

# JON PAUL RUST

## Curriculum Vitae

### GENERAL INFORMATION

Professional Address                      Wilson College of Textiles  
Box 8301  
North Carolina State University  
Raleigh, NC 27695-8301

### EDUCATION

NC State University	PhD	Fiber and Polymer Science	1990
Clemson University	MS	Fiber Science	1985
Clemson University	BS	Mechanical Engineering	1982

### EMPLOYMENT HISTORY

**Wilson College of Textiles**  
**North Carolina State University**

7/2020-present	Professor Emeritus of Textile Engineering
7/2020	Phased retirement,
7/2020 – 7/2023	Professor – one half time
12/2018 – 5/2019	Associate Dean for Academic Programs
7/2017 – 11/2018	Interim Associate Dean for Academic Programs

#### **Department of Textile Engineering, Chemistry and Science**

2008 - 2014	Head of Department
2005 - 2020	Alumni Distinguished Undergraduate Professor
2000 - 2008	Associate Head, Director of Undergraduate Programs
1999 - 2023	Professor
1998 - 2000	Program Director: Textile Engineering
1994 - 1999	Associate Professor
1992 - 2004	Director: Milliken / NC State Summer Challenge
1990 - 1994	Assistant Professor
1985 - 1990	Instructor, Research Assistant and PhD Candidate

#### **Zeis Textiles Extension Education for Economic Development**

12/2014 – 5/2019	Interim Director
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**Division of Undergraduate Academic Programs**  
**North Carolina State University**

2008 - 2009	Interim Associate Dean for General Education Implementation
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## HONORS AND AWARDS

- 2015 Chancellors Creating Community Award for Outstanding Faculty, for a strong commitment to diversity
- 2014 Faculty-2-Faculty Mentor Award Citation
- 2012 Gertrude Cox Award: for *Innovative Excellence in Teaching and Learning with Technology*
- 2008 Division of Undergraduate Academic Programs Award: for *Outstanding Contributions to Undergraduate Education*
- 2006 - 2007 College of Textiles Board of Governors Award nominee
- 2005 - 2006 College of Textiles Board of Governors Award nominee
- 2005 Division of Undergraduate Academic Programs Award: Ephraim I. Schechter Award for *Excellence in Undergraduate Assessment*
- 2005 NC State Alumni Distinguished Undergraduate Professor
- 2001 Outstanding Teacher at NC State University
- 1997 - 1998 College of Textiles Board of Governors Award nominee
- 1992 Outstanding Teacher at NC State University
- 1992 Alumni Outstanding Teaching Award, NCSU Alumni Association
- 1992 Member of the Academy of Outstanding Teachers
- 1988 Tessilli Grant, Italian Trade Commission and ACIMIT

## **ADMINISTRATIVE ACCOMPLISHMENTS**

### **Associate Dean for Academic Programs (12/2018 – 5/2019)**

#### **Interim Associate Dean for Academic Programs (7/2017 – 12/2018)**

- Faced more than 50% turnover of the Academic Programs staff during 2017 – 2018
- Reorganized Academic Programs with fewer staff while improving student services
- Coordinated a move of all Academic Programs staff to a new suite: room 2418
- Renamed to: Center for Academic, Career and Student Services (ACSS) for  
Recruitment, Diversity, Advising, Scholarships, Careers
- Grew enrollment in Masters and PhD programs

#### **Interim Director, Zeis Textiles Extension (12/2014 – 5/2019)**

- Led the department through a period of growth resulting in significant increases in revenue generation each year
  - ZTE labs have recorded multiple all time highs in revenue generation during my time as Interim Director
  - ZTE professional education, textiles and Lean Six Sigma combined have generated increased net revenue over the previous year in back-to-back years
- Led laboratory and professional education space modernization
  - Air vortex spinner, 12 spindle lab spinner with Amsler STG 4000
  - Sample weaving, drawing-in and sample warping equipment
  - Narrow tenter, curing systems, donations from Ralph Lauren
  - Shima Seiki, corizon (loan), warp knitting (Allergan), Tirtex jacquard equipment
  - New paint, flooring in classrooms, break areas, second floor pod 4 hallway
  - New A/V equipment in classroom 2431

#### **Department Head, Textile Engineering, Chemistry and Science (11/2008 – 12/2014)**

- Led the department through a period of growth from 22 to 29 tenured / tenure-track faculty:
  - Undergraduate enrollment has doubled since 2009, > 50% female – a first in 2013, > 24% self-identify in UPA surveys as other than white – a first in 2013
  - Placement for undergraduate students has remained above 90%
  - Graduate (MS) enrollment has increased by 60% despite losing most TA funding, > 50% of graduate students are female – a first in 2013
  - Added a new degree previously in the TATM Department: Textile Technology
  - Added seven faculty previously in the TATM Department
  - Significant curriculum revisions were completed for Textile Technology and Polymer and Color Chemistry programs
  - Received outstanding ABET accreditation review of Textile Engineering Program
  - Research expenditures and new research funding have grown despite elimination of the National Textile Center
  - Added two Assistant Professors in nonwovens, one in nanocomposites, one in forensics, one Associate Professor in Protection and Comfort – one of five was female, one was from an underrepresented minority group
  - Added a new Research Professor in textile composites
  - Led the department through a successful graduate program review

- Directed a thorough renovation of department laboratory facilities (approx. 15,000 ft<sup>2</sup>) during a period of major budget reductions:
  - DataColor Color Science Laboratory (1021 ft<sup>2</sup>)
  - Forensic Analytical Laboratory (1345 ft<sup>2</sup>)
  - Textile Chemistry Undergraduate Teaching Laboratories (3551 ft<sup>2</sup>)
  - Tissue Engineering Laboratory (362 ft<sup>2</sup>)
  - Antimicrobial Test Facility and Medical Textiles Laboratory (980 ft<sup>2</sup>)
  - Forensic and Textile Microscopy Laboratory (1038 ft<sup>2</sup>)
  - Textile Engineering Analog and Digital Circuits Laboratory (921 ft<sup>2</sup>)
  - Tri-component Melt-spinning and Wet-spinning Extrusion Laboratories (1755 ft<sup>2</sup>)
  - Nanocomposites Laboratory (1120 ft<sup>2</sup>)
  - Nano-extended Textile Group Laboratory (485 ft<sup>2</sup>)
  - Textile Engineering / Textile Technology Senior Design Laboratory (2000 ft<sup>2</sup>)

**Interim Associate Dean for General Education Implementation (August 2008 – July 2009)**

- Led CUE in:
  - Developing the rationale and objectives for each GEP category
  - Refining details of the US Diversity and Global Knowledge categories
  - Populating GEP category course lists
  - Creating a structure for review of new courses for addition to the GEP lists
  - Performing initial course reviews to improve the GEP course approval process
- Led UCCC in facilitating the curriculum revision process where:
  - Hundreds of curriculum actions were processed
  - Most curricula were successfully revised to include the new GEP requirements
- Interfaced with Registration and Records to design a new student degree audit structure

**Associate Head: TECS (August 2000 – November 2008)**

- Led all aspects of administration of the Textile Engineering and Textile Chemistry (later Polymer and Color Chemistry) undergraduate programs:
  - Course and curricular revisions
  - Program assessment
  - Undergraduate and graduate course scheduling
  - Undergraduate student advising
- Increased the diversity of the faculty as Chair (or member) of numerous faculty searches
- Served on numerous department, COE and COT committees
- Served the university as Chair of UCCC, CUE and CUPR (two years)

**Director: Milliken / NC State Summer Challenge (May 1992 – August 2008)**

- Begun in 1992 in collaboration with SUCCEED, an NSF funded education coalition
- More than \$1.8 MM in funding from Milliken and Company and the NSF
- University – Industry coalition providing summer project improvement experiences for graduate and undergraduate students from NC State University.
- In 2004, Milliken and Company decided to change the program and hire the students and the Director directly. The program continued through the summer of 2008.
- Over 17 years, hundreds of students from NC State University, the University of NC – Charlotte and North Carolina A&T State University participated.

**RESEARCH FUNDING RECORD** with Funding source

***Development of a Portable Pneumatic Splicing System for Heavy Denier Continuous Filament Yarns,*** (w/ A. Seyam & T. Ghosh), All-American Hose, LLC, \$49,000, 7/2014 – 12/2014

***Laboratory Pad Applications,*** (w/ J. Willoughby), Nike Inc., \$10,000 1/2014 – 6/2014.

***Innovation Platform for Material Sustainability in Textile Structures,*** (w/ D. Hinks, S. Khan, and M. McCord), Nike Inc., \$1,201,327, 8/2013 – 7/2016.

***Magnolia / NCSU Summer Challenge 2003: Process Improvement at Magnolia Finishing Location,*** Milliken and Company, \$144,195, 5/03 – 4/04.

***Magnolia / NCSU Summer Challenge 2002: Color Control Center, Mercerization, Finishing and Wet Process Control,*** Milliken and Company, \$129,269, 5/02 – 4/03.

***Magnolia / NCSU Summer Challenge 2001: Pre-dryer Control, A-Frame Standardization, and Wet Processing Control,*** Milliken and Company, \$133,876, 5/01 – 4/02.

***Air-jet Re-engineering,*** (w/ Tim Clapp, Roy Johnson), Petree and Stoudt, \$10,000, 12/00 – 6/01.

***Magnolia Energy Cost Reduction, Shade Variability Reduction, and Information Processing,*** Milliken and Company, \$134,510, 5/00-4/01.

***Colorant Yield at Cypress Chemical Plant,*** Milliken and Company, Cypress Chemical Plant, \$16,450, 5/99 – 4/00.

***Apex Change-over Time Reduction,*** Milliken and Company, Magnolia Finishing Location, \$124,812, 5/99 – 4/00.

***Thermosol Change-over Time Reduction,*** Milliken and Company, Magnolia Finishing Location, \$130,500, 5/98 – 4/99.

***Dye-range Change-over Time Reduction,*** Milliken and Company, Magnolia Finishing Location, \$119,011, 5/97 – 4/98.

***Spun Yarn Development,*** (w/ Tim Clapp), UNIFI Inc., \$500,000, 1/95 - 1/97. 5 patents awarded

***Thermosol Cost Reduction,*** Milliken and Company, Magnolia Finishing Location, \$138,608, 5/96 - 4/97.

***Waste Reclamation,*** Milliken and Company, Magnolia Finishing Location, \$150,000, 5/95 - 4/96.

***QIP for the Magnolia Finishing Location of Milliken and Company,*** Magnolia Finishing Location, \$150,000, 5/94 - 4/95.

***Fingerprinting and Backward Quality Projection in Textile Products,*** (with M. Suh and W. Oxenham), National Textile Center, \$230,000, 3/94 - 3/96.

***QIP with Milliken and Company,*** (with A. Chen, T. Brown and T. Johnson), Milliken Research Corporation, \$203,318, 1/93 -12/93.

***QIP with Milliken and Company***, (with A. Chen, T. Brown and T. Johnson), NSF through (SUCCEED), \$209,225, 1/93 - 12/93. Paper: *ASEE*.

***QIP for the Magnolia Finishing Plant I of Milliken & Company***, (with J. Trevino and A. Chen), Milliken Research Corporation, \$60,000, 6/92-8/92. Papers: *4th Annual Total Quality Symposium*

***Spinframe Motor Performance Testing Project***, North Carolina Alternative Energy Corporation, \$29,575, 5/92-12/93.

***CIM in the Fiber, Textile and Apparel Industrial Complex***, (with P. Grady and et.al.), National Textile Center, \$476,644, 3/92-3/94. Papers: *IEEE, ISA*.

***Maximization of Quality, Productivity and Profitability for US Cotton Spinning Industries under CIM, HVI, and On-Line Process Control***, (with M. Suh and W. Oxenham), National Textile Center, \$299,219, 3/92-3/94.

***Carding of Nonwoven Webs***, Nonwovens Cooperative Research Center, \$53,000, 1/92 - 4/94. Refereed papers: *Textile Research J* (3)

***Design, Fabrication and Testing of a Mechanical Stylus Surface Analyzer***, (with R. Barker and I. Shalev), James River Corporation, \$154,974, 9/91-6/93. Refereed papers: 3, *Textile Research J* and *TAPPI*.

***Yarn Hairiness and the Process of Winding***, State Appropriated, \$48,700, 1/91-12/92. Papers: *Textile Research J*

***Controlling Sliver Evenness Through Monitoring at the Drawframe***, State Appropriated, \$800, 8/90-6/91. Refereed papers: *J Textile Institute*

***Fiber Assembly in Friction Spinning***. (with P.R. Lord), State Appropriated, \$3555, 8/89-6/91. Refereed papers: 4, *J Textile Institute and Textile Research J*

## **PATENTS**

1. U.S. Patent No. 12,018,414: **“Warp Knit Fabric for Textile and Medical Applications and Methods for Manufacturing the Same”**, (w/ H. Levinson, JB Davis & D Ward), June 25, 2024
2. US Patent # 11,001,948: **“Warp Knit Fabric for Textile and Medical Applications and Methods for Manufacturing the Same”**, (w/ H. Levinson, JB Davis & B Ward), May 11, 2021
3. US Patent # 10,602,791: **“Multi-layered Protective Covering and Uses Thereof”**, (w/ Jur, Gorga, et al), 2020
4. U.S. Patent No. 8,261,415: **“An Apparatus for Cotton Ginning, Processes and Methods Associated Therewith”**, (w/Alex Poole and Wesley Burgess, former UG students), 2012
5. U.S. Patent No. 8,120,769: **“Method and System for Fiber Properties Measurement”**, (w/ M. Tompkins, former student), 2012
6. China Patent # ZL200680044482.4: **“An Apparatus for Cotton Ginning, Processes and Methods Associated Therewith”**, (w/ D. Poole and W. Burgess, former UG students), 2011
7. U.S. Patent No. 6,882,423: **“Apparatus and Method for Precision Testing of Fiber Length Using Electrostatic Collection and Control of Fibers”**, (w/ Stroupe, Byrd and Brenzovich, UG students), 2005
8. U.S. Patent No. 5,774,942: **“Feedforward and Feedback Autoleveling System for Automated Textile Drafting System”**, (w/ T. Clapp, C. Farrington and S. Peykamian), 1998
9. U.S. Patent No. 5,796,220: **“Synchronous drive system for automated textile drafting system”**, (w/ T. Clapp, C. Farrington and D. Bowen), 1998
10. U.S. Patent No. 5,774,943: **“Tongue and Groove Drafting Roller Autoleveling System for Automated Textile Drafting System”**, (w/ T. Clapp, C. Farrington and D. Bowen), 1998
11. U.S. Patent No. 5,761,772: **“Securing and Pressuring System for Drafting Rollers for Automated Textile Drafting System”**, (w/ T. Clapp, C. Farrington, D. Bowen, R. Saunders and M. Thomas), 1998
12. U.S. Pat. No. 5,774,940: **“Draftless Sliver Coiler Packaging System for Automated Textile Drafting System”**, (w/ T. Clapp, C. Farrington and D. Bowen), 1998

## **LEADERSHIP ACTIVITIES RELATED TO TEACHING AND LEARNING:**

Dr. Rust created several courses at NC State including TE 105, TE 501, and several others that were offered as special topics classes but never formalized. TE 105 came about as a direct result of his efforts in assessment. As TE Program Director, he led curriculum restructuring that included working with other faculty to develop new courses. After finding assessment data suggesting the TE curriculum needed additional experiences in engineering ethics, acceptance of other cultures and appreciation of diversity, he added in-class and out-of-class assignments relating to multi-cultural experiences and engineering ethics in senior design (TE 402).

As a participant in SUCCEED (an NSF funded initiative in Engr. Ed.), Dr. Rust (with other faculty from NCSU, Duke, NCA&T, and UNCC) developed a partnership program with several industrial companies. Milliken was the most significant, providing about \$2 million in grants to NC State (\$1.5 million for Rust) for team-based summer internship activities as well as in-class educational activities. To share experiences and the NCSU / Milliken model, he **presented 8 times** between **7/1993 and 2/1999** on industry / university partnerships and team-based multi-disciplinary inter-institutional summer internships in the following venues: 4th Annual Total Quality Symposium, American Soc. for Quality Control, Frontiers in Education Conf., ASEE Total Quality Education Conf., SUCCEED Conf.'s and other universities.

As a result of those partnerships with industry, he was in a unique situation to obtain and utilize information relevant to assessment from industry employers and recent graduates that he had helped place in careers. In 1999, Dr. Rust began a restructuring of the Textile Engineering curriculum through assessment – based review of the program.

The initial efforts in implementing assessment in the Textile Engineering (TE) program began in 1998 and are listed below.

1. May 1, 1998: TE faculty interview recent graduates and employers of our graduates and request information about the perception of the program, as well as suggestions for improvement.
2. Fall 1998: Rust leads TE faculty to restructure the curriculum to meet perceived needs as determined from the May 1998 surveys.
3. May 1999: A new TE curriculum is approved by the University (Provost's Office).
4. February 4, 2000: Rust leads the first assessment meeting of Textile Engineering faculty (7 of 11) to develop educational objectives, determine key constituencies, and identify individuals who will represent the key constituencies.
5. February 7 – 18, 2000: Rust collected additional data from faculty with regard to educational objectives, key constituency groups and representatives of that group. Individuals were identified to make contact with key constituency representatives.
6. February 18, 2000: Rust presents educational objectives to the College of Engineering EC 2000 team for input before contacting constituency representatives.
7. February 21 – April 10, 2000: TE faculty collect responses from constituency groups with regard to educational objectives (*survey*), discussed the suggestions, and made changes where deemed appropriate.

Dr. Rust led this team effort to begin implementing assessment of undergraduate education with documentation in TE. Many people contributed in many ways to the successful assessment efforts that resulted in a very glowing review during the ABET accreditation visit in the fall of 2004. While leading the TE program in assessment, Dr. Rust also was key in leading NC State in assessment of undergraduate education, the first research intensive university to do so.

With regard to assessment of undergraduate education within the NC State community, Dr. Rust presented, conducted workshops, and participated in round tables with university faculty and administrators regularly. During the period from August 2000 to December 2002, Dr. Rust performed the following university service toward implementing assessment.

Pres'n on NCSU Assessment activities to President Broad's cabinet (the Off. of the Pres.)	2000
Pres'n on NCSU Assessment activities to the Univ. assessment roundtable	2000
Pres'n on NCSU Assessment activities (regarding CUPR) to the COE ABET team	2000
Undergraduate Academic Program Review, A presentation to the CUE,	9/7/01
Undergraduate Academic Program Review, A presentation to LEADS (Dept. Heads),	10/2/01
Undergraduate Academic Program Review, A workshop for the NC State COE,	10/9/01
Undergraduate Academic Pro. Rev., A presentation to the NC State Faculty Senate,	10/30/01
Undergraduate Academic Program Review, The Fall CUPR workshop,	11/09/01
Undergraduate Academic Program Review, A workshop for the NC State COM,	12/6/01
Undergraduate Academic Program Review, A "Last Chance" workshop,	1/18/02
CUPR 2002, Where are we? Where do we go?, CUPR's "Peggy Maki" Retreat,	5/16/02

All of these interactions with university faculty and administrators were in addition to his being named the first chair of the ad hoc Committee on Undergraduate Academic Program Review (CUPR). Dr. Rust was the Chair of CUPR for the first two years (2000 – 2002). Dr. Rust also served the University Committee on Courses and Curricula (UCCC) for 6 years and chaired the committee in 2000-2001. Dr. Rust has also served on the board of the Campus Writing and Speaking Program (CWSP) from 2003 to 2008.

As NC State led the nation in undergraduate assessment for Research Intensive Universities (Research I universities), Dr. Rust found many opportunities to speak abroad, nationally (5) and internationally (4) on the assessment efforts at NC State. During the period of 7/2001 to 11/2008, Dr. Rust co-presented many times at conferences engaged with improving teaching and learning. For his efforts in leading assessment – based undergraduate academic program review, Dr. Rust received the inaugural Ephraim L. Schecter Award for Excellence in Undergraduate Assessment at NC State University.

## **CURRICULUM DEVELOPMENT**

As Textile Engineering Program Director, Dr. Rust has led a Program review and restructuring effort with the goal of increasing enrollment in Textile Engineering through Program diversity and flexibility. In the spirit of ABET 2000, it was our goal that the new Textile Engineering Program embrace multi-disciplinary design efforts and offer students the opportunity to follow unique and diverse curricula while building enrollment.

Textile Engineering enrollment had always been low by design and demand for textile engineers had always exceeded supply. This restructuring effort centered on curricular diversity, flexibility and providing students with the tools requisite for the fields in which they will work, as determined through employer and alumni surveys. The Program Curricular restructuring was completed in 1999 with four new Concentrations: Machine Design, Information System Design, Textile Product Engineering, and Chemical Processing. Subsequently, building enrollment was accomplished: 1. Using a new optional freshman TE class (TE 105) to give early interaction between students and faculty, 2. more interaction with the COE freshmen and 3. greater involvement with College of Textiles high school recruiting efforts.

## **PUBLICATIONS**

### **Peer-Reviewed: Research**

1. Yao, Tong, B.D. Choules, J.P. Rust and M.W. King, "The Development of an In Vitro Test Method for Predicting the Abrasion Resistance of Textile and Metal Components of Endovascular Stent Grafts", *Journal of Biomedical Materials Research B: Applied Biomaterials*, 00 Month 2013, (wileyonlinelibrary.com) DOI: 10.1002/jbm.b.33026.
2. Lee, S., J.P. Rust, H. Hamouda, Y.R. Kim and R.H. Borden, "Fatigue Cracking Resistance of Fiber Reinforced Asphalt Concrete", *Textile Research J*, 75(2), 123-128 (2005)
3. Ikiz, Y., J. Rust, J. Trussel and W. Jasper, "Fiber Length Measurement by Image Processing", *Textile Research J*, 71(10), 905-910 (2001)
4. Rust, J., Y. Ikiz, J. Trussel and W. Jasper, "Dealing with Fiber Crossovers in Fiber Length Measurement by Image Processing", *Transactions of the 2000 EFS Conference*, Raleigh, NC (Nov. 2-3, 2000)
5. Guldemet, B. and J.P. Rust, "The Effects of Feed Sliver Moisture Content on Rotor Spinning Performance and Rotor-Spun Yarn Properties", *Textile Research J*, 71(3), 271-274 (2001)
6. Peykamian, S. and J.P. Rust, "Fabric Softness Classification Using Linear and Non Linear Models", *Textile Research J*, 201-204, 70,3(March, 2000)
7. Peykamian, S. and J.P. Rust, "Yarn Quality Indexing Using a Mechanical Stylus", *Textile Research J*, (November, 1998)
8. Lord, P.R., J.P. Rust and F. Fenercioglu, "Balloon Irregularities In Ring Spinning", *J Textile Institute* 89, p.498(1998)
9. Peykamian, and Rust, "Yarn Surface Profilometry Using a Mechanical Stylus", 1996 ASME International Mechanical Engineering Congress and Exposition, Textile Engineering Division, *Conf Proc*, Atlanta, GA (November 19, 1996)
10. Fryer, L.F., and J.P. Rust, "Effects of Cotton Fiber Blending and Processing on HVI Measurements - Part II", *Textile Research J* (1996)
11. Fryer, L.F., J.P. Rust and P.R. Lord, "Effects of Cotton Fiber Blending and Processing on HVI Measurements - Part I", *Textile Research J* (1996)
12. Peykamian, S. and J.P. Rust, "Yarn Surface Using a Mechanical Stylus", *ASME/96 Technical Conference - The Winter Mtg.* (November 1996)
13. Clark, M.J. and J.P. Rust, "Real-time Control of Carding through Fiber Load Measurement", *ASME Textile Engineering Division Conference*, Atlanta (October 9&10, 1995)
14. Fryer, L.F. and J.P. Rust, "High Volume Instrumentation Testing", *ASME Textile Engineering Division Conference*, Atlanta (October 9&10, 1995)
15. Gutierrez H.M. and J.P. Rust, "System Identification for a Photodiode-Based Monitoring System", *J of the ISA*, 34 (1995)
16. Peykamian, S. and J.P. Rust, "Yarn Surface Analysis Using MSSA", *ISA; International Conference and Exhibition*, Toronto (May 26, 1995)

17. Gutierrez, H.M. and J.P. Rust, "System Identification for a Photodiode-Based Monitoring System", *ISA; International Conference and Exhibition, Conference Proceedings*, Toronto (May 26, 1995)
18. Gutierrez, H.M. and Rust, "Modeling and Simulation for Control in Carding", *Textile Research J* (1995)
19. Rust, J.P. and H.M. Gutierrez, "Mathematical Modeling and Simulation for Roller-top Carding", *Textile Research J*, 64,573 (October, 1994)
20. Grady, P.L., L.F. Fryer, G.L. Hodge and J.P. Rust, "Computer-Integrated Management of Yarn Manufacturing", *IEEE Transactions on Industry Applications* (October, 1993)
21. Rust, J.P., T.L. Keadle, I. Shalev and R.L. Barker, "Evaluation of Surface Softness Parameters of Paper Products by Mechanical Stylus Scanning", *TAPPI Conference Proceedings*, (February, 1994)
22. Allen, D.B., J.P. Rust, I. Shalev and R.L. Barker, "Mechanical Stylus Surface Analysis Instrumentation for use on Soft Tissue Paper Products", *TAPPI Conference Proceedings*, (February, 1994)
23. Rust, J.P. and E. Koella IV, "Carding Fiber Load Measurement", *Textile Research J*, 64, 364 (1994)
24. Rust, J.P., T.L. Keadle, D.B. Allen, I. Shalev and R.L. Barker, "Tissue Softness Evaluation by Mechanical Stylus Scanning", *Textile Research J*, 64(3), 163-168 (1994)
25. Grady, P.L., L.F. Fryer, J.P. Rust and G.L. Hodge, "CIM Systems for Yarn Manufacturing", *Proceedings of The Instrument Society of America (ISA) National Conference* (September, 1993)
26. Grady, P.L., L.F. Fryer, G.L. Hodge and J.P. Rust, "Computer-Integrated Management of Yarn Manufacturing", *Proceedings of The Institute of Electrical and Electronics Engineers (IEEE) 1993 Annual Textile, Fiber and Film Industry Technical Conference* (May, 1993)
27. Rust, J.P. and S. Peykamian, "Yarn Hairiness and the Process of Winding", *Textile Research J*, 62, 11, 685-689 (1992)
28. Lord, P.R., M. Govindaraj, J.R. Rust and S. Peykamian, "On-Line Control of the Ratch Setting on a Drawframe", *J Textile Institute*, 83, 3, 399 (1992)
29. Lord, P.R. and J.P. Rust, "Fiber Assembly in Friction Spinning", *J Textile Institute*, 82, 4, 465-478 (1991)
30. Rust, J.P. and P.R. Lord, "Variations in Yarn Properties Caused by a Series of Design Changes in a Friction Spinning Machine", *Textile Research J*, 61, 11, 645-655 (1991)
31. Lord, P.R. and J.P. Rust, "Twist Dist. in Open-End Friction Spinning", *J Textile Institute*, 81, 2, 211-213(1990)
32. Lord, P.R. and J.P. Rust, "The Surface of the Tail in Open-End Friction Spinning", *J Textile Institute*, 81, 1, 100-103 (1990)
33. Lord, P.R., J.P. Rust and M. Govindaraj, "Fluid Vortices In Friction Spinning", *J Textile Institute*, Letter to the Editor, 79, 3, 517-519 (1988)
34. Rust, J.P. and H. M. Behery, "Effect of Production Variables on the Properties of Ultrasonically Bonded Nonwovens", *INDA-TEC, The International Nonwovens Technology Conference, Conference Proceedings*, Philadelphia, 120-137 (1986)

## **PUBLICATIONS**

### **Peer-Reviewed Education**

1. Bresciani, M. J., J. H. Griffiths and J. P. Rust, "Assessment at North Carolina State University: Adapting to Change in the Workplace", *J for Research and Practice in Assessment*, 3:1 (January, 2009)
2. Anson, Chris M., Michael Carter, Deanna P. Dannels and Jon Rust. "Mutual Support: CAC Programs and Institutional Improvement in Undergraduate Education", *Language and Learning Across the Disciplines*, 6 25-37 (August, 2003)

3. Brown T., A. Chen, T. Johnson and J. Rust, "Quality Improvement Partnerships", *In Conference Proceedings, Fourth Annual Total Quality Symposium, "Making the Transition to Education "*, Kansas City MO (July 27- 30, 1993)
4. Hands, C.R. and J.P. Rust, "Inter-departmental and Inter-institutional Experiences Associated with Industry/University Partnerships", *ASEE Total Quality Education, IL/IN Sectional Conference Proceedings*, Purdue University (March 16-18, 1995)
5. Rust, J.P., H. Hamouda, E.R. Hewitt, J.W. Shelnut, and T. Johnson, "Qual Impr Partnerships with Industry Using Proc Improvement Teams of Students and Faculty", *J of Engineering Education* (July, 1994)
6. Rust, J.P. and C.J. Allen, "Quality Improvement Partnerships, The Milliken/SUCCEED University Challenge", *ASEE Regular Conference Proceedings*, Baton Rouge (March 24-25, 1994)

## **PUBLICATIONS**

### **Non-Peer-Reviewed; Research**

1. Rust, J.P. and H.E. Behery, "Effect of Production Variables on the Properties of Ultrasonically Bonded Nonwovens", *INDA-TEC, The International Nonwovens Technical Conference, Conference Proceedings*, Philadelphia, 120-137 (1986)
2. Grady, P.L., L.F. Fryer, J.P. Rust and G.L. Hodge, "CIM Systems for Yarn Manufacturing", *The Instrument Society of America National Conference, 1993 Conference, Conference Proceedings*, Chicago, IL September, 19-24, 1993.
3. Allen, D.B. , J.P. Rust, I. Shalev and R. Barker, "Mechanical Stylus Surface Analysis Instrumentation for use on Soft Tissue Paper Products", *TAPPI Conference Proceedings* (February 1994)
4. Rust, J.P., T.L. Keadle, I. Shalev and R.L. Barker, "Evaluation of Surface Softness Parameters of Paper Products Using Mechanical Stylus Scanning", *TAPPI Conference Proceedings* (February 1994)
5. Lord, P.R. and J.P. Rust, "Blending as a Systemic Problem", *1994 Beltwide Cotton Conference Proceedings*, San Diego (January 5-8)
6. Fryer, L.F., J.P. Rust, and P.R. Lord, "Influence of Cotton Variables on Subsequent Process Performance", *1994 Beltwide Cotton Conference Proceedings*, San Diego (January 5-8)
7. Rust, J.P. and S. Peykamian, "Yarn Quality Measurement (New Perspectives)", *1994 Beltwide Cotton Conference Proceedings*, San Diego (January 5-8)
8. Peykamian, S. and J.P. Rust, "Yarn Quality Indexing through MSSA", *ISA Textile Division, Conference Proceedings*, Raleigh, NC (January 10, 1995)
9. Rust, J.P. "Card Fiber Load Measurement and Control", *ISA Textile Division, Conference Proceedings*, Raleigh, NC (January 1995)

## **PRESENTATIONS**

### **Research**

1. Rust, Ikiz, Trussel and Jasper, "Dealing with Fiber Crossovers in Fiber Length Measurement by Image Processing", Presented at the 2000 Engineered Fiber Selection Conference, Raleigh, NC (November 2-3, 2000)
2. Rust "Fiber Preparation Reengineering", Invited lecture at Clemson University's Performance Improvement Forum, Clemson, SC (September 1998)
3. Peykamian and Rust, "Yarn Surface Profilometry Using a Mechanical Stylus", 1996 International Mechanical Engineering Congress and Exposition, Textile Engineering Division, Atlanta (November 19, 1996)
4. Clark and Rust, "Real-time Control of Carding through Fiber Load Measurement", *ASME Textile Engineering Division Conference*, Atlanta (October 9 & 10, 1995)
5. Fryer and Rust, "High Volume Instrumentation Testing", ASME Textile Engineering Division Conference, Atlanta (October 9 & 10, 1995)
6. Peykamian and Rust, "Yarn Surface Analysis Using MSSA", ISA; International Conference and Exhibition, Toronto (May 26, 1995)

7. Gutierrez and Rust, "System Identification for a Photodiode-Based Monitoring System", ISA; International Conference and Exhibition, Toronto (May 26, 1995)
8. Rust, "Carding Fiber Load Measurement and Control", ISA Textile Division, Raleigh, NC (Jan., 1995)
9. Peykamian and Rust, "Yarn Quality Indexing through MSSA", ISA Textile Division, Raleigh, NC (January 10, 1995)
10. Rust and Seyam, "Monitoring, Simulation and Control for Carding", Hercules Inc. (1994)
11. Rust and Peykamian, "Yarn Quality Measurement (New Perspectives)", 1994 Beltwide Cotton Conference, San Diego (January 5-8)
12. Fryer, Rust, and Lord, "Influence of Cotton Variables on Subsequent Process Performance", 1994 Beltwide Cotton Conference, San Diego (January 5-8)
13. Lord and Rust, "Blending as a Systemic Problem", 1994 Beltwide Cotton Conferences, San Diego (January 5-8)
14. Rust, Keadle, Shalev and Barker, "Evaluation of Surface Softness Parameters of Paper Products Using Mechanical Stylus Scanning", TAPPI (February 1994)
15. Allen, Rust, Shalev and Barker, "Mechanical Stylus Surface Analysis Instrumentation for use on Soft Tissue Paper Products", TAPPI (February 1994)
16. Grady, Fryer, Rust and Hodge, "CIM Systems for Yarn Manufacturing", The Instrument Society of America National Conference, 1993 Conference, Chicago (Sept. 19-24, 1993)
17. Grady, Fryer, Hodge, and Rust, "Computer-integrated Management of Yarn Manufacturing", IEEE 1993 Annual Textile, Fiber and Film Industrial Technical Conference, Atlanta (May 5-6, 1993)
18. Govindaraj, Lord and Rust, "Automatic Roller Setting on a Drawframe by Monitoring Sliver at the Drafting Zone", Poster session, Fall 1991 Conference, The Fiber Society (1991)
19. Rust and Behery, "Effect of Production Variables on the Properties of Ultrasonically Bonded Nonwovens", INDA-TEC, The International Nonwovens Technical Conference, Philadelphia, (1986)

## **PRESENTATIONS**

### **Education**

1. Rust, J., "So You Want to Become a Department Head", Provost's New Department Head Orientation workshop, 9/19/2014, Raleigh
2. Rust, J., "Question to Ask Your Department Head", Provost's New Faculty Orientation workshop, 8/6/2012, Raleigh
3. Rust, J., Session Chair at: Eastman Chemical Center of Excellence proposal workshop, 8/6/2013, Raleigh
4. Rust, J., "Getting Started in Administration", Advance workshop: Leadership for a Diverse Campus, 1/23/2013, Raleigh
5. Rust, J., "Educating for Success: Employer Perspective on Student Outcomes," Moderator, 2006 NC State Undergraduate Assessment Symposium, NC State University, Raleigh, NC, April 7, 2006
6. Rust, J. and J. Griffiths, "Using Grading Rubrics to Facilitate the Assessment Process and Development of an Appreciation for Diversity while Improving Learning", 6th Annual Assessment Conference at Texas A&M, College Station, TX, February 23 - 25, 2006
7. Rust, J., M. Bresciani and C. Goode-Vick, "Engaging in Genuine Assessment: A Balancing Act Between Administrators and Faculty", 2005 Annual Meeting of the Southern Association of Colleges and Schools - the Commission on Colleges, Atlanta Dec. 3-6, 2005
8. Rust, J. and M. McCord, "Assessment of Undergraduate Education at NC State University: The Textile Engineering Program," 2<sup>nd</sup> Annual National Undergraduate Assessment Symposium, North Carolina State University, Raleigh, NC, April 16, 2004
9. Rust, J. and M. McCord, "Using Rubrics in Courses to assist in Grading and Assessing Program Outcomes," 2<sup>nd</sup> Annual National Undergraduate Assessment Symposium, NC State University, Raleigh, NC, April 16, 2004

10. Rust, J., P. Abbott, T. Banta, M. Bresciani, and P. du Toit, "In Search of the Best Processes for Identifying Quality Education", Fifteenth International Conference on Assessing Quality in Higher Education", Capetown, S. Africa, July 14-17, 2003
11. Rust, J., M. Bresciani and J. Griffiths, "Assessing the Impact of Our Assessment Process", Fifteenth International Conference on Assessing Quality in Higher Education", Capetown, S. Africa, July 14 – 17, 2003
12. Rust, J., S. Blanchard, C. Goode-Vick and J. Tector, "Departmental Perspectives of Implementing Assessment-Based Undergraduate Academic Program Review," Inaugural National Undergraduate Assessment Symposium, North Carolina State University, Raleigh, NC, April 8, 2003
13. Rust, J. and M. McCord, "Using Rubrics in Courses to assist in Grading and Assessing Program Outcomes," Inaugural National Undergraduate Assessment Symposium, NC State University, Raleigh, NC, April 8, 2003
14. Rust, J., C. Anson, M. Bresciani and D. Dannels, "Permanent Change: Case Studies of Continuous Program Review and Assessment, Fourteenth International Conference on Assessing Quality in Higher Education", Vienna, Austria, June 2002
15. Rust, J., M. Carter, C. Anson and D. Dannels, "Mutual Support: Communication-Across-the-Curriculum Programs and Institutional Improvement in Undergraduate Education," Sixth National Writing Across the Curriculum Conference, Rice University, Houston, TX, March 7, 2002
16. Rust, J., J. Allen and M. Bresciani, "Transformations at NC State University: Assessment, Program Development, and Continuous Improvements." Thirteenth International Conference on Assessing Quality in Higher Education, Glasgow, Scotland, July 26, 2001
17. Rust, J., "CUPR 2002: Where are we? Where do we go?", CUPR's Peggy Maki Retreat, NC State University, Raleigh, NC, May 16, 2002
18. Rust, J., Undergraduate Academic Program Review, A "Last Chance" workshop, NC State University, Raleigh, NC, January 18, 2002
19. Rust, J., Undergraduate Academic Program Review, A workshop for the NC State College of Management, NC State University, Raleigh, NC, December 6, 2001
20. Rust, J., Undergraduate Academic Program Review, The Fall CUPR workshop, NC State University, Raleigh, NC, November 9, 2001
21. Rust, J., Undergraduate Academic Program Review, A presentation to the NC State Faculty Senate, NC State University, Raleigh, NC, October 30, 2001
22. Rust, J., Undergraduate Academic Program Review, A workshop for the NC State College of Engineering, NC State University, Raleigh, NC, October 9, 2001
23. Rust, J., Undergraduate Academic Program Review, A presentation to LEADS, NC State University, Raleigh, NC, October 2, 2001
24. Rust, J., Undergraduate Academic Program Review, A presentation to the Council on Undergraduate Education, NC State University, Raleigh, NC, September 7, 2001
25. Rust, J., "Education, Research and Extension in Textile Engineering", Invited lecture at Clemson University, Clemson, SC (October 10, 1997)
26. Hands, C. and J. Rust, "Inter-departmental and Inter-institutional Experiences Associated with Industry/University Partnerships", At: ASEE Total Quality Education, IL/IN Sectional Conference Proceedings, Purdue (March 16-18, 1995)
27. Rust, J., "Educational Benefits Provided by SUCCEED's Multi-disciplinary Total Quality Systems Course", Ist Annual SUCCEED Symposium, Raleigh, NC(January 31, 1995)
28. Rust, K. and T. Shelnutt, "Quality Improvement Partnerships", At: Frontiers in Education Conference, Silicon Valley Edition (November 2-7, 1994)
29. Rust, J., "Peer-based Team Internships", North Carolina Textile Foundation, NC State University, Raleigh, NC, (October 19, 1994)
30. Rust, J., "Industry/University Partnerships: Team-based Multi-disciplinary Inter-institutional Summer Internships", Invited lecture at SUCCEED Conference in Clemson, SC (February 12, 1999)

31. Rust, J., “Quality Improvement Partnerships, The Milliken/SUCCEED University Challenge”, American Society for Quality Control: Raleigh Chapter, (August 23, 1994)
32. Brown, Chen, Johnson and Rust, "Quality Improvement Partnerships", Fourth Annual Total Quality Symposium, "Making the Transition to Education”, Kansas City MO, (July 27-30, 1993)

## COMMITTEE SERVICE AND LEADERSHIP

### North Carolina State University

2017 – 2019	Administrative Board of the Graduate School	Member
2017 – 2019	Graduate Operations Council	Member
2017 – 2019	Associate Deans of Academic Affairs	Member
2013 - 2016	Writing Competency ad-hoc Committee	Member
2013	Graduate School Dean Nomination Committee	Member
2012 - 2013	Strategic Translational Leadership Program	Member
2012 - 2014	Eastman Chem. CoE Research Steering Team	Member
2012	Leading Change workshop (Provost’s Office)	Member
2011 - 2012	Task Force on Review of Academic Programs	Member
2011 - 2012	GEP Competency Task Force	Member
2011	MAE Review of Graduate Programs	Member
2010	ADVANCE Climate Survey and Workshop	Member
2008 - 2014	Department Heads Steering Committee	Member
2008 - 2009	Interim Assoc. Dean for GEP Implementation	
2006 - 2009	Intellectual Property Committee	Member
2002 - 2008	Campus Writing and Speaking	Member
2007 - 2008	Council on Undergraduate Education (CUE)	Chair
2007	Provost’s Working Group on Faculty Development	Member
2006 - 2007	Council on Undergraduate Education	Member
2006	Food Science Ext. UG Academic Rev. Team	Member
2004	Off of Provost Search: Assistant Director for Assessment	Chair
2002	Council on Undergraduate Education	Member
2002 - 2005	UG Academic Program Review	Member
2000 - 2002	UG Academic Program Review (CUPR)	Chair
2000 - 2001	Courses and Curricula (UCCC)	Chair
1998 - 2004	Courses and Curricula	Member
1996 - 1998	Honors and Awards	Member
1992 - 1995	Outreach and Extension	Member

### Wilson College of Textiles

2018 – 2019	Associate Dean for Academic programs	
2017 - 2018	Interim Associate Dean for Academic programs	
2014 - 2019	Interim Director of Zeis Textiles Extension	
2008 - 2016	Dean’s Core Council	Member
2008 - 2016	Dean’s Full Council	Member
2001 - 2012	Centennial Scholars Reading and Interviewing	Member
2010 - 2011	Innovation Design Center	Member
2010 - 2011	NC Textile Foundation Director Search	Member
2006 - 2007	TE/TT/PCC Task Force	Member
2006 - 2007	Textiles Online Programs Advisory Comm.	Member
2005 - 2007	Courses and Curricula	Member
2002 - 2004	Courses and Curricula	Chair

2002 - 2003	Academic Task Force	Chair
2000 - 2002	Courses and Curricula	Member
1996 - 1998	Honors and Awards	Co - Chair

### **College of Engineering**

2022	Textile Engineering ABET Coordinator	
2008 - 2014	Dean's and Department Head's	Member
2008 - 2014	Dean's Executive Committee	Member
1998 - 2009	Courses and Curricula	Member
1998 - 2009	Coordinators of Advising	Member
1998 - 2007	Scholarship	Member
1999 - 2000	ABET	Member
1998 - 2000	Graduate Studies	Member
1991 - 2000	Open-House and Recruiting	Member
1990 - 1991	Television and Video Advisory	Member

### **Department of Textile Engineering, Chemistry and Science**

2022	Textile Engineering ABET Coordinator	
2008 - 2014	Department Head	
2000 - 2008	Associate Head: Undergraduate Academic Programs	
1998 - 2000	Textile Engineering Program Director	
2006 - 2007	Peer Review of Teaching	Chair
2006 - 2007	Post Tenure Review	Chair
2005 - 2006	Textile Engineering Faculty Search	Co - Chair
2004 - 2005	Courses and Curricula	Member
2002 - 2003	Textile Chemistry Curriculum Revision Task Force	Chair
2001 - 2003	Courses and Curricula	Member
2003 - 2004	Textile Engineering Faculty Search	Member
2002 - 2003	Textile Engineering Faculty Search	Member
1999 - 2008	Faculty mentor (Drs. Gorga and Joines)	
1999 - 2000	Comprehensive Review of Tenured Faculty	Member
1999 - 2000	Textile Engr. Faculty Search	Chair
1998 - 2000	Textile Engineering Program Director	Director
1998 - 1999	Graduate Studies	Member
1995 - 1996	Textile Material Science Faculty Search	Member
1993 - 1994	Graduate Studies	Member
1991 - 1992	Textile Engineering Faculty Search	Member
1990 - 1997	Courses and Curricula	Member
1990 - 1991	Safety	Member

## PROFESSIONAL CONSULTING

Quinn Emanuel Urquhart & Sullivan, LLP, Los Angeles, CA	2024 - 2025
Wood Herron & Evans LLP, Cincinnati, OH	2024 - 2025
Toll Firm, Goodlettsville, TN	2023 - 2024
MacCord and Mason PLLC, Greensboro, NC	2020 - 2022
Arent Fox LLP, New York	2019 - 2022
Clapp, Moroney, Vucinich, Beeman, Scheley, Pleasanton, CA	2020 - 2022
Denlea and Carton LLP, New York	2021
RatnerPrestia, Philadelphia	2019 - 2020
Morgan Lewis and Bockius LLP, Miami	2019
Jones Day, Chicago	2018 - 2019
Bunker and Ray, Philadelphia	2018
Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Washington DC	2015 - 2016
Duane Morris LLP, Philadelphia	2016
Merlin Law Group, Tampa FL	2011 - 2016
Smith Gambrel and Russell, LLP, Jacksonville, FL	2014 - 2015
Law Office of James Toomey, NY, NY	2014
Miranda, Sambursky, Slone, Sklarin, Verveniotis LLP, Mineola, NY	2014
Adams and Reese LLP, Jacksonville, FL	2013 - 2014
Ray Lego and Associates, Greenwood Village, CO	2013 - 2014
Personal Safety Products LLC, Englewood, CO	2013 - 2014
Woodard, Emhardt, Moriarty, McNett and Henry LLP, Indianapolis	2013 - 2014
Cameron LLP, Washington, DC	2012 - 2013
Peterson Bernard, West Palm Beach, FL	2012 - 2013
Bob Barker Company, Fuquay-Varina, NC	2012
Lewis and Roca, LLP, Minden, NV	2011
Brown and James Law Firm, Kansas City, MO	2011
Ray Lego and Associates, Salt Lake City, UT	2011
LongFiber Inc., Portland, OR	2009
Lewis and Roca, LLP Minden, NV	2009
Custom Technical Solutions, Gastonia, NC	2009
Crumley and Associates, Greensboro, NC	2008
Cohen, Milstein, Hausfeld & Toll PLLC, Philadelphia, PA	2005 - 2008
Milliken and Company, Spartanburg, SC	2005 - 2008
IT3, Raleigh, NC	2007
Carolina Technical Solutions Inc., Bethania, NC	2004
Blackwell, Sanders, Peper and Martin, St. Louis, MO	2002 - 2003
Milliken and Company, Judson Plant, Greenville, SC	2001 - 2003
Milliken and Company, Monarch Plant, Union, SC	2001 - 2003
Milliken and Company, Gilliland Plant, Laurens, SC	2001 - 2003
Hoge, Fenton, Jones and Appel, San Jose, CA	2001
Bob Barker Co., Fuquay - Varina, NC	2001
Akin, Hunt, & Fearon P.C., Fuquay - Varina, NC	2001
Akins, Gump, Strauss, Hauer & Feld, LLP, Philadelphia, PA	2000 - 2001
Williams and Connolly, Washington, DC	1999 - 2001
National Textiles Inc., Mountain City, TN and Forest City, NC	1999
Milliken and Company, Enterprise Plant, Marietta, SC	1998
Swift Denim, P.O. Box 759, Erwin, NC	1997
Sara Lee Knit Products, Winston-Salem, NC	1997
Burlington Industries Inc., 3330 W. Friendly Dr., Greensboro, NC	1997

Burlington Industries Inc., 3330 W. Friendly Dr., Greensboro, NC	1996
Burlington Fabrics Inc., 3330 W. Friendly Dr., Greensboro, NC	1996
Milliken and Company, Dewey Plant, Inman, SC	1995
Gibbs International, Inc., Spartanburg, SC	1995
Kimberly Clark Corp., Neenah, WI	1995
Richards, Medlock and Andrews, 4500 Renaissance Tower, Dallas	1995
Willian, Brinks, Hofer, Gilson & Lione: NBC Tower, Suite 3600, Chicago	1994
Petree Stockton, Inc., 4100 Lake Boone Trail, Raleigh	1994
Milliken and Company, Cypress Plant, Blacksburg, SC	1994
Milliken and Company, Cypress Plant, Blacksburg, SC	1993
Murata Inc., Charlotte, NC	1992