

**AGENDA & PROCEEDINGS OF THE
FOURTEENTH INTERNATIONAL CONFERENCE ON
WEB HANDLING (IWEB 2017)
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA**

June 4-7, 2017

**Advanced Technology Research Center
Oklahoma State University**

Sunday, June 4

6:00-8:00 PM **Reception – ConocoPhillips OSU Alumni Center – Traditions Hall
Registration**

Monday, June 5 – 102 Advanced Technology Research Center TAB

7:00 AM	Registration, Coffee, Juice, Pastries	
8:00 AM	Welcome , Karl Reid and J. K. Good, Oklahoma State University, USA	
8:30 AM	Keynote Presentation: <i>Web Transport Modeling and Control: Historical and Current Perspective</i> , Prabhakar R. Pagilla, Texas A&M University, USA	1

Monday, June 5 (continued) – 102 Advanced Technology Research Center TAB

Session 1 – Longitudinal Dynamics/Tension Control

Session Chairs – TBD and Karl Reid

9:20 AM	<i>Machine Direction Registration Dynamics Model of a Rotary Printing Press</i> , Brian S. Rice, Rochester Institute of Technology, USA, and Robert L. Walton, USA	2
9:45 AM	<i>Calculation of Film Tension from Film Position and Roller Position</i> , Günter Oedl, Brückner Maschinenbau GmbH & Co. KG, GERMANY	3
10:10 AM	Break	
10:35 AM	<i>Modeling and Computer Simulation of Zero Speed Splice Unwinds</i> , Prabhakar R. Pagilla, Texas A&M University, USA	4
11:00 AM	<i>Longitudinal Tension in a Web Span</i> , Karl N. Reid, Moad Abudia and Ben Reish, Oklahoma State University, USA	5
11:25 AM	<i>Optimizing Idler Diameter</i> , Ronald J. Lynch, RJLynch & Associates, LLC, USA	6
11:50 AM	Lunch in the Student Excellence Center	

Session 2 – Winding

Session Chairs – TBD and Karl Reid

1:00 PM	<i>A Study of Oscillation</i> , David R. Roisum, Finishing Technologies, Inc., USA	7
1:25 PM	<i>Nip Impinged Center-Winding Including a Nonlinear Beam Model</i> , Cagri Mollamahmutoglu, Yildiz Technical University, TURKEY	8
1:50 PM	<i>Using a Winding Model to Reduce Winding Defects</i> , Amy Thuer, Avery Dennison, USA	9
2:15 PM	Break	
2:40 PM	<i>The Winding Mechanics of Laminate Webs</i> , Sheng Pan and J. K. Good, Oklahoma State University, USA	10
3:05-4:05 PM	<i>Discussion – Leaders: Steve Schramm and J. K. Good</i>	
6:30 PM	Social & Dinner, Donald W. Reynolds School of Architecture Building, 1st Floor Gallery. Entertainment: William Smith & Band Map will be provided.	

7:30 AM	Coffee, Juice, Pastries
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Session 3 – Lateral Mechanics/Dynamics, Wrinkling, Web Nonuniformity and Friction

Session Chairs – Amy Thuer and J. K. Good

8:30 AM	<i>The Effect of Mass Transfer on Multi-Span Lateral Dynamics of a Uniform Web</i> , Jerry L. Brown, Essex Systems, USA	11
8:55 AM	<i>Boundary Conditions for Lateral Deformation of Webs Transiting Rollers in Roll-to-Roll Process Machines</i> , J. K. Good, Yao Ren and Jinxin Shi, Oklahoma State University, USA	12
9:20 AM	<i>The Effect of Mass Transfer on Multi-Span Lateral Dynamics of Nonuniform Webs</i> , Jerry L. Brown, Essex Systems, USA	13
9:45 AM	Break	
10:10 AM	<i>Measurement and Quantification of Baggy Webs</i> , Ronald P. Swanson, 3M Company, USA	14
10:35 AM	<i>Explicit Simulation of Wrinkle Formation Due to Web Non-Uniformity</i> , Boshen Fu, Eric Gilgenbach, Katie Nackers and Russ Brumm, Kimberly-Clark Corporation, USA	15
11:00 AM	<i>Wrinkling Mechanisms of Non-Wovens with Spatially Varying Material Properties</i> , Rich Hamm, Jeremy Carrle and Steve Lange, Procter & Gamble, USA	16
11:25 PM	<i>A New Model for the Steady State Deformation and Friction of Webs on Rollers</i> , Dilwyn P. Jones, Emral Ltd, UNITED KINGDOM	17
11:50 AM	Lunch in the Vogt Room	
12:50 PM	<i>Data Analytics to Predict and Prevent Issues in Roll-to-Roll Manufacturing</i> , Aravind Seshadri and Carlo Branca, Roll-2-Roll Technologies LLC, USA	18
1:15 PM	<i>Discussion – Leaders: David Roisum and Tim Walker</i>	
2:15 PM	Tour of Laboratories in the Web Handling Research Center	
4:30 PM	Board Buses East of ATRC Building for Trip to Tulsa	
6:00 PM	Social & Dinner – Gilcrease Museum. Entertainment: <i>Tour Museum</i>	

7:30 AM	Coffee, Juice, Pastries
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Session 4 – Nano Impression Lithography
Session Chairs – Günter Oedl and Karl Reid

8:20 AM	Announcements – Karl Reid	
8:30 AM	Keynote Presentation: <i>The Path to Roll-to-Roll Nanoimprinting and Future Opportunities</i> , L. Jay Guo, The University of Michigan, USA	19
9:20 AM	<i>The Nip Mechanics of Nano-Impression Lithography in Roll-to-Roll Process Machines</i> , Yao Ren and J. K. Good, Oklahoma State University, USA	20
9:45 AM	<i>Lateral Behavior of Moving Webs: A New Look at Modeling and Control</i> , Edison O. Cobos Torres and Prabhakar R. Pagilla, Texas A&M University, USA	21
10:10 AM	Break	
10:35 AM	<i>Impact of Large Deformations of Webs Transiting Rollers</i> , Jinxin Shi and J. K. Good, Oklahoma State University, USA	22

Session 5 – Nip Mechanics
Session Chairs – Günter Oedl and Karl Reid

11:00 AM	<i>Optimizing Nipped Roller Systems</i> , Timothy J. Walker, TJWalker + Associates Inc., USA	23
11:25 AM	<i>Web Curl and Web Curl Measurement</i> , Ronald P. Swanson, 3M Company, USA	24
11:50 AM	Lunch in the Vogt Room	
1:00 PM	<i>Roller Nip Deflections</i> , Kevin Cole and Brooks Schneider, Optimization Technology, USA	25
1:25 PM	<i>Preventing Negative Issues at Nip Roller</i> , Tom Bass, Mitsubishi Rayon Carbon Fiber & Composites, Inc., USA & Atsushi Nagahori, Mitsubishi Chemical Corporation, JAPAN	26
1:50 PM	Break	
2:15 PM	<i>Discussion – Leaders: Steve Lange & Neal Michal</i>	
3:15 PM	Closure and Presentation of Best Paper Awards	
	List of Attendees	27