2016 PROCEEDINGS OF AATCC INTERNATIONAL CONFERENCE

April 19-21, 2016
Williamsburg Lodge
Williamsburg, VA, USA

SPEAKER PRESENTATIONS

Scroll down or use the bookmarks in the navigation pane at left to move to a new location in the Proceedings. Click on a Blue Paper Title to view that paper.

A full text search can be performed for any word or phrase by pressing CTRL + F. Enter the desired text in the pop-up box and click “Next” or “Previous.”

OLNEY MEDAL ADDRESS

Forty Years of Wanderings in Textile Chemistry Process and Materials Research

Fred L. Cook, Georgia Institute of Technology
KEYNOTE ADDRESS

Made Here, Made Possible—Building a Local-for-Local Apparel Manufacturing Model
Keith Hoover, Under Armour

CHEMICAL APPLICATIONS TRACK

► SESSION: Herman and Myrtle Goldstein Student Paper Competition
Moderator: Fred Cook, Georgia Institute of Technology

Preparation and Characterization of Biodegradable Electrospun Core-sheath Yarn for Bio-medical Purposes
Apurba Banerjee, University of Georgia, Athens

Size Grading of Zero-waste Garments
Allison Elizabeth Bowles, North Carolina State University

Evaluation of Passive Cooling Garments for Improved Design for Thermal Comfort Based on Thermal Manikin Tests
Caroline M. Donelan, Cornell University

Preparation of Smart Textiles by Grafting Thermo and pH Responsive Block Copolymer onto Silk
Qisheng Fang, Zhejiang Sci-Tech University, China

A New Single Fiber Based Detergency Measurement with Confocal Laser Scanning Microscope Technique
Qian Hu, Zhejiang Sci-Tech University, China

Peltier Effect in Cotton Fabric Treated with Doped Nanocellulose
Jeff Morgan, The University of Georgia, Athens

Study of Polyacrylamide Modified Polyester Fabric with Self-cleaning for Efficient Oil/Water Separation
Mengyuan Sun, Zhejiang Sci-Tech University, China

Fabrication and Characterization of Nanocellulose Hydrogels for Facile Coating Applications
Lauren Tolbert, University of Georgia, Athens
The Performance Quality of Cotton Denim Fabrics Compared to Blended Stretch Denim Fabrics
Alyson VanderPloeg, Central Michigan University

► SESSION: Sustainable Applications
Moderator: Mike Tyndall, Cotton Incorporated

Sustainable Cotton Processing
Eliat Singam, Ameritex

Dyeing of Cotton with Sulphur Dyes using Alkaline Enzymes as Alternate Reducing Systems
J.N. Chakraborty, National Institute of Technology, Jalandhar

Eco-Friendly Omniphobic Textile Coatings
Krishnaswamy K. Rangan, Materials Modification Inc.

► SESSION: Advances in Wet Processing
Moderator: Forrest Putnam, Vestagen Technical Textiles

ITMA 2015: Advances in Textile Wet Processing
Peter J. Hauser, North Carolina State University

Gang Sun, University of California, Davis

Improvement of Crockfastness for Cotton
Magali Brown, NICCA USA

Investigation into Utilizing Dye Transfer Inhibitor Polymers as a Means to Ecologically Improve the Rinsing Process of CI Reactive Black 5 on Cotton Knit Fabric
William H. Garrett, Cotton Incorporated

► SESSION: Innovative Technologies
Moderator: Dennis Scheer, VF Corporation

Sol-gel Formulation as an Ecological Finishing for Antimicrobial and Anti-mosquito Textiles
Jaime Rocha-Gomes, Ecofoot, SA
Flame Retardation of Cotton Blends with High Synthetic Content
Robert Brookins, Alexium Inc.

Correlating the Perception of Odor in the Amount of Odorous Chemicals Present on Footwear Materials
Tyler Pickett, North Carolina State University

Sanitized Marker Technology – The Ultimate System for Controlling a Complex Supply Chain
Darrell Burnette, Sanitized USA, Inc.
CONCEPT 2 CONSUMER® (C2C) TRACK

► SESSION: Comfort & Performance Insight
Moderator: Heidi Carvalho, TTACC

Performance, Comfort & Clean: Efficiency in Your Supply Chain—What’s the “Charge”
Harrie Schoots, Ascend Performances Materials

Machine Sewing with Conductive Thread: A Comparison of Materials and Techniques
Mary Ruppert-Stoescu, Oklahoma State University

Evaluation of Clothing Comfort Factor
Renuka Dhandapani, Cotton Incorporated

► SESSION: Global Impact: Concept to Consumer
Moderator: Carol Revels, Lands’ End Inc.

Assessing the Impact of Reduced Water Levels, Detergent Type, and Laundering Platform on Basic Clothing Attributes
Elizabeth P. Easter, University of Kentucky

Don’t Just Claim It, Prove It! Protect Your Brand by Verifying Textile Performance Claims
Louann Spirito, SGS Consumer Testing Services

Managing Speed to the Market
Sandeep Khatua, Bureau Veritas Consumer Products Services

Case Studies in Striking a Balance Between Design and Quality
Lisa Cram, VF Outdoor

► SESSION: Product Research & Development
Moderator: Patrick Ayers, Vartest Laboratories Inc.

TITIN: From Tragedy to Triumph
Patrick Whaley, Titin LLC

Selection of Tests to Evaluate Performance of Novel Moisture Management Finishes and Fabrics
Emiel A. DenHartog, North Carolina State University
► SESSION: Print & Technology
Moderator: Punita Patel, Joseph Ribkoff Inc.

Design with a Purpose: Virtually Fitted, Digitally Printed Engineered Garments and Underlay/Overlay Repeats
Lynn M. Boorady, Buffalo State University

Current and Future State of Digital Textile Printing Platforms
Johnny Shell, Specialty Graphic Imaging Association (SGIA)

The Stain Resistance and Cleanability Evaluation of a Top-Coated Printed High Performance Commercial Upholstery
Marty Gurian, Designtex

► SESSION: Color Management & LED Lighting Update
Moderator: Karen Kyllo, SGS US Testing Services

The Evolution and Revolution of Global Color Management
Carol T. Revels, Lands’ End Inc.

LED Retail Lighting: State of the Union
Andrew Fraser, Consumer Testing Laboratories Inc.

LEDs, Standards, and Their Effect on the Supply Chain
Ann Laidlaw, ACL Color Consulting LLC and Roland Connelly, RoLyn Group
MATERIALS TRACK

► SESSION: Protective Textiles I
    Moderator: Haskell Beckham, Exponent

**Specifying and Testing Idealized Bust Surrogates for Female Stab-resistant Body Armor**
Amanda L. Forster, National Institute of Standards and Technology

**Failure Analysis of Protective Textiles and Design for Failure Prevention**
Haskell Beckham, Exponent

**Reinforced Bingham Plastics for Energy Dissipation**
Christopher Pastore, Philadelphia University

► SESSION: Protective Textiles II
    Moderator: Christina Rapa, W.L. Gore & Associates

**Development of Novel Synthetic Turf Infill Materials**
Richard Harper, Georgia Institute of Technology/American Trim

**Impact of Backing Material Properties on the Performance of Protective Textiles**
Aaron M. Forster, National Institute of Standards and Technology

**Computational Modeling to Characterize the Mechanical Response of Knit Fabric Under Ballistic Loading**
P. Justin McKee, TKC Global

**Incorporation and Performance of Molecular Polyoxometalates in Fibrous Substrates**
Nancy Elizabeth Allen, Cornell University

► SESSION: Functional Textiles
    Moderator: Trish Hayes-Danitz

**Solar Textiles: Collaborating Cross Disciplines to Craft a Powerful Cloth**
Marianne Fairbanks, University of Wisconsin-Madison

**Smart Textiles with Soft Thermal Responsive Polymers**
Jiping Wang, Zhejiang, Sci-Tech University

**Adhesion—The Theory of Everything (Fabric)**
Dick Lindmark, Adherent Laboratories, Inc.
Teaching Cotton New Tricks 640
Juan Hinestroza, Cornell University

► SESSION: Materials Analysis/Bio-Based Materials
Moderator: Robina Hogan, United Soybean Board

Laboratory and Outside the Laboratory Measurements of Ginned and Not Ginned Cotton Fiber Micronaire and Maturity by Portable Near Infrared (NIR) Instruments 641
James Rodgers, USDA-ARS-SRRC

Azo Dyes in Textiles: Exposure and Analysis 647
Rob Pawle, Exponent

Soy Based Novel Bi-component Fibers for Geo-Synthetics 648
Abhay Joijode, The Nonwovens Institute, North Carolina State University

Fabrication of Advanced Green Composites using Cross-linked Raw Plantain Starch and Liquid Crystalline Cellulose Fibers 653
Anil N. Netravali, Cornell University