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For permission requests, please contact The Fiber Society
at the address below.

The Fiber Society
North Carolina State University
College of Textiles
PO Box 8301
Raleigh, NC, 27695-8301
USA

Phone: (919) 513-0143
Fax: (919) 515-3057

admin@thefibersociety.org

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PROGRAM

Monday, October 9

8:30 AM–5:30 PM	Advanced Fiber Process Development Short Course
10:00 AM–5:00 PM	Governing Council Meeting, the Hilton Knoxville
5:30 PM–7:30 PM	Early Bird Registration, the Hilton Knoxville
7:30 PM–9:00 PM	Early Bird Reception, the Hilton Knoxville

Tuesday, October 10

7:30	Registration and Continental Breakfast	
8:20	Welcoming Remarks, Business and Announcements	Gajanan Bhat, Program Chair Phil Gibson, President, Fiber Society Way Kuo, Dean, College of Engineering, University of Tennessee
8:40	Plenary Talk: Wesley Hoffman, US Air Force Research Laboratory <i>How Well Does Carbon Handle Stress?</i>	

Day Chair: William Haile, Missing Octave Insights

Session 1 A

Session 1 B

	High-performance Fibers: Andy Campbell, Sunoco Chemicals	Fiber Assemblies: Rakesh Gupta, Eastman Chemical Company
9:25	<i>PP and PET Nanocomposites Fibers: Process, Structure and Some Applications 2</i> <u>A. Aji</u> , J. Denault, M. Bureau, D. Trudel-Boucher and S. Dimitrievska, Industrials Materials Institute	<i>Enhanced Wicking Behavior in Two-Ply Fibrous Composites 9</i> <u>Haskell Beckham</u> ¹ , Johannes Leisen ¹ , Patrick McDonald ² , Fred Ahrens ² and Tim Patterson ² , ¹ Georgia Institute of Technology, ² George W. Woodruff School of Mechanical Engineering and Institute of Paper Science and Technology
9:55	<i>Elongated Rheology and Orientation Number of Polymer Melts and Solutions 3</i> <u>John R. Collier</u> and Simioan Petrovan, University of Tennessee	<i>Hydrophobic-Hydrophilic Surfaces via Modification with Natural Products 10</i> <u>You-Lo Hsieh</u> , University of California Davis
10:25	Break	Break
10:40	<i>Mechanical Properties and Fatigue Analysis of Heat Treated Poly(ethylene Terephthalate) Nanocomposite Fibers</i> <u>Rodney Averett</u> , Mary L. Realff and Karl Jacob, Georgia Institute of Technology 4	<i>Designing Islands in the Sea Nonwovens to Meet Pore Size Specifications 11</i> <u>Glen E. Simmonds</u> , John D. Bomberger and Michael A. Bryner, E. I. DuPont de Nemours & Co.
11:10	<i>Morphology of In Situ Microfibrillar Composite and Formation of Thermoplastic Micro- and Nanofibers</i> Dong Wang and <u>Gang Sun</u> , University of California Davis 6	<i>Non-particulate Protective Fabrics: New Insight on the Protection/Adsorption Mechanism 12</i> Utkarsh Sata, Senthil Chinnasami, Lohit Shastri and <u>S. S. Ramkumar</u> , Texas Tech University
	<i>Pitch-based Carbon Fiber Spinning</i>	<i>Development of an Antimicrobial and</i>

	<u>Ahmad Vakili</u> , University of Tennessee Space Institute 7	<i>Breathable Microporous Polyurethane Membrane</i> 14 <u>Kuitian Tan</u> and S. Kay Obendorf, Cornell University
12:10	Lunch Mount Posters and Prepare Table Tops	

Session 2

1:40	Student Paper Competition Session Chair: Dominique Adolphe, ENSITM
	Special Session to Honor Prof. J. E. Spruiell Session Chairs: J. E. Spruiell, University of Tennessee Bhuvnesh Goswami, Clemson University
2:40	<i>Structural Hierarchy Developed in Polypropylene/Clay Melt Spun Fibers</i> 17 <u>J. H. Fujiyama-Novak</u> and <u>Miko Cakmak</u> , University of Akron
3:05	<i>Thermal Bonding of Polyolefin Fibers</i> 18 <u>Rajen Patel</u> , Wenbin Liang, Gert Claasen, Karin Katzer, Jesus Nieto and Thomas Allgeuer, Dow Plastics
3:30	<i>Superparamagnetic Flexible Substrates Based on Submicron Electropsun Estane® Fibers Containing MnZnFe-Ni Nanoparticles</i> 19 <u>Pankaj Gupta</u> , Ramazan Asmatulu, Rick Claus and Garth Wilkes, Virginia Polytechnic Institute and State University
3:55	Break
4:05	<i>Fiber Spinning Behavior of Biodegradable Polymers</i> 20 <u>Eric Bond</u> , Procter & Gamble Company
4:30	<i>Morphological Investigation of Fibrous Materials by Multiaxially Stretched Films</i> 21 <u>Kyung-Ju Choi</u> , AAF International
4:55	<i>Fibrous Form of Bioabsorbable Polymers in Surgical Applications</i> 24 <u>Jack Zhou</u> , Ethicon, Inc.
5:20–7:30	Poster Presentations and Table Top Exhibits — Refreshments Provided

Wednesday, October 11

7:30 Registration and Continental Breakfast

Day Chair: Kevin Kit, University of Tennessee

Session 3 A

Session 3 B

	Fiber Formation: Elizabeth McFarland, INVISTA	Fabrics and Modeling: Phil Gibson, US Army, Natick
8:30	<i>Preparation of Superhydrophobic Surface Using Lotus Effect</i> 26 <u>Hoon Joo Lee</u> and Stephen Michielsen, North Carolina State University	
9:00	<i>Development of Orientation in Extruded Cellulose Fibers</i> 28 Ramsis Farag ¹ , <u>Roy M. Broughton</u> ¹ , Fatma Kilinc-Balci ¹ , Weijun Wang ¹ , Richard Swatloski ² and Robin Rogers ² , ¹ Auburn University, ² University of Alabama	<i>A clothing modeling framework for uniform and armor system design</i> 37 Xiaolin Man, <u>Colby C. Swan</u> , Jun Yang and Salam Rahmatalla, University of Iowa

9:30	<i>Wet Spinning of High Molecular Weight Aliphatic Polyamides</i> 29 <u>Amit Gupta</u> ¹ , M. Afshari, R. Kotek ¹ , A. E. Tonelli ¹ and Nad Vasanthan ² , ¹ North Carolina State University, ² Long Island University	<i>Tension and Bending Performance of Single Muscle Fiber in the Pig</i> 38 <u>Yuqing Liu</u> and Ke Wang, Donghua University
10:00	Break	Break
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10:45	<i>Spinability and morphology of melt-spun nanocomposite fibers</i> 32 <u>Rudolf Hufenus</u> , Giuseppino Fortunato, Paul Brühwiler, Jörn Lübben and Marcel Halbeisen	<i>Transplanner Water Transport Tester for Fabrics</i> 41 <u>M. K. Sarkar</u> , J. T. Fan and X. M. Qian, Hong Kong Polytechnic University
11:15	<i>Elastis Fibers Based on Polyolefin Elastomers</i> 34 <u>Hongyu Chen</u> , Debbie Chiu, Ben Poon, Ashish Sen and Shih-yaw Lai, Dow Chemical Company	<i>Hemp Fiber Preparation: Designing and Calculating a Full Size Production with Process Oriented Analysis</i> 42 <u>Daniel Gantner</u> , Institute for Manufacturing Automation
11:45	<i>Elastic Nonwoven Fabrics from Specialty Polyolefin Elastomers</i> 35 <u>Raja Dharmarajan</u> , Smita Kacker, Vincent Gallez, Bruce A. Harrington and A. D. Westwood, ExxonMobile Chemical Corporation	<i>Plasma Surface Modification of Textiles</i> 44 <u>M. M. Hossain</u> and Dirk Hegemann, Empa
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Session 4 A

Session 4 B

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2:00	<i>Fundamental Study of the Driving Mechanisms for Cross-Section Shape Change in Highly Noncircular Fiber Spinning</i> 48 <u>Donggang Yao</u> , Georgia Institute of Technology	<i>Textile Heartvalve Prosthesis: In Vitro Performance of the Fabric</i> 59 <u>F. Heim</u> , B. Durand and N. Chakfe, ENSITM
2:30	<i>Modeling the Torsional Behavior of Human Hair</i> 50 Prasad Potluri ¹ , Don Harper ² and <u>Yash Kamath</u> ² , ¹ University of Manchester, ² TRI/Princeton	<i>Phosphate Glass Fibres as Reinforcement in Resorbable Composites for Medical Implant Devices</i> 62 A. J. Parsons, S. Cozien-Cazuc, Jing Yang, C. D. Rudd, and <u>Ifty Ahmed</u> , University of Nottingham

3:00	Break	Break
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4:45 **General Body Meeting: Open to Fiber Society Members Only**

6:30 **Reception and Banquet**

Thursday, October 12

7:30 Registration and Continental Breakfast

Day Chair: Larry Wadsworth, University of Tennessee

Session 5 A

Session 5 B

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10:00	Break	Break

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Coralie Marchand
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Chung Hee Park, Presenter
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