

BUSINESS
PLANS



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Innovation. Automation. Commercialization. Education. Offshoring. Reshoring. Restoring the textile industry, and repopulating it with trained and motivated employees. From the latest industry issues and the newest interactive textiles and digital manufacturing to the basics of operating efficiency and increasing productivity, thousands of show participants took advantage of IFAI Expo's education, special events and exhibits, all working to sharpen their competitive edge in marketing, manufacturing and diversification. It's a working education, topped off with parties, receptions, rewards for excellence in manufacturing, in innovation, in student design, for service to the industry, for volunteerism ... and for serving our communities (see page 43) and our country, in addition to our customers.

➔ NEXT YEAR IN ORLANDO.

REPORT COMPILED BY

Elisa Bernick, Sammi Jones, Galynn Nordstrom, Rebecca Post and Janet Preus.

SHOW PHOTOGRAPHY

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IFAI EXPO 2018 HIGH POINTS AND HIGHLIGHTS

The 4.0 Industrial Revolution is well underway, and IFAI's 2018 Expo was layered with information about how to embrace technology and business practices to "future proof" the textile industry as it evolves. This year's Expo, located in Dallas, Texas, had combined show floors for IFAI, GeoDallas, and CamX, creating a vibrant networking environment.

Automation is a big part of the "reshoring" trend to bring industrial sewing back to the United States—which means investing in linked equipment systems that work together. The digitization of manufacturing doesn't necessarily mean jobs are being eliminated; it does mean that jobs are changing as new tools are being added. The good news: younger workers—who admittedly may not know how to sew—are not intimidated by technology and can be extremely capable learners and workers. Businesses are learning how to incorporate and motivate multigenerational employees, whose ages may range from 18 to 80.

TEXAS STYLE



As the exhibit hall closed on Tuesday evening, Expo attendees headed over to the 2616 Commerce Event Center to enjoy drinks, appetizers and live music from IFAI member band Hangin' by a Thread: Steve Angelone (Bruin Plastics), drums; Eric Brown (Heytex), guitar and vocals; Dennis Bueker (Keyston Outdoor), guitar; Char Clark (Signature CanvasMakers), vocals; Joe Shepley (Jakob Mueller of America), bass; Michael McKeldon Woody (Trans-Tex), vocals; Craig Zola (Herculite Products), guitar and vocals. The evening also included a guest appearance featuring two live armadillos for in-house Texas-style armadillo racing.



Keynote speaker

MARK SCHARENBRICH "Acknowledge, honor and connect"



Keynote speaker Mark Scharenbroich has straightforward advice for success in business: Make a true connection with employees and customers. Rain, wind and cold outside the Kay Bailey Hutchison Convention Center in Dallas, Texas, didn't dampen the enthusiasm of Scharenbroich and Expo attendees. Scharenbroich, in fact, advocates an attitude of gratitude, reminding people that when they're having a bad day, they should write a list of 12 things for which they are grateful.

Scharenbroich's philosophy of "acknowledge, honor and connect" is founded on the idea of two core needs: the need to belong and the need to hear "nice bike," a reference based on his visit to Harley Davidson's 100-year anniversary event several years ago. Thousands of motorcycle enthusiasts attended, and all they needed to hear from one another was two magic words—"nice bike"—to trigger an instant connection.

When Scharenbroich talks about acknowledgement, he means "be present." "It's like a meat raffle," he explains. "There are only two rules: You have to buy a ticket and you have to be present to win. Being present and interested in your customers and employees makes all the difference in achieving goals."

The concept of honor refers to "creating cool experiences for people," says Scharenbroich. He and his wife once attended a Rolling Stones concert, he said, and "The band members don't just call it in. They don't cheat the audience." Everyone in the audience knew that the band members were trying to give the performance of a lifetime.

Scharenbroich's parents also were an inspiration to him. His mother was known as "Aggie, the retainer lady," because she would go through the school cafeteria garbage bins to find young students' accidentally discarded retainers. Parents and children greatly appreciated—and remembered—her kindness and humor. Scharenbroich's father, a stoic World War II veteran, was not one to hug others. Yet upon visiting the Vietnam Memorial in Washington, D.C., he greeted another veteran—a stranger—and quietly gave him a bear hug in gratitude for his service. The interaction was brief, but the connection was enormous and emotional.

Scharenbroich is an Emmy award-winning speaker and the author of "Nice Bike: Making Meaningful Connections on the Road of Life."

2018 Outstanding Volunteer Awards

At the annual meeting during IFAI Expo 2018, IFAI presented this year's Outstanding Volunteer Awards, to people who generously gave of their time by serving on different boards, task forces and committees, judged competitions and provided education and leadership to others in the industry.

The Outstanding Volunteer Award program was developed in 2012, designed to acknowledge a handful of volunteers each year who regularly go above and beyond. This year's recipients:

Patti Bates, General Manager-Protective, Glen Raven Technical Fabrics

Andy Durham, Senior Geosynthetic Engineer, Owens Corning

Jennifer Fennell, Sourcing Manager, Polo Custom Products

Chad Miller, Director of Contract Manufacturing, American National Manufacturing

For complete information on the role they've played this past year in making IFAI and IFAI Expo a success, please visit www.ifai.com/2018/10/18/2018-outstanding-volunteer-awards-presented-at-ifai-expo/.

For information on all of IFAI's market-based sectors, publications and member benefits, please visit www.ifai.com.

PERFORMANCE PLUS



Rewarding innovation

The Industrial Fabrics Foundation (IFF) has announced W.L. Gore & Associates Inc., Newark, Del., as the winner of the 2018 IFF Innovation Award. The company's GORE-TEX® PYRAD® fabric won in the category of Fabrics, Fibers and Films.



GORE-TEX PYRAD is a revolutionary technology that offers weather protection utilizing a waterproof, windproof and breathable GORE-TEX membrane combined with enhanced protection from flash-fire incidents. Offering a unique blend of flame resistance, thermal insulation and thermal stability, products made from PYRAD fabric are also lightweight, fast-drying, abrasion-resistant, and available in various colors and print patterns.

The fabric technology originated in military tent applications, eventually making its way to wider use in FR shell/outerwear technology for warfighters. PYRAD technology is currently used in garments for oil and gas industry workers and electrical utility linemen. It's seeing expanded use on a global level, particularly in military uniforms overseas.



Recognizing excellence

This year, there are 120 winning projects in IFAI's annual International Achievement Awards competition (Awards of Excellence and Outstanding Achievement Awards) in 42 categories. Winners were selected based on complexity, design, workmanship, uniqueness and function, judged by industry experts, editors, architects, educators and design professionals.

Judges also selected the "Best of Category" winners in each of the seven major award categories.

Fabric Structures: **MakMax Australia**; Awnings and Canopies: **Fabritecture**; Fabric Environments: **Fabric Images**; Marine Fabrication: **David's Custom Trimmers**; Tent Rental and Manufacturing: **Eventstar Structures**; Geosynthetics: **TenCate Geosynthetics Americas**; Advanced Textiles: **AR Tech, Div. A&R Tarpaulins Inc.**

For more than seven decades, IAA has recognized excellence in design and innovation, highlighting truly spectacular work in the specialty fabrics and technical textiles industry. IFAI's goal is to promote awareness of the specialty fabrics used in thousands of products and applications in the growing \$130 billion-plus dollar global fabrics marketplace.

For more on all the winners and other entries, with photos and detailed project descriptions, visit www.iaa.ifai.com.



THE GREATER GOOD

Service Thread, based in Laurinburg, N.C., was awarded the 2018 Industrial Fabrics Foundation (IFF) Greater Good Award at IFAI Expo 2018. Service Thread's culture of community service is intertwined with its business model. Employees donate their time to fundraise for the American Red Cross as well as the United Way, and participate in Habitat for Humanity. Working with local schools, supporting local 8th grade STEM programs, Service Thread created career tours to help educate and inspire students, creating a career pathway into our industry. The Service Thread website summarizes their mission: "Community Matters." Read more in the June 2018 *Review*: <https://specialtyfabricsreview.com/2018/06/01/service-thread>.



HONORABLE MENTION

Ascend Performance Materials, Houston, Texas, responded in force when Hurricane Harvey arrived. For the rest of the story, visit www.specialtyfabricsreview.com/2018/05/01/ascend-performance-materials.

O'Sullivan Films/Continental, Winchester, Va., has used both its products and employee resources to protect local waters and support local schools with equipment donations. For more, visit <https://specialtyfabricsreview.com/2018/08/01/osullivan-films>.

The Greater Good Award recognizes an IFAI member company that does good business—and strives to be a good neighbor, good citizen and good partner. Nomination criteria were based on the company's impact, influence, sustainability, investment and development efforts. For more details on these companies and other "Greater Good" articles in *Specialty Fabrics Review*, visit www.specialtyfabricsreview.com and click on "The Greater Good" on the menu bar.

IFAI EXPO
by the numbers

4,350

SHOW PARTICIPANTS

800+

EXHIBITORS
(INCLUDING CAMX)

69

EDUCATIONAL SESSIONS

66

COUNTRIES REPRESENTED

46

PRE-EXPO EDUCATIONAL
SESSIONS

31

CAMPFIRE SESSIONS

14

MARKET/DIVISION
"OPEN MEETINGS"

1

SOLD-OUT SHOP TOUR

AND

74

DUFFEL BAGS FOR THE BRIDGE
FROM THE
"MANUFACTURING FOR GOOD"
DEMONSTRATION AREA
(SEE PAGE 68)

IFAI EXPO 2018

SPECIALTY FABRICS

The conversation at IFAI Expo 2018 was about working harder, smarter and embracing the future of digital. Business owners and managers had many educational opportunities to learn about what works, what doesn't and how to find new business opportunities and new employees in an increasingly competitive world. Whether a business owner is considering an investment in automated equipment or seeking a new customer base, Expo presenters gave attendees advice based on real world experience and current trends.

SHORTENING LEAD TIMES

Torey Heinz, of Teagles Consulting, told attendees of his Expo session that shorter lead times are important because they increase sales and enhance a shop's reputation for reliability.

"Most projects take far too long thanks to employee distractions and wait times between the steps of a project," Heinz said. His tips for shortening lead times in small shops include:

- Streamline workflow processes
- Minimize interruptions
- Limit multitasking to increase focus
- Prioritize work for desirable customers

Heinz said most small shops try to do too many projects at once, which means each project takes longer to complete. He suggested small shops make it every employee's goal to get a limited number of projects through the shop efficiently before putting more projects in the pipeline.



AUTOMATION BOOSTS COMPETITIVE EDGE

Frank Henderson, CEO of Henderson Sewing Machine Co. Inc., has some blunt advice: Automation is the future. Henderson's Expo session included an enthusiastic message of how the textile industry can move forward.

"We need to embrace change," said Henderson. He said the U.S. is cost competitive today, but companies need automation and technology to be competitive. And companies can produce on-demand goods in the U.S., instead of relying on offshore companies that involve delayed shipping and very large orders.

Henderson showed numerous examples of automation including videos of sewing robots, synchronized sewing systems, a furniture gantry robot and 3-D shoe sewing. These "cobots" are being used in a way that robots collaborate with each other and alongside humans, he explained. "How things are sewn hasn't changed, but we do it differently now."

Testing basics

Testing a textile product before taking it to market can ultimately help businesses understand what to communicate to others about a product, according to Dr. Emiel DenHartog, North Carolina State University, Wilson College of Textiles. He noted that test results provide objective information about a product that businesses can use to communicate certain expectations with suppliers, pass along product information to customers, and draw clear comparisons between their products and those produced by competitors.

DenHartog explained that certain organizations, like the American Association of Textile Chemists and Colorists, for example, provide test methods that don't specify if a product is "good" or "bad." Other organizations, like the National Fire Protection Association, provide specific standards that manufacturers may work to meet. Additional reasons identified by DenHartog for testing include conformance to specifications, quality control, quality promotion and adherence to government regulations.



MULTIGENERATIONAL WORKPLACES

This is the first time in history that five distinct generations are working in a single workplace, according to J. Karl Sherrill Jr., a certified risk manager with Marsh & McLennan Agency LLC. He told Expo attendees that managing multigenerational teams differently will help them find and keep workers.

"To future-proof your business, you need to look at your older and younger workers like a puzzle that needs some help putting all the pieces together." Sherrill suggested managers take advantage of the skills of different workers. He said tech-savvy Generation Xers can train older workers to use new technology and internet-savvy millennials can research solutions to solve company problems.

Sherrill warned managers not to force younger workers into roles designed for older employees. "Younger workers, such as Generation Z, are like canaries in a coal mine for your business. If they're not attracted to your company culture or they don't stick around, that's an indicator of future problems for your company."

Capitalizing on the Maker Movement

Jonathan Palmer, president and CEO of Autometrix Inc., Grass Valley, Calif., discussed how cut-and-sew companies can capitalize on the Maker Movement—a hands-on, do-it-yourself movement that encourages people to turn their ideas into products. Palmer said the Maker Movement has grown thanks to alternative crowd-funding platforms like Kickstarter, combined with the technology for developing ideas.

While crowd-funding platforms allow ideas to be funded, people looking to turn their ideas into products—many of which require fabrics and textiles—are confronted with having to decide where to take the production process. Palmer said this is where cut-and-sew businesses have the potential to “find a piece of the pie” if they’re willing to do the following:

- Understand the product and prepare the business for the opportunity
- Market their company and pursue business through search engine optimization
- Grow their company by investing in different tools and machines

For more information, visit IFAI’s Makers Division at www.makers.ifai.com.

INCREASING PRODUCTIVITY

Randy Westlund, founder and CEO of Awning Tracker, told Expo attendees that if productivity is not managed closely, small businesses can lose money. Westlund said the three key areas that can help increase productivity are communication, workflow and teamwork.

He said mistakes are one of the biggest factors that cause small businesses to lose out on profitability, and a lack of clear, effective communication is often at fault. Westlund’s tips for effectively managing workflow to increase productivity include investing in software, being sure to track the status of various jobs and reducing double data entry.

Teamwork can also impact the productivity of a small business. Westlund said it’s important for a business to have a clear and easy to understand mission, to acknowledge employee achievements and to offer employee buy-in opportunities to increase comradery.

LEAN manufacturing

The journey to LEAN manufacturing started back in 2005 for Ehmke Manufacturing Co. Inc., and Ehmke CEO Bob Rosania told Expo attendees it transformed his company. LEAN is a systematic approach to identifying and eliminating waste through continuous improvements in systems and processes. The basic idea is to minimize or limit non-value-added activities between processes, such as waiting for the next step in a production line while some other part of the project gets ready, something Rosania calls “buckets of wasted time” that a customer doesn’t want to pay for. “This isn’t lightning bolt stuff,” he says. “It’s reorganizing the tool area, painting the floor and rethinking processes to improve the one-piece flow.”

Other examples of waste include:

- Redundant quality inspections
- Excess forms and supplies
- Downtime with computer processes
- Paperwork searches
- Top-down management processes that keep line workers waiting for decisions

Rosania says LEAN manufacturing radically improved his company’s bottom line profits, reduced inventory and reduced defective material by 90 percent.



AUTOMATION TRANSFORMING KNITTING INDUSTRY

Connie Huffa, president of Fabledesigns Inc., thinks the textile industry is experiencing the fourth industrial revolution, something she calls the 4.0 Industrial Revolution.

“Jobs are changing but not being eliminated,” said Huffa, a textile engineer, in her Expo session about how digital technology has affected the flat knitting industry.

Huffa encouraged textile manufacturers to ask the following questions:

- How might digitalization disrupt my corner of the industry in the next five to ten years?
- Where is the value of digitalization for my company?
- What technology should my company invest in?
- In what skills do we need to train our existing employees?
- What talents should we be looking for in the future?
- What happens if we do nothing?

Huffa said the days of huge orders from big retailers may be numbered as countries like South Korea, Singapore and Germany race to automate manufacturing. “Automation levels the competitive field for products that are labor intensive,” noted Huffa. “Especially in countries with growing environmental and employee safety concerns.”



<<< SPECIAL ADVERTISEMENT >>>

IFAI EXPO 2018 FROM THE **DALLAS** SHOW FLOOR

Whether you're looking to enhance your post-Expo experience or are seeing these companies for the first time, use the information below from IFAI Expo exhibitors to learn more about the products and services they provide.



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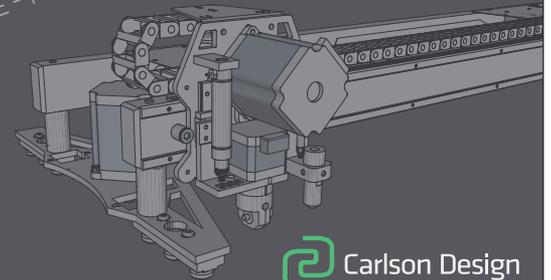
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IFAI EXPO 2018

ADVANCED TEXTILES

Advanced textiles once again merited a large share of the presentations and discussions, exhibitors and products at this year's IFAI Expo in Dallas. Medical and health, protective and safety, smart fabrics, solar textiles and military applications were among the most discussed market segments.

E-TEXTILES: A TURNING POINT

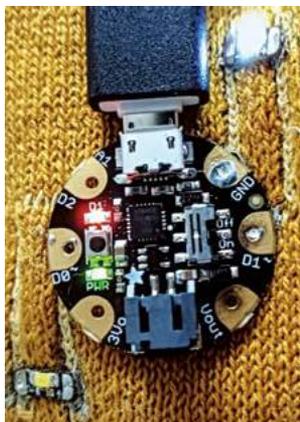
There was no mistaking the year's predominant subject: e-textiles—including the most significant news that work on standards for e-textiles is now underway. Chris Jorgenson, director, technology transfer for IPC (Association Connecting Electronics Industries) and the IPC e-textiles committee staff liaison, says that about 125 businesses and individuals have participated so far. That total includes "a good balance of electronics people and textiles people," according to Stephanie Rodgers, APEX Mills, committee co-chair.

IPC-8921, "Requirements for Woven and Knitted Electronic Textiles (E-Textiles) Integrated With Conductive Fibers, Conductive Yarns and/or Wires," establishes classifications for fibers, yarns and wires; adopts terms and definitions from the international standards organization ASTM; standardizes key performance characteristics; and sets quality assurance provisions, such as test frequency. The committee has identified test methods already in use that are helpful for assessing e-textiles.

A working draft of this standard will be submitted to the full committee for comment by spring 2019.

WORKING THE CIRCUIT

Propel LLC won a grant to develop a Smart Integrated Uniform (SIU) for the U.S. Navy that uses conductive yarns and sensors to monitor the wearer's well-being. The company is also working on 3-D knitting techniques that allow production of an entire jacket with no seams. This could be a breakthrough for integrating conductive yarns into garments, because it allows for the use of different yarns within the same article. Photo: Propel LLC.



ADVANCED TEXTILES AWARD OF EXCELLENCE

In the Advanced Textiles category of this year's IAA Awards, AR Tech, a division of A&R Tarpaulins Inc., Fontana, Calif., was recognized with an Award of Excellence, Best in Category, for its Contamination Cover, Inner Line and Soft Cover Assembly, IPT. The

contamination covers for the James Webb Space Telescope (JWST) were produced through a contract awarded from Northrop Grumman.

The JWST is set to launch in 2021 and will be NASA's premier observatory, serving thousands of astronomers worldwide to help study every phase in the history of the universe. Two contamination covers, one inner and one outer, cover 13,049 cubic feet each. The inner bag is made of an electrostatic film to protect against static electricity, and the outer bag of a transparent-aero packaging helps provide waterproofing and protect the inner layer.

A dedicated class 8 clean room was erected in-house featuring HEPA filtration; AR Tech's quality assurance engineer was trained by the Northrop Grumman aerospace contamination team. The project took about a year to complete and deliver on time to Northrop Grumman. For more on all this year's IAA winners, visit www.iaa.ifai.com.



MEDICAL TEXTILES: EVOLUTIONARY

Fitzroy Brown, product manager of Bard Peripheral Vascular, discussed the evolution of medical textiles for vascular surgical applications on October 15 at IFAI's 2018 Pre-Expo Conference in Dallas, Texas. Attendees learned that implantable fabrics were first experimented with in World War II and the Korean War. The first applications tried were solid walls, glass tubes and plastics—none of which were successful. Better results eventually came with polyester and PTFE fabrics.

Potential uses for surgical applications:

- Heart valves: sew rings and scaffolding
- Pledgets, from catheter cuffs to heart valve sew rings
- AAA, repair of bulging abdominal artery
- LVAD: attached to drive line of Left Ventricular Assist Devices
- Orthopedic applications

Considerations for implantable textile material selection include the impact on tissue fluids, acceptance by the tissue, sterilization needs and fabrication capability. As for the path to market, Brown says the sequence of steps is: design, testing for safety and efficacy, sterilization, bio-compatibility testing and regulatory requirements.

MARKET GROWTH

IFAI market research director Jeff Rasmussen told attendees that the 8.8 percent growth in the advanced textiles market reported in 2017 will also be true of 2018. Rasmussen pointed to the overlay between the smart fabrics and the advanced textile products (ATP) markets.



"The smart fabrics market has made more progress in the last two years than it has in the last fifteen years," he said. The positive side of this is that the crossover effect supports growth for many of the market segments and subsegments within ATP—especially important in keeping industry momentum going, considering how long it can take to meet government regulations.

The largest market segment in the U.S. ATP market for 2017 was performance clothing with a massive 72 percent share; composites came in second place, but trailing at just 13 percent. Rasmussen identified five segments of the U.S. ATP market: smart fabrics, protective clothing, performance clothing, coatings and composites. Within these segments are specific industries and market areas: sports and recreation is the fastest growing, but smart fabrics show the fastest growth overall. The safety and protective market is also expected to see strong growth.

Competition from inexpensive imports, particularly from Asia, continues to restrict growth in U.S. ATP markets. Tariffs and trade disagreements could have a bigger impact.

The Advanced Textiles Products Market Report is available to IFAI's Advanced Textiles Products division members. Visit <https://advancedtextiles.ifai.com>.

APPLIED ELECTRICITY

Pittsburgh-based **Liquid X Printed Metals** presented "Inkjet Printing of Particle-Free Conductive Inks for E-Textile Applications." Sales and marketing manager Bill Babe said his company "does direct on-fabric printing, which has high throughput, is easily scalable and easily integrated into current manufacturing processes." The particle-free technology offers a highly conductive coating on fabric fibers, has a low temperature cure, less jet clogging, and the ability to withstand bending and stretching.

Startup company **Lumenus**, sharing exhibit space with Volt Smart Yarns, has created a safer, hands-free lighting system in smart clothing and accessories designed specifically for people running, walking or bicycling. The LEDs activate via a smartphone app and interface with Google Maps to indicate which direction the wearer is turning by a row of lights that points in the wearer's direction of travel.



STUDENT DESIGN CHALLENGE WINNERS

Advanced Textile Products and the Narrow Fabrics Institute, divisions of IFAI, recently selected the winners of the 2018 Advanced Textiles Student Design Competition, announced during IFAI Expo 2018.

First-place honors went to **J. Walter Lee, Stephanie Wang and Caroline Albers** from the University of Minnesota, for their Intra-spacesuit Electromyography Garment System. The project is a noninvasive, textile-based wearable system that can be used for measuring muscle activations of the body inside a spacesuit or any other rigid, small compartment where optical research methods are not viable.

Megan Cavellier from Central Michigan University took second prize with her ReCover Hospital Gown, intended to address the special needs of teenagers, who can be very self-conscious about what they wear, even in the hospital. The new design provides teens with a sense of dignity, along with physical and emotional safety.

Third prize was awarded to **Jeremy Doody, Marjorie Pickard, Joshua Gvillinsky and Jaime Shimra Fine** from the University of Rhode Island, for their Posture Monitoring Smart Shirt. The smart technology-enabled compression shirt uses integrated sensors to continuously monitor an individual's posture, and can monitor complex movements, even detecting bending over or lifting in a potentially harmful way. Wearers can track their posture through a Bluetooth-connected smartphone app.

This year's challenge was to use textiles as a major component to design aerospace, medical, military, safety/protective or other wearable



FIRST PLACE: Intra-spacesuit Electromyography Garment System, Walter Lee, Stephanie Wang and Caroline Albers from the University of Minnesota



SECOND PLACE: ReCover Hospital Gown, Megan Cavellier from Central Michigan University



THIRD PLACE: Posture Monitoring Smart Shirt, Jeremy Doody, Marjorie Pickard, Joshua Gvillinsky and Jaime Shimra Fine from the University of Rhode Island.

and nonwearable textile technology applications. The competition is meant to encourage students to pursue careers in the advanced textiles field. Students compete for a prize package worth more than \$6,000, including a trip to IFAI Expo, to present their winning projects and spend time with industry members from all parts of the textile supply chain.

SHADE AND WEATHER

From awnings to fabric structures to tents, shade and weather protection was a hot topic at IFAI Expo 2018. Industry experts offered sound business advice and shared the latest market trends during the Pre-Expo Conference and on the show floor.

SHADE MARKET BASICS THAT DELIVER

According to Marc Shellshear, general manager of Value Vinyls Inc., Grand Prairie, Texas, the shade market keeps growing and customers are more concerned than ever about preventing skin cancer.

Shellshear explained that there are three types of HDPE fabrics for shade cloth: tape/tape, mono tape and mono/mono. HDPE was originally used in the horticultural market, but now is widely used in shade sails and fabric structures.

“Architects love triangles,” noted Shellshear, “but the only way that they really work well in shading applications is to have the triangles overlap. Hypar designs are a good solution because they have shape and twist.”

Attendees at Shellshear’s presentation learned about the Rule of 6 for shade sales, calculating catenary curves and design considerations such as what the shade will be attached to and what time of day the shade is needed.

Smooth sailing: shade sails clinic

Brydon Roe from Shade Sails Canada Inc., Revelstoke, British Columbia, led a campfire session dedicated to shade sails installation tips.

When it comes to shade sail fabric options, Roe recommended polyester, Commercial95 (or a mid-grade shade fabric), Monotec (commercial grade, four seasons, 15-year warranty) and WeatherMAX.

When thinking about the corner construction and thread for a shade sail, Roe said it’s important to consider corner details with reinforcement, thread and stitching details (such as UV thread) and stainless ring options.

Once at the posts, finish and footings stage, Roe recommended HSS (hollowed structured steel) 6.5 O.D.-12” O.D. depending on the sail size, type and wall thickness. Posts can be plumb or splayed.

During sail attachment, posts should be pre-drilled to receive the threaded rod. Add hardware on the ground and always be sure to install high points of the sail first.

2018 Fabric Structures Student Design Competition winners

Students were challenged to design a fabric structure that provides shelter and architectural interest for a public or commercial site. IFAI and its divisions created student design competitions to encourage students to pursue careers in the specialty textiles field. Prize packages worth more than \$6,000, including a trip to IFAI Expo, allowed students to present their winning projects and spend time with industry members from all parts of the textile supply chain.

First place went to **Rafael Dias Simoes, Kevin Barthelmebs and Fabien Burgeat** from ENSAVT University for “Origami Parking,” a wood-framed provisory parking garage accommodating 450-500 cars situated near the Orly Airport.

Second place went to **Georges Fares** from the University of Texas at Austin for his Cortina Hostel project, with the idea of turning a current strip mall in Austin into a hotel. The concept is to use origami folded pyramids that are attached to a system of rods connected through a rail in the ceiling.

With this, a curtain system is created to transform the space of the hotel.

Third place was awarded to **Kellie Nguyen**, University of Texas at Austin for BEACON Pavilion. The university is home to a student volunteer-run program called SURE Walk, intended to reduce the risk of sexual assault and violence on campus by providing companionship to people walking home during late hours. The goal of the BEACON Pavilion is to support SURE Walk by providing a designated safe and well-lit area near the Student Activity Center building for students.



FIRST PLACE: “Origami Parking,” Rafael Dias Simoes, Kevin Barthelmebs and Fabien Burgeat from ENSAVT University.



SECOND PLACE: Cortina Hostel project, Georges Fares from the University of Texas at Austin.



THIRD PLACE: BEACON Pavilion, Kellie Nguyen, University of Texas at Austin.

FIND YOUR IDEAL CLIENT

According to Madeleine MacRae, owner of MM MacRae Coaching & Consulting, Dearborn, Mich., asking “Who is your ideal client?” can help make your business a magnet for new customers. “Once you know who your ideal client is, you can move in their direction and they can move in yours,” she said.

Ideal clients can help hone a business’s marketing message and attract more clients. One can learn who their ideal clients are by thinking from their customers’ perspectives and learning what their clients need, desire, fear and value.

Although some business owners say they’re afraid that targeting a specific audience will scare off potential business, MacRae rejected this. “If you’re targeting everyone, you’re essentially targeting no one,” she said. “Telling stories in your marketing that really relate to the specific problems people are trying to solve is the key to finding ideal clients. You won’t repel people, you’ll attract people who are well-suited to you.”

SOCIAL MEDIA ADVANTAGES

Should you bother with social media? Most definitely yes, says Luke Gusman, marketing manager for Sta-Lok Inc., a manufacturer of marine and architectural rigging hardware. During his session on understanding social media, Gusman said there are five social media platforms that can increase engagement with your product or service and raise your bottom line: Instagram, Twitter, Facebook, LinkedIn and YouTube.

A company needs to understand its goal and target audience, develop a unique social tone and take tangible action no matter which social media platforms it chooses. "The key is creating interesting, thoughtful and engaging content."

Gusman says that short videos are valuable right now on all of the social media platforms. Companies need both style and substance and should develop a visual brand identity that creates recognizable products or services. "Present your company, product and brand in the best light."

Go digital to acquire new customers

Ed Keough, vice president of sales for FutureGuard Building Products Inc., Auburn, Maine, told business owners they need to embrace digital advertising or be "left in the dust" during session "Acquiring New Customers in the Digital Age."

Unlike previous years when customers used to contact a business for basic information, the internet allows customers to do preliminary research prior to contacting a business. Consumers are using new digital tools, and businesses need to respond by using new tools of their own.

Keough says recent studies show that more than 50 percent of consumers do all their research on a smart phone or tablet, which means a business better have a mobile-friendly website or risk losing 50 percent of its customers. He suggests businesses take advantage of free digital tools such as Google StoreFront and a Facebook business page. Additional digital tool suggestions include HomeAdvisor, a fee-based contractor referral service, and Facebook's digital marketing services.

Keough says a business should devote at least 5-10 percent of gross sales to advertising. "This may sound expensive," he says. "But you can't afford not to spend it."

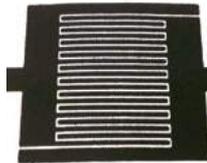
IFAI EXPO Show STOPPER WINNERS

IFAI announced winners of the seventh annual Show Stopper competition at IFAI Expo 2018. Designed to recognize new products from exhibitors, the Show Stopper Awards acknowledge the newest, most innovative, useful and exciting, effective, efficient and economical entries, as well as the most environmentally sound products at the show. Entries were submitted by exhibitors and displayed on the show floor, with winners selected by a committee of industry experts.

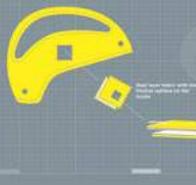
Chemicals, Coatings & Compounds / Sensors →

DITF German Institutes for Textile & Fiber Research
www.ditf.de/en

The textile-based sensors use electro-conductive inks and pastes, basic for the manufacturing of inexpensive smart textiles.



MIPS-E3 GLIDEWEAR



End Products / MIPS-E3 Glidewear Liner ←

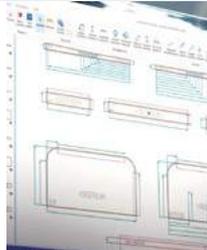
Glidewear by Tamarack Habilitation Technologies
www.glidewear.com

MIPS, a brain safety technology company, is incorporating Glidewear in a new product designed to protect athletes wearing hard-shell helmets. The multi-directional stretch, low-friction fabric has two layers that glide against each other to absorb harmful friction and shear.

Equipment & Tools / Templates for "just in time" manufacturing →

Autometrix Inc. • www.autometrix.com

For companies that offer a variety of sizes or dimensions for their custom or semi-custom products, Templates provides a method to generate new patterns for each product in any size, greatly reducing inventory costs.



Fabrics, Fibers & Films / Solar Clear Vinyl ←

Lark International Inc. • www.larkintl.com

Solar Clear Vinyl is both FR and cold-crack resistant down to -30°F, as well as mildew resistant and heat sealable.

Hardware, Findings & Accessories / CAF-COMPO screw-stud →

SUREFAS • www.surefas.com

The composite self-tapping screw-stud can be used in fiberglass, wood and other composites. The stud is the lower part of a snap or ring-spring press fastener system that will fit any regular ring-spring socket.



Services to Manufacturers / HOSYcan compression testing device ←

Hohenstein • www.hohenstein.de

The compression testing device allows for accurate compression measurements during movement and measures the interaction between different materials.