORMANCE APPAREL
SAFETY/ PROTECTIVE
SMART FABRICS
SPORTS, LEISURE
TRANSPORTATION OEM
AND AFTERMARKET

ATTENDEES INCLUDE

Owners/Presidents/
VPs/GMs

Engineers/R&D/
Academics

Designers/Product
teams

Supply chain
managers

Purchasers

Production/
Operations

Marketers/Brand
managers

Retailers

Show Highlights

28 Educational Opportunities

Experience education opportunities designed to help you gain valuable insights into advances in textile products, materials, technologies, design initiatives, production techniques and marketing strategies, presented by industry leaders.



In the Classroom

Purchase an All Access Registration to experience education critical to building your business.

ADVANCED TEXTILES

Welcome Lunch and Plenary: Advancing Textile Manufacturing Through Collaboration

E-Textiles

Wearables

Medical Textiles

Sustainability

PPE Production

Advancing U.S. Manufacturing

Industry 4.0



Campfire Sessions

These informal, interactive show floor discussions are FREE to all attendees.

TUESDAY, NOV. 2

10:30 am **E-Textiles Game Show**
Chris Jorgensen, Director, Technology Transfer, IPC; **Stephanie Rodgers**, Director of Advanced Product Development, Apex Mills

11:30 am **Defense Logistics Agency Industrial Base Planning and Warstopper Program**
Bill Sismour, Industrial Capabilities Program Team Lead, Defense Logistics Agency

1 pm **The Influence of Textile Characteristics and Pre-Treatment on Printing Quality in Inkjet Printing**
Reinhold Schneider, Head of Team Color and Functional Printing, German Institutes of Textile and Fiber Research

3:30 pm **Pivoting on a Dime During a Time of Crisis**
Frank Keohan, Senior Technology Manager, Bolger & O'Hearn, Inc.

WEDNESDAY, NOV. 3

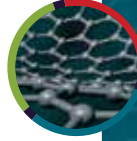
12:30 pm **Activating a National Ecosystem for Manufacturing Advanced Functional Fabrics**
Sasha Stolyarov, CEO, Advanced Functional Fabrics of America (AFFOA)

2 pm **The Added Benefit: How Antimicrobials Inhibit Surface Growth on Durable Coated Fabrics**
Eric Petersen, Director of Sales and Marketing, Enduratex

3:30 pm **Campfire Session by National Council of Textile Organizations**

THURSDAY, NOV. 4

11 am **Campfire Session by NASA**
12:30 pm **Textile-based Sensors for Inspection of Composite Materials**
Reinhold Schneider, Head of Team Colour and Functional Printing, German Institutes for Textile and Fiber Research



Rhode Island Textile Innovation Network

Gather with your peers as we kick off the Advanced Textiles Conference with our Welcome Lunch and Plenary focusing on how Rhode Island textile manufacturers collaborated with the state's Manufacturing Extension Partnership, government agencies, and the University of Rhode Island to create the Rhode Island Textile Innovation Network (RITIN), to close the skills gap faced by manufacturers, foster collaboration, and create business opportunities for its members.

AT Conference Full Schedule

	INNOVATIONS IN E-TEXTILES TRACK	MEDICAL TEXTILE BREAKTHROUGHS TRACK	SUSTAINABILITY IN ADVANCED TEXTILES TRACK
Monday, Nov. 1			
11:30 am-12:45 pm	OPENING PLENARY AND LUNCH A More Perfect Union—Advancing Textile Manufacturing Through Collaboration Michael Woody , Trans-Tex LLC; Christian Cowan , University of Rhode Island; Clare King , Propel LLC; Mary Johnson , 401 Tech Bridge		
1-1:50 pm	Developing E-Textiles, Translating Fundamental Research Into Commercial Products Ladan Eskandarian , Myant Inc.	Fibrous Scaffolds for Tissue Engineering Applications in Regenerative Medicine Jessica Gluck , Wilson College of Textiles, NC State University	Implementing Greener Chemistry in Supply Chains Ben Mead , Hohenstein Institute America
2-2:50 pm	Inkjet Printing of Electronics on Textiles Dr. Jesse Jur , Wilson College of Textiles, NC State University; Director of Ecosystem Technology, AFFOA	Smart Textiles for Medical Applications at DITF Carsten Linti , German Institutes for Textile and Fiber Research	Nature Based, Infrared Wellness: The First Sustainable, In-fiber IR Viscose Courtney O'Keefe , Hologenix
3:10-4 pm	Building a More Connected Future Through Textiles George Sun, John Peters, and Matt Evans , Nextiles, Inc.	Medical Device Innovation: Patient Isolation and Transportation Unit Bud Weisbart and Jessica Gunawan , AR Tech	The Shift to Sustainable Materials in the Textiles Industry Courtney Cruzan , Brrrr [®] ; Meredith Boyd , UNIFI; Lauren Choi , The New Norm Fabrics; Ladan Eskandarian , Myant Inc.
4:10-5 pm	Solving for the Challenges in E-Textiles Clare King , Propel LLC	Comparison of Test Methods for Evaluating the Particle Filtration Efficiency of Protection Masks Alejandro Maupomé, Justine Decaens, and Vincent Deregnacourt , CTT Group	Road to Zero: The Future of Nonwovens Michael Savarie and Daniela Leal , Piana Nonwovens, LLC
5-6:30 pm	ADVANCED TEXTILES CONFERENCE NETWORKING RECEPTION AND COCKTAIL HOUR		
Tuesday, Nov. 2			
8:30-9:45 am	IFAI EXPO OPENING KEYNOTE—STEVE RIZZO COVID-19 TRACK		
10-10:50 am	The U.S. Trade Agenda and Supply Chain Security after COVID-19: What Companies in the Advanced Textiles Industry Need to Know Nate Bolin , DLA Piper; The Hon. Bill Jackson , Assistant United States Trade Representative for Textiles; John Macisso , Albany International Corp		
11-11:50 am	Pivoting and Production Change Management During COVID-19: Lessons Learned Skip Gehring , Gehring-Tricot; Trevor Stevenson , Eastman Machines; Rian True , Carolina Covertech		
Wednesday, Nov. 3			
	ADVANCED MANUFACTURING IN TEXTILES TRACK		
9-9:50 am	Robotics in the Manufacturing of Fabrics, Session 1 TBD		
10-10:50 am	A New Materials Horizon: Redefining Textiles with Micron-Scale Additive Manufacturing Jifei Ou, Anthony Chu, Talia Connelly, and Kevin Rosenberg , OPT Industries		
11-11:50 am	Deployable Robotic Systems: The Benefits of a Soft Approach to Hard Problems Ryan Gundling , Ryzing Technologies LLC		

Visit IFAIexpo.com for complete schedule and course descriptions.

Registration at IFAIexpo.com

Innovations in E-Textiles Track

Monday, Nov. 1

11:30 am–12:45 pm

Welcome Lunch and Opening Plenary Session:

A More Perfect Union— Advancing Textile Manufacturing Through Collaboration

Michael Woody, CEO, Trans-Tex LLC; **Christian Cowan**, COO, University of Rhode Island Research Foundation & Exec. Director, 401 Tech Bridge; **Mary Johnson**, Manager, 401 Tech Bridge; **Clare King**, President, Propel LLC

This panel session will focus on how Rhode Island textile manufacturers collaborated with the state's Manufacturing Extension Partnership (MEP), government agencies, and the University of Rhode Island to create the Rhode Island Textile Innovation Network (RITIN). RITIN's goal is to close the skills gap faced by textile manufacturers, foster collaboration, and create business opportunities for its members.

1–1:50 pm

Developing E-Textiles, Translating Fundamental Research Into Commercial Products

Ladan Eskandarian, R&D Lead, Myant Inc.

Why are e-textiles struggling to become commercialized? How do we develop durable, flexible, breathable, and lightweight e-textiles? During this session, we will review the recent technological advancements in the area of e-textiles and provide an updated evaluation of the status of the research, development, and commercialization in this field.

2–2:50 pm

Inkjet Printing of Electronics on Textiles

Dr. Jesse Jur, Professor, Wilson College of Textiles, NC State University; Director of Ecosystem Technology, AFFOA

Printing electronic materials is considered a promising pathway for development of high throughput flexible electronics, particularly inkjet printing. In this session, attendees will be able to identify targeted opportunities of inkjet processing of electronics on textiles, evaluate the materials characteristics of electronic ink coatings on textiles and much more.

3:10–4 pm

Building a More Connected Future Through Textiles

Dr. George Sun, CEO and Founder, Nextiles, Inc.; **John Peters**, CBO, Nextiles, Inc.; **Matt Evans**, CFO, Nextiles, Inc.

Sewing is nearly a 2,000 year old technology, but has not seen the same pace of innovation as electronics and the broader technology industry. Chips have gotten smaller, but the form factor for wearables has stayed the same – wrapping, strapping or otherwise attaching electronics to our body has been sufficient, but left users with a limited experience. The future of textiles will be merged with electronics to create the most seamless form factor, resulting in a much better user experience for all.

4:10–5 pm

Solving for the Challenges in E-Textiles

Clare King, President, Propel LLC

Hear about Propel's efforts, funded by the US Navy, for the development of e-textiles. In particular she will discuss novel solutions that Propel developed for textile-based sensors and electrical connections within 3D knit structures. Propel's 3-year project has resulted in 3 patent applications, and the prototype e-textile sensor garment just completed successful Navy testing. Ms. King will also discuss the challenges for transition of e-textiles to mass production, and where she thinks the opportunities will be over the next years.



ADVANCED TEXTILES RECEPTION

Enjoy networking and cocktails with your Advanced Textiles Conference peers! Monday, Nov. 1 from 5–6:30 pm.

Medical Textile Breakthroughs Track

Monday, Nov. 1

1–1:50 pm

Fibrous Scaffolds for Tissue Engineering Applications in Regenerative Medicine

Dr. Jessica Gluck, Assistant Professor, Textile Engineering, Chemistry and Science, Wilson College of Textiles, NC State

As biotechnology advances, we are seeing more innovative approaches in medicine. Textiles in the form of fibrous scaffolds can be used for tissue engineering, which is the recapitulation of native tissues in the lab. These fibrous scaffolds augment and support specific cellular function depending on tissue of interest. In particular, we explore how to develop fibrous scaffolds that best mimic the unique properties of native tissue and how we can manipulate those scaffolds to develop tissue-engineered constructs with specific functions. The Gluck Tissue Engineering Laboratory uses a stem cell model for cardiovascular and corneal tissue engineering and we will discuss our recent progress.

2–2:50 pm

Smart Textiles for Medical Applications at DITF

Carsten Linti, Deputy Head of Technology Center, Biomedical, German Institutes for Textile and Fiber Research

Smart textiles are creating a more active role for textiles in patient care with medical applications ranging from knitted textiles with adaptive compressions, to e-textiles with sensory and actuator properties. This presentation provides an overview of the DITF contribution to research and development projects in this field. Current work includes the European ULIMPIA, a joint project focused on the integration of textile and foil-based sensors into a multilayer wound patch. Key to work in the medical sector is the institute's Biomedical Engineering technology centre, that is certified according to EN ISO 13485 for the development of medical devices.

3:10–4 pm

Medical Device Innovation: Patient Isolation and Transportation Unit (PITU)

Bud Weisbart, Vice President, and **Jessica Gunawan**, General Manager, AR Tech A&R Tarpaulins, Inc.

This session will cover the development and purpose of the newly developed Patient Isolation and Transportation Unit (PITU). Learn how PITU addresses issues related to contagious disease and the safety of medical patients, staff, and facilities.

4:10–5 pm

Comparison of Test Methods for Evaluating the Particle Filtration Efficiency of Protection Masks

Alejandro Maupomé, Project Leader, CTT Group; **Vincent Deregnacourt**, Project Leader, CTT Group; **Justine Decaens**, R&D Manager, CTT Group

This presentation will focus on comparing test methods for measuring the PFE (Particle Filtration Efficiency) of masks and respirators.

PFE is the most universally tested parameter for all types of masks and respirators. PFE has thus become the single most important parameter to measure and report to assess the degree of protection offered by masks and respirators, for both medical and non-medical applications.

Stay in Touch Feel the pulse of the industry through this worldwide interactive publication dedicated to the technical textiles market through interdisciplinary, engaging content.

Subscribe at AdvancedTextilesSource.com/e-newsletter/

 **Advanced Textiles Source**

Registration at IFAExpo.com

Sustainability in Advanced Textiles Track

Monday, Nov. 1

1–1:50 pm

Implementing Greener Chemistry in Supply Chains

Ben Mead, Managing Director, Hohenstein Institute America

Traditional dyeing and textile finishing is marked by impregnation of textiles with diluted dyestuffs or finishing chemicals and subsequent thermal fixation. This processing requires a lot of energy. The use of UV-curable dyeing liquors and finishing chemicals would significantly contribute to energy saving and new textile products. UV-curable inks for inkjet-printing and UV-curable finishing chemicals were developed.

These UV-curable inks and finishing chemicals provide excellent functionality, very soft hand and excellent fastness properties on different textile materials. UV-curing was also successfully applied in the curing of composite materials, which reduces energy consumption significantly and enables new products.

2–2:50 pm

Nature Based, Infrared Wellness: The First Sustainable, In-fiber IR Viscose

Courtney O'Keefe, Chief Supply Chain Officer, Hologenix

Created in partnership with Kelheim Fibres, Celliant Viscose is an innovation that has been years in the making and offers a myriad of health and wellness benefits while meeting increasing consumer demand for more environmentally-friendly textiles.

Learn how Kelheim's distinctive technology and Celliant's functional additives create a unique fiber that provides full functionality without the need for any additional processing step – a new standard in the field of sustainable IR viscose fibers.

You'll learn why brands have been anticipating a plant and mineral-based solution as an alternative to synthetic fibers, and how this viscose fiber capture and convert body heat into infrared, increasing local circulation and improving cellular oxygenation.

3:10–4 pm

The Shift to Sustainable Materials in the Textiles Industry

Courtney Cruzan, Vice President, Sourcing and Product Development, Brrrr^o; **Meredith Boyd**, Senior Vice President, Innovation and Technology, UNIFI; **Lauren Choi**, Founder, The New Norm Fabrics; **Ladan Eskandarian**, R&D Lead, Myant Inc.

Join us for an invigorating panel as we discuss a variety of approaches to sustainable business practices, and how the textiles industry is shifting to sustainable materials. Hear from experts on sourcing sustainable materials, how to improve sustainability efforts across the international supply chain, and innovative and disruptive methods of converting non-recyclable materials into fibers used in fashion.

4:10–5 pm

Road to Zero: The Future of Nonwovens

Michael Savarie, Sustainability Manager, Piana Nonwovens LLC; **Daniela Leal**, Sustainability Specialist, Piana Nonwovens LLC

As the world pivots towards a circular economy, customers, designers, and manufacturers are reexamining the impacts of traditional materials throughout their lifecycles and supply chains. This shift towards circularity has driven innovation into the nonwovens industry and has opened up endless opportunities for material (re)utilization in new and existing markets.



Kick Off Your IFAI Expo Experience

A Hall of Fame speaker and former national headline comedian, Steve Rizzo knows how to captivate and inspire. He engages the audience with laughter as he gradually challenges them to SHIFT their way of thinking to discover Increased Productivity, Greater Joy and Enthusiasm and new levels of success. Tuesday, Nov. 2 from 8:30–9:45 am.

COVID-19 Track

Advanced Manufacturing of Textiles Track

Tuesday, Nov. 2

10–10:50 am

The U.S. Trade Agenda and Supply Chain Security after COVID-19: What Companies in the Advanced Textiles Industry Need to Know

Nate Bolin, Partner, DLA Piper; **The Hon. Bill Jackson**, Assistant United States Trade Representative for Textiles; **John Macisso**, Legal Counsel and Director of Global Trade Compliance, Albany International Corp.

In this dynamic panel presentation, you will hear directly from leading U.S. trade official and industry peers on the trade and supply chain challenges and opportunities facing your company and industry and where the United States is likely to go next in the areas of trade and investment policy and government procurement involving advanced textiles and related technologies.

11–11:50 am

Pivoting and Production Change Management During COVID-19: Lessons Learned

Skip Gehring, President and CEO, Gehring Tricot Corp. Gehring-Tricot; **Trevor Stevenson**, Vice President, Eastman Machines; **Rian True**, President, Carolina CoverTech

Join us for an exciting panel of three unique IFAI member companies who will share their stories of navigating the pandemic and pivoting to the production of PPE. This panel will address:

- What prompted company leaders to make, in some cases, drastic changes to their businesses?
- Challenges in procurement of raw materials, and how the supply chain affected pivoting to PPE.
- Any challenges related to understanding testing/standards in PPE.
- The short and long term impacts on business models.

Wednesday, Nov. 3

9–9:50 am

Industry 4.0: Robotics in the Manufacturing of Textiles

TBD

10–10:50 am

A New Materials Horizon: Redefining Textiles with Micron-Scale Additive Manufacturing

Jifei Ou, CEO, OPT Industries, Inc.; **Anthony Chu**, Director of Product, OPT Industries, Inc.; **Talia Connelly**, Product/Textile Designer, OPT Industries, Inc.; **Kevin Rosenberg**, Partnerships and Business Development, OPT Industries, Inc.

Developing textiles for novel technical applications requires new performance considerations, tailored material properties, enhanced functions, and design novelty. However, conventional textile manufacturing processes have limited potential to achieve these results, due to intrinsic machine constraints.

In this talk, we present a breakthrough in 3D photolithography technology, where textiles are engineered at the scale of microns and mass-produced to the scale of meters.

11–11:50 am

Deployable Robotic Systems: The Benefits of a Soft Approach to Hard Problems

Ryan Gundling, CEO and Lead Engineer, Ryzing Technologies LLC

Compressed air has been used alongside industrial processes for well over a century. Used for many operations on the fabrication floor, air is the unsung hero of automation. As manufacturing continues to evolve many robotic structures now utilize air to their advantage and some use air to create their structure and to complete tasks. Inflatable robotic systems are being developed as an alternate approach to rigid robotics with great success for the right applications.

Show Floor



SHOW FLOOR

200,000 sq ft featuring more than 300 exhibitors

EDUCATION AREAS

- Advanced Textiles Campfire
- Shade and Weather Protection Campfire
- Specialty Fabrics Campfire

SPECIAL ACTIVITIES

- IFAI Hub
- Innovation Stage
- North Carolina Pavilion
- Pet a Puppy

Advance Your Industry Connections

Attend any or all of the FREE market segment events that take place during Expo. Get inside knowledge on what's happening, make connections and get involved in your industry. Visit IFAIexpo.com for more details.

Emerging Leaders

Connect, network and mingle with other emerging leaders involved in our industry.

Happy Hour

Wednesday, Nov. 3 | 5:30 pm
Omni Nashville Hotel



IFAI Division Connections Schedule

TUESDAY, NOV. 2

10:30 am	Military Division
11:30 am	U.S. Industrial Fabrics Institute
12:30 pm	Professional Awning Manufacturers Association
2:30 pm	Tent Rental Division
4:30 pm	IFAI Canada Division

WEDNESDAY, NOV. 3

10:30 am	Narrow Fabrics Institute
11:30 am	Makers Division
12:30 pm	Tarp Association
1:30 pm	Fabric Graphics Association
2:30 pm	Advanced Textile Products
3:30 pm	Geosynthetics Materials Association
4:30 pm	Marine Fabricators Association

THURSDAY, NOV. 4

10:30 am	Fabric Structures Association
11:30 am	Equipment Division



EXPO

Nov. 2-4, 2021 | Nashville, TN USA

Education: Nov. 1-4 | Music City Center

	All Access Nov. 1-4		Expo Plus Nov. 2-4		Show Floor Nov. 2-4	
	MEMBER	NON-MEMBER	MEMBER	NON-MEMBER	MEMBER	NON-MEMBER
STANDARD RATES Aug. 1-Sept. 30	\$449	\$649	\$349	\$549	\$39	\$89
LATE/ON-SITE Oct. 1-Nov. 4	\$549	\$749	\$449	\$649	\$59	\$109
BENEFITS INCLUDE						
Keynote Sessions	✓		✓		✓	
Show Floor Access	✓		✓		✓	
15+ Hours of Campfire Education	✓		✓		✓	
28+ Hours of Classroom Education	✓		✓			
Advanced Textiles (AT) Conference	✓					

Add-on Opportunities	MEMBER	NON-MEMBER
Downtown Nashville Fun Run/Walk Nov. 2, 6:45 am	\$25	\$35
Industry Night Nov. 2, 6:30-9 pm Includes food, drinks and live music.	\$59	\$79
Awards and Networking Breakfast Nov. 3, 8-9:30 am Breakfast and Networking: 8-8:30 am; Awards Program: 8:30-9:30 am Includes: continental breakfast and awards presentation	\$39	\$59
Fabric Structures Summit Nov. 4, 1-5 pm Includes: two hours of fabric structures and architecture specific education and networking reception	\$89	\$109

IFAI members receive discounts! Contact us today at 800 486 3947 or email membership@ifai.com for more information.

SUPPORTING ORGANIZATIONS		IFAI EXPO SPONSORS		
AFFOA – Advanced Functional Fabrics of America	IPC Manufacturing & Textile Innovation Network	Apex Mills Corp.	Haining Jinda Coating Company	Rome Fastener Corporation
ASTM International	NC State - Wilson College of Textiles	APV Engineered Coatings	Herculite Products Inc.	Sattler Corp.
Chemical Fabrics & Film Association	NCTO - National Council of Textile Organizations	Autometrix Inc.	Hongyuan Hontex	Seaman Corporation
Defense Logistics Agency	SEAMS - The Association of the Sewn Products Industry	Carolina CoverTech	Jason Mills LLC	Strataglass LLC
Economic Development Partnership of North Carolina		DAF Products Inc.	Jomar Softcorp International	Trivantage LLC
INDA - Association of the Nonwoven Fabrics Industry		Ennis Fabrics	Mermet Corporation	Universal Screens
International Sign Association		Eton Systems Inc. USA	Mexican Manufacturers Inc.	Value Vinyls
		Fabrene Inc.	Miller Weldmaster	W.L. Gore & Associates Inc.
		Fasnap Corp.	MMI Textiles	Zhejiang Hailide New Material Co. Ltd.
		Forsstrom High Frequency AB	Ribbon Webbing Corp.	Zhejiang Yuli New Material Co. Ltd.
		Glen Raven Custom Fabrics LLC		

Current as of Aug 4, 2021