UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT TRIAL AND APPEAL BOARD

Camel Manufacturing Company, LLC

Petitioner,

v.

DLX Enterprises, LLC,

Patent Owner.

Case No. PGR2024- 00033
U.S. Patent No. 11,732,496

EXHIBIT 1023

RESUME OF SABIT ADANUR, Ph.D.

TEKLICON

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San Jose, CA 95113

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SABIT ADANUR, Ph.D.

1. EDUCATION

June 1989	Ph.D. in Fiber and Polymer Science North Carolina State University, Raleigh, North Carolina.
Dec. 1985	M.S. in Textile Engineering and Science North Carolina State University, Raleigh, North Carolina.
July 1982	B.S. in Mechanical Engineering Istanbul Technical University, Istanbul, Turkey.

PROFESSIONAL EXPERIENCE

Aug. '15 – Present	Professor Auburn University, Mechanical Engineering Department, Auburn, Alabama.
Oct. '00 – Aug. '15	Professor Auburn University, Polymer and Fiber Engineering Department, Auburn, Alabama.
Oct. '96 – Sept. '00	Associate Professor Auburn University, Textile Engineering Department, Auburn, Alabama.
Sep. '92 - Sep. '96	Assistant Professor Auburn University, Textile Engineering Department, Auburn, Alabama.
Nov. '89-Aug '92	Product and Process Development Manager Asten Forming Fabrics, Inc., Appleton, Wisconsin.
July '89-Oct. '89	Process Development Engineer Asten Forming Fabrics, Inc., Appleton, Wisconsin.
Aug. '83-Jun. '89	Research/Teaching Assistant North Carolina State University, Raleigh, North Carolina.

Professional Development Activities

- Attended the "WileyPLUS for Your Dynamics Course", on 17 March 2022 for continuous improvement.

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- Personal Protective Equipment (PPE) by IFAI (Industrial Fabrics Association International, Roseville, MN) for Covid 19, attended 7 webinars, May - June 2020.
- Summer Meta-Assessment Institute, July 10-14, 2017, Auburn University.
- Attended the webinar by Southern Alliance for Advanced Vehicle Manufacturing (SAAV), June 11, 2014.
- Attended the Biggio Seminar "Engaging Students in Active Learning", 14 February 2013, Biggio Center, Auburn University.
- Attended the tutorial "Canvas Orientation", Sept. 20, 2011, Auburn University.
- Attended the workshop "Introduction to Performance Tasks", by [Cla]ssroom Academy, 15-16 August 2011, Auburn, AL.
- Completed the Alabama Ethics Law Training, March 31, 2011.

2. ASSIGNED DUTIES FOR THE PAST THREE YEARS (average)

Semester	Teaching (%)	Research (%)	Extension/Service (%)
Summers	10	90	0
Academic	60	30	10

3. HONORS AND AWARDS

- Auburn Author Award, 2018.
- Outstanding Faculty Award, Department of Polymer and Fiber Engineering, 2008-2009
- Outstanding Faculty Award, Department of Polymer and Fiber Engineering, 2007-2008
- Outstanding Teacher Award, Department of Textile Engineering, 2002-2003.
- Outstanding Teacher Award, Department of Textile Engineering, 2001-2002.
- Auburn Alumni Professor Award (1999 – 2004).
- Outstanding Teacher Award, Department of Textile Engineering, 2000-2001.
- AU College of Engineering Birdsong Merit Teaching Award 2000
- Outstanding Teacher Award, Department of Textile Engineering, 1999-2000.
- Auburn Alumni Engineering Council Senior Faculty Research Award, 1999.
- 1995 NSF Faculty Early Career Development (CAREER) Award, National Science Foundation, $ 210,000.00, duration: 4 years (Sept. 1, 96-Aug. 31, 2000).
- 1991 George Goldfinger Award. "This award is presented to the graduate of the North Carolina State University, College of Textiles, Fiber and Polymer Science Program who was judged to have submitted the most outstanding Ph.D. thesis over the past two years".

4. SCHOLARLY CONTRIBUTIONS

4. A. TEACHING

4.A.1 Courses Taught for the Past Three Years

Course	*Title*	*Credit*	*Enrollment*
Fall 2022			
MECH 2140	Kinematics and Dynamics	3	45

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MECH 5970/6970/6970D01 Engineered Flexible Structures	3	81

Spring 2022

MECH 2140 Kinematics and Dynamics	3	50
MECH 5970/6970-PFEN 6200 Manufacturing of Polymeric Structures	4 (3+1)	72

Fall 2021

MECH 2140 Kinematics and Dynamics	3	27
MECH 5970/6970/6970D01 Engineered Flexible Structures	3	72

Spring 2021

MECH 2140 Kinematics and Dynamics	3	71
MECH 5970/6970-PFEN 6200 Manufacturing of Polymeric Structures	4 (3+1)	53

Fall 2020

MECH 2120 Kinematics and Dynamics	3	55
MECH 5970/6970 Engineered Flexible Structures	3	51

Summer 2020

MECH 2120 Kinematics and Dynamics of Machinery	4 (3+1)	24

Spring 2020

MECH 2120 Kinematics and Dynamics of Machinery	4 (3+1)	58
MECH 5970/6970-PFEN 6200 Manufacturing of Polymeric Structures	4 (3+1)	43

- Class visit to ThermoFisher, PFEN 6200, Spring 2019.
- Class visit to SiO2 Medical Products, PFEN 6200, Spring 2019.

4.A.2 Graduate Students Whose Work Has Been Completed

Students for Whom The Candidate Served as Major Professor

Student	Degree	Chair	Department	Graduation Date	Current Employer
Alby, Laine	MS	Dr. Adanur	ME	May 2022	Enercon Services, Atlanta
Jayswal, Ajay	MMECH	Dr. Adanur	ME	Dec. 2020	Ph.D. student
Cermik, Ozdes	PhD	Dr. Marghitu/Adanur	ME	May 2017	K. Maras University
Shen, Yang	PhD	Dr. Adanur	PFEN	Dec. 2015	Highland Ind.
Shen, Yang	MS	Dr. Adanur	PFEN	Dec. 2013	Ph.D. student in PFEN
Meeks, Steve	MS	Dr. Adanur	PFEN	May 2012	WNA
Zheng, Hai	MS	Dr. Adanur	PFEN	Dec. 2010	Graduate Student
Gocek, Ikilem	PhD	Dr. Adanur	PFEN	May 2010	Istanbul Technical Univ.
Keskin, Reyhan	PhD	Dr. Adanur	PFEN	May 2010	Pamukkale University

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Liu, Wei	PhD	Dr. Adanur	PFEN	May 2010	Intertek, IL
Selver, Erdem	MS	Dr. Adanur	PFEN	May 2010	PhD Student/England
Liu, Wei	MPFEN	Dr. Adanur	PFEN	May 2009	AU PhD student
Isikel, Lale	MS	Dr. Adanur	PFEN	May 2007	A company in Turkey
Irsale, Swagat J.	PhD	Dr. Adanur	PFEN	Dec. 2005	Nexus Software Sol,Inc., MN
Ascioglu, Birgul	PhD	Dr. Adanur	PFEN	Aug. 2005	Valeo, Inc., Bursa, Turkey
Irsale, Swagat J.	MS	Dr. Adanur	Textile Eng.	Dec. 2003	Nexus Software Sol, Inc., PA.
Hughes, Kevin	MTE	Adanur/Tippur	Textile Eng.	May 2005	GKN Aerospace
Vakalapudi, Sathendra	MS	Dr. Adanur	Textile Eng.	Aug. 2003	Detroit (software co.)
Onal, Levent	PhD	Dr. Adanur	Textile Eng.	May 2002	Erciyes University
Turel, Tacibaht	MS	Dr. Adanur	Textile Eng.	Aug. 2002	PhD, Consumer Aff.
Tascan, Mevlut	MS	Dr. Adanur	Textile Eng.	May 01	PhD, Clemson Univ.
Orak, Hakan	MS	Adanur/Tippur	Textile Eng.	May 01	PhD, Clemson Univ.
Kayathi, K. K.	MS	Dr. Adanur	Textile Eng.	January 01	India
Xu, BaoHua	MS	Dr. Adanur	Textile Eng.	Aug. 99	PhD Student, TE
Arumugam, Yuvaraj	MS	Dr. Adanur	Textile Eng.	July 98	Goodyear Tire Co.
Qi, Jing	MS	Dr. Adanur	Textile Eng.	May 98	Grad Student in EE
Tewari. Ashutosh	MS	Dr. Adanur	Textile Eng.	Dec. 97	California Co.
Hou, Zhenwei	MS	Dr. Adanur	Textile Eng.	Dec. 97	PhD Candidate
Gongalareddy, Sreekanth	MS	Dr. Adanur	Textile Eng.	Dec. 96	Telecom., Atlanta
Mallick, Sumita B.	MS	Dr. Adanur	Textile Eng.	Aug. 96	PhD (Boston Univ.)
Zhai, Honglian	MS	Dr. Adanur	Textile Eng.	Aug. 96	TCOM, Maryland
Yuksekkaya, M. Emin	MS	Dr. Adanur	Textile Eng.	June 96	Prof., Usak U., Turkey
Tsao, Yen P.	MS	Dr. Adanur	Textile Eng.	Dec. 95	Taiwan
Tam, Chi-Wen	MS	Dr. Adanur	Textile Eng.	March. 95	Taiwan
Sartain, Stephen L.	MS	Dr. Adanur	Textile Eng.	Dec. 94	Own automotive business

Others:

Inan, Gunes	PhD	Dr. Adanur	Textile Eng.	Aug. 04-Dec. 04
Kilinc, F. Selcen	PhD	Dr. Adanur	Textile Eng.	Aug. 00 – Dec. 01
Unsal, Evren	PhD	Dr. Adanur	Textile Eng.	Aug. 00-Feb. 01
Xu, BaoHua	PhD	Dr. Adanur	Textile Eng.	June 99 – Dec. 99
Zhenwei Hou	PhD	Dr. Adanur	Textile Eng.	Jan. 99 – Sept. 99
Mallick, Sumita B.	PhD	Dr. Adanur	Civil Eng.	Aug. 96 – Aug. 98
Nalamati, R. Kumar	MS	Dr. Adanur	Mech. Eng.	Sept. 95- April 96

Students for Whom The Candidate Served as Committee Member

Student	Degree	Chair	Department	Graduation Date	Current Employer
1. Alizadeh, Nima	PhD	Dr. Auad	CHEN	Spring 2021	Posdoc
2. Akhan, Ahmet F.	MS	Dr. Marghitu	ME	Spring 2019	PhD Student
3. Sangars, Uday B.	MS	Dr. Beale	ME	Dec. 2015	Company
4. Furlong, Shane	MS	Dr. Broughton	PFEN	Dec. 2015	Company
5. Snead, Ed	MS	Dr. Thomas	PFEN	May 2015	PhD

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6.	Shirgaonkar, S.	MS	Dr. Beale	MECH	Dec. 2014	Hanwha, Opelika
7.	White, Charles J.	PhD	Dr. Byrne	CHEN	Aug. 2014	FDA
8.	Poyraz, Selcuk	PhD	Dr. Zhang	PFEN	June 2014	Assist. Prof., Turkey
9.	Smith, James	MS	Dr. Zhang	PFEN	May 2014	Private Industry
10.	Wang, Xialong	MS	Dr. Zhang	PFEN	Spring 2013	PhD at another univ.
11.	Blackwell, C.	MS	Dr. Thomas	PFEN	Dec. 2012	CSP
12.	Liu, Zhen	PhD	Dr. Zhang	PFEN	Spring 2012	UMaryland
13.	Liu, Yang	MS	Dr. Zhang	PFEN	Dec. 2011	PhD student at AU
14.	Quinones, Vladimir	PhD	Dr. Thomas	PFEN	Spring 2011	Post-doc at AU
15.	Luna, Eric	PhD	Dr. Tatarchuk	Chemical Eng.	Summer 2009	Syngenta Crop, NC
16.	Anthony, Rebecca	MS	Dr. Thomas	PFEN	Spring 2009	Industry, MS
17.	Hasan Kocer	M.S.	Dr. Broughton	PFEN	Fall 2007	PhD student ITAS
18.	Ray, Rebecca	M.S.	Dr. Thomas	PFEN	Fall 2006	Company
19.	Ma, Erjian	PhD	Dr. Jang	Materials Eng.	Spring 01	Company
20.	McCarthy, P. J.	MCE	Dr. Elton	Civil Eng.	Spring 96	Denver, CO
21.	Xiao, Liming	PhD	Dr. Yang	Materials Eng.	Spring 98	Postdoc, AU EE
22.	Hunt, Rich	MS	Dr. Nelms	Electrical Eng.	June 97	Company
23.	Kirkpatrick, C. T.	MS	Dr. Jang	Materials Eng.	Spring 97	California Company
24.	Kotha, S.	MS	Dr. Gowayed	Textile Eng.	Spring 97	India
25.	Xi, Xiaomei	PhD	Dr. Yang	Materials Eng.	Aug. 96	California Company
26.	Zhang, Qiang	PhD	Dr. Beale	Mechanical Eng.	Jan. 96	Maryland
27.	Vickers, Daniel	MS	Dr. Beale	Mechanical Eng.	March 95	FMP/Rauma

Students for Whom the Candidate Served as Outside Reader

Student	Degree	Chair	Department	Defense Date
Shah, Syed H. R.	PhD	Dr. Ahmed	Aerospace Eng.	TBD
Khan, Omar	PhD	Dr. Ahmed	Aerospace Eng.	Apr. 23, 2021
Ozcan Ozturk	PhD	Dr. Nadolnyak	College of Agr.	Aug. 5, 2017
Donath, Gregory W.	PhD	Dr. Duke	Chemical Eng.	Nov. 10, 2008
Ajitsaria, Jyoti K.	PhD	Dr. Choe	Mech. Eng.	Aug. 29, 2008
Butts, Daniel Alan	PhD	Dr. Gale	Materials Eng.	May 9, 2005
ElBashir, Nimir	PhD	Dr. C. Roberts	Chemical Eng.	Nov 15. 2004
Gopalakrishnan, M.	PhD	Dr. ElHalwagi	Chemical Eng.	May 21, 2002
Noureldin, M.	PhD	Dr. ElHalwagi	Chemical Eng.	Oct.12, 00
Patil, A. R.	PhD	Dr. Crocker	Mechanical Eng.	Sept. 11, 00
Park, Y.	PhD	Dr. Roberts	Chemical Eng.	July 20, 00
Shelley, M. D.	PhD	Dr. El-Halwagi	Chemical Eng.	Apr. 20, 00
Abdo, Z. A. M.	PhD	Dr. Gale	Materials Eng.	Dec. 3, 99
Garrison, W.	PhD	Dr. El-Halwagi	Chemical Eng.	May 8, 97
Yim, J. H.	PhD	Dr. Jang	Materials Eng.	Apr. 25, 97
Hamad, A. A.	PhD	Dr. El-Halwagi	Chemical Eng.	Apr. 21, 97
Mallick, R. B.	PhD	Dr. Brown	Civil Eng.	Apr. 8, 97
Zhao, Li-Ren	PhD	Dr. Jang	Materials Eng.	Feb. 26, 96
Haque, Anwarul	PhD	Dr. Raju	Mechanical Eng.	Oct. 10, 95
Yim, Jong H.	PhD	Dr. Jang	Materials Eng.	April 25, 95

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4.A.3 Graduate Students on Whose Committee the Candidate is Presently Serving

Student	Degree	Chair	Department
Akhan, A. F.	Ph.D.	Dr. Marghitu	MECH

Visiting Scholars/Students Supported

Name	Origin	Duration
Ms. Roxanne Guarin	Undergraduate student from Univ. of Mass-Amherst	May 21, 2008- July 31, 2008
Ms. Stacy Yee	Undergraduate student from Univ. of Michigan	May 21, 2007- July 27, 2007
Ms. Christina Yacoob	Undergraduate student from SUNY Buffalo	May 29, 2006-Aug. 4, 2006
Dr. Levent Gumusel	Turkey	Jan. – Feb. 2005, Jan. 2006
Dr. Hasan Bas	Turkey	Jan. – Feb. 2005, Jan. 2006
Ms. Abibe Maimaiti	China	Sept. 2001-Sept. 2002
Dr. Gulay Ozcan	Turkey	January 01 – February 01
Dr. Tianyi Liao	China	Aug. 96 - March 99.
Dr. Sule Altun	Turkey	July 99-Sept. 99

4.A.4 Courses and Curricula Developed

New Undergraduate Courses Developed:

Dr. Adanur has developed the following courses which did not exist before.

1. MECH 5520/6520 – PFEN 6200 Manufacturing of Polymeric Structures
2. MECH 5320/6320 Engineered Flexible Structures
3. PFEN 3200 Polymer Processing
4. ENGR 1110 Introduction to Polymer and Fiber Engineering
5. PFEN 3300 Fibrous Product Testing and Instrumentation
6. PFEN 4300 Engineered Fibrous Structures
7. PFEN 5100/6100 Fabrics for Papermaking
8. TXTN 3450 Technical Textiles
9. TE 225 Fabric Design and Manufacturing
10. TE 460 Mechanics of Textile Manufacturing Processes and Systems

New Graduate Courses Developed:

1. PFEN 6100 Fabrics for Papermaking
2. PFEN 6200 Polymer Processing
3. PFEN 6250 Advanced Engineering Fibrous Structures
4. PFEN 7210 Fabric Formation and Properties
5. PFEN 8200 Advanced Textile Structure Design and Development

4.A.5 Grants Received Related to Teaching (Total $ 191,999.00; see also 4.B.8)

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1. Adanur, S., Graduate Outreach Program (GOP) Grant, $135.00, Spring 2009.

2. Two injection molding machines were donated to polymer processing lab by ThermoFisher Scientific of Auburn, May 2007, $9,000.00.

3. Travel fund for the ITMA 2003, Birmingham, England.
Funding Agent: Highland Takata Industries
Amount: $ 3,428.92
Duration: Oct. 21-30, 2003.

4. Developing a Course Based on Equipment Design for Introduction to Engineering
Funding Agent: AU College of Engineering
Amount: $ 24,050
PI: P. Jones (leader), C. A. Flood, S. Adanur
Duration: June 1, 1999-May 31, 2000

5. Title: Travel fund for IFAI Expo 1999, San Diego, CA.
Funding Agent: Highland Takata Industries
Amount: $ 4,000.00
PI: W. Walsh, S. Adanur, R. Broughton, Y. ElMogahzy
Duration: Oct. 28-30, 1999.

6. Title: Travel fund for Messe Frankfurt Industrial Textiles Fair, Frankfurt, Germany
Funding Agent: Highland Takata Industries
Amount: $ 4,000.00
PI: S. Adanur (50%), W. Walsh (50%)
Duration: May 11-18, 1998

7. Title: Textile Structural Composites Laboratory
Funding Agent: National Science Foundation, Instrumentation and Laboratory Improvement (ILI)
Amount: $ 87,185.00
PI: S. Adanur (95 %), Co-PIs: W. Walsh, R. Walker, B. Jang
Duration: Sept. 1, 94- Aug. 31, 96
This NSF grant is specifically for undergraduate curriculum development purposes.

8. Title: Wellington Sears Handbook of Industrial Textiles
Funding Agent: Wellington Sears Company, Valley, Alabama.
Amount: $ 60.000.00
PI: Sabit Adanur
Duration: Oct. 1, 93 - March 15, 95.

9. Title: Discretionary Teaching Grant-in-Aid
Funding Agent: Auburn University

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Amount: $ 200.00
PI: Sabit Adanur
Duration: Nov. 1, 92 - Apr. 30, 93.

4.A.6 Publications Pertaining to Teaching

1. Adanur, S., Paper Machine Clothing, 2nd Edition, December 2017. Library of Congress Catalog Card No. 2017-949013, ISBN No. 978-0-692-92120-3, 279 pages (331 figures, 47 tables).
2. Updating the Wellington Sears Handbook of Industrial Textiles, which has been an industry standard since 1995. The new expanded edition has new chapters and state of the art technology related to polymers, fibers, yarns, fabrics and their manufacturing processes and applications.
3. Chapter 8 – "Structure and Mechanics of Coated Fabrics", book chapter in "Structure and Mechanics of Fibre Assemblies", edited by Peter Schwartz - Woodhead Publishing Limited and CRC Press LLC, 2008.
4. Adanur, S., Wellington Sears Handbook of Industrial Textiles, Technomic Publishing Co., Inc., Lancaster, PA, 1995. Library of Congress Catalog Card No. 95-61229, ISBN No. 1-56676-340-1, 850 pages (519 figures and 140 tables).
5. Adanur, S., Paper Machine Clothing, Technomic Publishing Co., Inc., Lancaster, PA, 1997. Library of Congress Catalog Card No. 97-60981, ISBN No. 1-56676-544-7, 405 pages (338 figures, 55 tables).
6. Adanur, S., Handbook of Weaving, Technomic Publishing Co., Inc., 2001. Library of Congress Catalog Card No. 00-107625, ISBN No. 1-58716-013-7. 446 pages (539 Figures, 52 Tables).

Lecture Notes (Bound)

1. TE 425 Technical Textiles, Lecture Notes, Auburn University, 191 pages.
2. TE 460 Mechanics of Textile Manufacturing Processes and Systems, Lecture Notes, Auburn University, 154 pages.

4.A.7 Other Contributions to Teaching

1. ABET (Accreditation Board for Engineering and Technology) coordinator. Accreditation of Textile Engineering program in 1998 (first time ever), Fiber Engineering program in 2004 and Polymer and Fiber Engineering program in 2010 was achieved.
2. Semester Transition (was responsible for the quarter to semester transition for the curriculums in the Department of Textile Engineering).
3. Expansion of Master's Program (actively participated in expanding the Master's program in the Department. There were not adequate graduate level courses that covered certain aspects of the Master of Science program in Textile Engineering. Developed four new graduate level courses for this purpose).
4. Establishment of Ph.D. Program (was a member of the Textile Engineering Department Committee to establish a joint Ph.D. program with the Consumer Affairs Department).

Establishment of High Performance Materials Laboratory

Dr. Adanur has established an industrial textiles/composites laboratory in the Department. The lab is equipped with state-of-the-art equipment and is being used for teaching. Besides teaching, the laboratory provides an excellent opportunity for undergraduate and graduate students in their projects and independent studies. The lab will strengthen the University's interaction with industry. A new Instron was purchased and installed in the lab. Dr. Adanur received funding from National Science Foundation for a computerized braiding machine which has been installed in the lab. He has

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purchased and installed a new compression molding machine and Dynatup impact testing machines with the NSF EPSCoR funding. The value of these machines is around $ 600,000.00.

Establishment of Polymer Processing Laboratory

With the funding from Department of Commerce, Dr. Adanur went to University of Akron, Ohio to tour their polymer science and polymer engineering labs and analyze their equipment in 2006. Based on that analysis, Dr. Adanur specified and ordered the single screw extruder and injection molding machine for the PFEN department. These two machines are the heart of the current polymer processing lab in the department which is being used for teaching, research and extension.

4.A.7 Teaching Philosophy

My primary goal in teaching is to help produce high quality graduates to meet the needs of the industry and contribute to the advancement of engineering, science and technology in the field. I try to give the students the best education possible while preparing them for other aspects of life as well. Constant improvement of graduate and undergraduate education is essential for this purpose.

Good education of its people is the best investment that a country can make for the future. In the heart of this investment is the teachers and educational environment. Teaching is a combination of art and science and I believe that a good teacher is a gifted person. A teacher not only educates and teaches but also nurtures and prepares students for life. There is no substitute for one-to-one interaction between the student and faculty. Faculty should develop a suitable learning environment for students of different backgrounds. Although I emphasize, encourage and require teamwork in my classes, I also try to nurture the development of individual entrepreneurship and attributes in my students by giving them individually challenging tasks. I give the most importance to understanding the fundamental concepts and issues (not memorization) which should be the key to an engineering education. This gives students self-confidence and allows them to use their potential to the maximum. I try to train them to master the details without losing the "pig picture" from their sight.

I believe that there are two aspects of higher education in engineering: technical and non-technical aspect. In the technical side, I provide students with education involving the application of the latest engineering and science principles to design, development, manufacturing and testing of engineered polymeric and fibrous products and processes. Polymer and fiber engineering is truly multi-disciplinary, and I am fortunate to have a multi-disciplinary background to give the students an education that has "breadth and depth". The application of technical textiles has spread into aerospace, civil engineering, architecture and construction, filtration, medicine, military and defense, paper making, safety and protection, transportation, agriculture, sports and recreation. I try to keep myself up to date with the latest engineering and science principles in these disciplines that are relevant to our profession to educate the students in a timely fashion. I incorporate the design aspect of polymer and fiber engineering in the courses that I teach throughout the curriculum. My courses present real-world applications without sacrificing conceptual and theoretical bases.

Both theory and applications should be taught in a complementary fashion. For this purpose, I closely integrate laboratory experience with classroom teaching. Students are exposed to industry problems during college years through field trips, special projects and case studies. Interdepartmental cooperation is encouraged through team projects. Understanding of the concepts and creative thinking are the keys for a successful engineering education. Student involvement is a key factor in successful learning.

The non-technical aspect of college education is as important as the technical aspect. A university is a bridge where young teenaged minds evolve into mature, knowledgeable and responsible citizens. They learn various life skills and attributes, some of which are learned outside the classroom. Therefore, I believe in developing a mentor-mentee relationship with students so that I can help during their transition in college years. For this reason, I try to make myself always available for students and I feel very rewarded when I see that I made a difference in a student's preparation for life. I try to offer opportunities for extracurricular activities to prepare my students to meet the demands of a career in the

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present and future engineering workplace and be able to assume a responsible place of leadership in a complex technological society. If the students' evaluations and comments are an indicator, I feel that I am making a difference for them.

I follow the most recent developments in teaching technology closely and adapt them as soon as possible if they are feasible and useful. I have attended many seminars by the Biggio Center for the Enhancement of Teaching and Learning and will continue to do so whenever I can.

4.B RESEARCH / CREATIVE WORK

4.B.1 Books/Book Chapters (See 4.A.6)

1. Adanur, S., Paper Machine Clothing, 2nd Edition, December 2017. Library of Congress Catalog Card No. 2017-949013, ISBN No. 978-0-692-92120-3, 279 pages (331 figures, 47 tables).
2. Updating the Wellington Sears Handbook of Industrial Textiles, which has been an industry standard since 1995. The new expanded edition has new chapters and state of the art technology related to polymers, fibers, yarns, fabrics and their manufacturing processes and applications.
3. Chapter 8 – "Structure and Mechanics of Coated Fabrics", book chapter in "Structure and Mechanics of Fibre Assemblies", edited by Peter Schwartz - Woodhead Publishing Limited and CRC Press LLC, 2008.
4. Adanur, S., Wellington Sears Handbook of Industrial Textiles, Technomic Publishing Co., Inc., Lancaster, PA, 1995. Library of Congress Catalog Card No. 95-61229, ISBN No. 1-56676-340-1, 850 pages (519 figures and 140 tables).
5. Adanur, S., Paper Machine Clothing, Technomic Publishing Co., Inc., Lancaster, PA, 1997. Library of Congress Catalog Card No. 97-60981, ISBN No. 1-56676-544-7, 405 pages (338 figures, 55 tables).
6. Adanur, S., Handbook of Weaving, Technomic Publishing Co., Inc., 2001. Library of Congress Catalog Card No. 00-107625, ISBN No. 1-58716-013-7. 446 pages (539 Figures, 52 Tables).

4.B.2 Article-length Publications

Refereed Journal Articles Published (*: student)

1. Jayswal, A*., and Adanur, S., "An overview of additive manufacturing methods, materials, and applications for flexible structures", Journal of Industrial Textiles, Vol. 52, pp. 1-42, 2022, https://doi.org/10.1177/15280837221114638.
2. Jayswal, A*., and Adanur, S., "An overview of additive manufacturing methods, materials, and applications for flexible structures", Journal of Industrial Textiles, accepted 30 June 2022.
3. Jayswal, A*., and Adanur, S., "Effect of heat treatment on crystallinity and mechanical properties of the flexible structures 3D printed with fused deposition modeling", Journal of Industrial Textiles, 2022, Vol. 51(2S), pp. 2616S-2641S, https://journals.sagepub.com/doi/10.1177/15280837211064937.
4. Adanur, S., and Jayswal, A.*, "Filtration mechanisms and manufacturing methods of face masks: An Overview", Journal of Industrial Textiles, 2022, Vol. 51(3S), pp. 3683S-3717S, DOI: 10.1177/1528083720980169.
5. Jayswal, A*., and Adanur, S., "Characterization of PLA/TPU composite filaments manufactured for 3D printing with FDM", Journal of Thermoplastic Composite Materials, https://doi.org/10.1177/08927057211062561, Published online, 2 December 2021, pp. 1-22.
6. Adanur, S., and Jayswal, A*., "Additive Manufacturing of Interlaced Fibrous Structures", Rapid Prototyping Journal, 2021, 27(4), pp. 671-681, DOI 10.1108/RPJ-05-2020-0095.
7. Shen, Y*., Branscomb, D., and Adanur, S., "Effect of joint stiffness on torsional stiffness of open lattice composite structures", Journal of Industrial Textiles, 2021, Vol. 51(3), pp. 409-423, https://journals.sagepub.com/doi/pdf/10.1177/1528083719881818.

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8. Shen, Y*., and Adanur, S., “Mechanical analysis of the auxetic behavior of novel braided tubular structures by the finite element method”, Textile Research Journal, 2019, Vol. 89 (23-24), pp. 5187-5197, https://doi.org/10.1177/0040517519851840.
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43. Adanur, S. (50%), and Sreekanthreddy, G.* (50%), "Compression Behavior of 3D Reinforced Glass/Epoxy Laminar Composite Profiles", ICAPC-97, Proceedings of the International Conference on Advanced Polymer Composites, Materials, Processing and Applications, Beijing University of Aeronautics and Astronautics, Beijing, China, June 1997.
44. Basu Mallick, S.* (40%), Elton, D. J. (30%), and Adanur, S. (30%), "An Experimental Characterization of Soil-Woven Geotextile Interface in Large Box Pullout Tests", Proceedings of the Geosynthetics '97, Long Beach, CA, March 1997, pp. 927-940.
45. Adanur, S., "Manufacturing of Industrial Textiles", 10 pages, Proceedings of the NSF sponsored Symposium, December 1996, Alexandria, Egypt.
46. Adanur, S. (40%), Mallick, S.*(30%) , and Zhai, H.*(30%), "Analysis of Geotextile-Soil Interaction in Pull-Out Tests", Proceedings of the IS Kyushu '96, International Symposium on Earth Reinforcement, Fukuoka, Japan, November 1996.
47. Warren, A.* (50%), El-Halwagi, M. (25%) and Adanur, S. (25%), "Design of a New Process for Converting Textile Solid Waste into Transportation Fuel", Proceedings of the First Trabzon International Energy and Environment Symposium, Karadeniz Technical University, Trabzon, Turkey, July 1996.
48. Adanur, S. (50%), and Gongalareddy, S.*(50%), "Compressive Properties of Stitched Woven Fiberglass Fabric Reinforced Composite Sections for Civil Engineering Applications", ICCE/3, Proceedings of the Third International Conference on Composites Engineering, New Orleans, LA, July 1996.
49. Adanur, S., (80%) and Tam, C. A*. (20%), "On-machine Stitching of 3-D Laminate Structures for Composites", Proceedings of the 2nd International Conference on Composites Engineering (ICCE/2), New Orleans, LA, August 1995.
50. Wang, S.* (40%), Adanur, S. (40%) and Jang, B. Z. (20%), "Thermo-Mechanical Behavior of Fiber/Filler Reinforced Phenolic Matrix Composites", Proceedings of the 2nd International Conference on Composites Engineering (ICCE/2), New Orleans, LA, August 1995.
51. Wang, S.* (40%), Adanur, S (40%). and Jang, B. Z. (20%), "Mechanical Behavior of Fiber/Filler Reinforced Phenolic Matrix Composites", Proceedings of the 2nd International Conference on Composites Engineering (ICCE/2), New Orleans, LA, August 1995.
52. Adanur, S. (50%), Mallick, S. B.* (25%), and Zhai, H.* (25%), "Design and Characterization of Geotextiles for High Performance Applications", Proceedings of the Hi-Tech Textiles Exhibition and Conference, Textile World and INDA, Greenville, SC, July 1995.
53. Mallick, S. B.* (40%)., and Zhai, H.* (40%), "A Laboratory Study on Pull-out Performance of Woven Geotextiles", Geosynthetics '95 Conference Proceedings, Nashville, TN, February 1995. This student paper, directed by Dr. Adanur (10%) and Dr. Elton (10%), was one of the 6 papers accepted for the conference.
54. Adanur, S. (60%), and Tsao, Y. P.* (40%), "Stitch Bonded Textile Structural Composites", SAMPE, Proceedings of the 26th International Technical Conference, Atlanta, GA, October 94.
55. Kozey, K.* (40%), Kumar, S. (20%), (Ga Tech), Adanur, S. (20%), and Mohamed, M. H. (20%), (NC State), "Compressive Failure Mechanisms in Woven and Laminate Glass/Epoxy Composites", SAMPE, Proceedings of the 26th International Technical Conference, Atlanta, GA, October 94.

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56. Adanur, S. (60%), Tsao, Y. P.* (20%), and Tam, C. W.* (20%), "Improving Fracture Resistance in Laminar Textile Composites", Proceedings of International Conference on Composite Engineering, ICCE/1, New Orleans, LA, August 1994.
57. Adanur, S., "Design and Structure of Fabrics for Papermaking", 3rd Annual International Hi-Tech Textiles Conference, Textile World and INDA, Greenville, SC, June 1994.
58. Adanur, S., (50%) and Walker, R. P. (50%), "Yarn Preparation for Weaving in the Future", Proceedings of the 33rd Annual Textile Slashing Short Course, Auburn University, AL, September 1993.
59. Adanur, S., "Effects of Forming Fabric Design on Paper Properties", Second International Hi-Tech Textiles Exhibition and Conference Proceedings, Greenville, SC, July 1993.

Non-refereed Journal Articles

1. Griffin, K., Jayswal, A., and Adanur, S., Additive Manufacturing of Braided Structures for Composite Reinforcement, Auburn University, Journal of Undergraduate Scholarship, 19 August 2022.
2. LaBombard, K., and Adanur, S., "Manufacturing of Nanoparticle Reinforced Materials through Electrospinning", Auburn University, Journal of Undergraduate Scholarship, http://our.auburn.edu/wp-content/uploads/2019/01/AUJUS-2018-Workspace_0000-dragged.pdf, January 25, 2019.
3. O'Dell, H., "Narrow Fabrics in Broad Use", Industrial Fabrics Products Review, Nov. 2007, pp. 48-51 (Adanur was interviewed and quoted in this article).
4. "Your Firm Has ISO Certification: What Comes Next?", This editorial paper was published based on our article: Allen, B*. (50%), and Adanur, S. (50%), "ISO 9000: First Results After Implementation", Textile World, August 1994.
5. Adanur, S., "Forming Fabrics in Papermaking", Textile and Technique, Turkish/English, August 1994, pp. 115-118.
6. Adanur, S., "Latest Developments in Weaving Machinery at ATME-I 93 Show", Textiles and Technique, Turkish/English, September 1993 (in Turkish).

Tech Briefs

1. Bakhtiyarov, S., Overfelt, R. A., and Adanur, S., "Improvements in Fabrication of Sand/Binder Cores for Casting", NASA Tech Briefs, July 2005.
2. "US-Turkey Cooperative Research", AL EPSCoR, 2004 Annual Report to the AL Commission on Higher Education, 10 Dec. 2004, pp. 18-19.
3. A summary report was submitted to Ms. Jennifer Braxton, Economic Development Analyst with the Economic Development Partnership of Alabama, Birmingham, entitled "Fiberglass Composite Research", Sept. 3, 2004; 4 pages.
4. Bakhtiyarov, S., Overfelt, R. A., and Adanur, S., "Improvements in Fabrication of Sand/Binder Cores for Casting", NASA Tech Brief, April 9, 2002.

4.B.3 Technical Presentations Made (presenter's name is in *Italic*)

1. *Jayswal, A*., and Adanur, S., Design, fabrication, and testing of novel 3D printed facemasks, CPAC Summer seminar series, Auburn University, 20 July 2021.
2. *Jayswal, A.,* and Adanur, S., Effect of Heat Treatment on the Crystallinity and Mechanical Properties of FDM 3D Printed Twill Fabric Structures, AU Research 2021 Student Symposium, Auburn University, 30 March 2021.

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3. *Adanur, S.*, and Jayswal, A., 3D Printing of Fabric-like Structures, TechTextil North America, 19 November 2020 (Webex presentation).
4. *LaBombard, K.,* and Adanur, S., "Manufacturing of Nanoparticle Reinforced Materials Through Electrospinning", The Fiber Society 2017 Fall Conference, Athens, GA, Nov. 8-10, 2017.
5. Shen, Y., Broughton, R., Beale, D., Foster, W., Branscomb, D., and *Adanur, S.*, "Failure Analysis of Open-Architecture Composite Structures Under Compression", The Fiber Society 2015 Fall Meeting and Technical Conference, October 28-30, 2015, College of Textiles, North Carolina State University, Raleigh, NC.
6. Shen, Y., Sangars, U., Adanur, S., Broughton, R., *Beale, D*., and Foster, B., "Failure Analysis of Micro-joints in Open-architecture Composite Structures (O-ACS)", TEXCOMP-12, 12th International Conference on Textile Composites, NC State University, College of Textiles, Raleigh, NC, USA, May 26-29, 2015.
7. *Shen, Y*., Adanur, S., Broughton, R., Beale, D., and Foster, B., "Buckling Analysis of Open-Architecture Composite Structures (O-ACS)", This is Research: Student Symposium 2015, Auburn University, 13 April 2015.
8. *Adanur, S*., "Application of Fluid Dynamics in PFEN", presentation given to AU Fluid Dynamics Working Group, 5 March 2015, Auburn, AL (Fluid Dynamics Working Group was established as a result of the SGCOE Interdisciplinary Faculty Research Colloquium).
9. *Shen, Y*., and Adanur, S., "Modeling of tensile properties of multi-layer fabrics by multi-scale finite element method", Auburn University Graduate Scholar Forum, 5 March 2014.
10. *Shen, Y.,* and Adanur, S., "A Biaxial Braiding Tubular Structure Based on Helical Auxetic Yarns", The Fiber Society International Symposium on Fibers Interfacing the World, Oct. 23-25, 2013, Clemson, SC.
11. *Adanur, S.,* and Liu, W, "Desulfurization Properties of Activated Carbon Fibers in Dry Conditions", International Istanbul Textile Congress 2013, New Materials, May 30-31, 2013, Istanbul, Turkey.
12. *Shen, Y*., Adanur, S., Meir, A. and Cao, Y., "Finite Element Analysis of Uniaxial Tension of Polyester Monofilament Woven Fabric", Auburn Research Week, 3 April 2013.
13. *Adanur, S*., and Broughton, R., "Recovery and Reuse of Waste PVC Coated PET Fabrics", The 4th International R&D Project Brokerage Event, Bursa, Turkey, Feb. 2-3, 2012 (presented as poster as well).
14. *Adanur, S*., "PVA Nanofiber Based Membrane for Proton Exchange Membrane Fuel Cells", The 4th International R&D Project Brokerage Event, Bursa, Turkey, Feb. 2-3, 2012 (presented as poster as well).
15. Selver, E., and *Adanur, S*., Properties of Nanoclay Added Composite Polypropylene Monofilaments Using Twin and Single Screw Extruders, Fiber Society International Symposium on New Frontiers in Fiber Materials Science, Oct. 11-13, 2011, Charleston, SC.
16. *Adanur, S*., A Novel Filling Insertion System for Weaving, The 3rd International R&D Project Brokerage Event, Bursa, Turkey, Feb. 10-11, 2011.
17. *Adanur, S*., Conceptual Design and Characterization of 3D Interlaced Fibrous Structures, The 3rd International R&D Project Brokerage Event, Bursa, Turkey, Feb. 10-11, 2011.
18. Zheng, H., and *Adanur, S*., "Synthesis and Characterization of Sulfonated Polyimide Based Membrane for Proton Exchange Membrane Fuel Cell Applications", Alabama Composites Conference, Aug. 24-26, 2010, Birmingham, AL (presented as poster as well).
19. Liu, W., and *Adanur, S*., "Activated Carbon Fiber Filter Media in Proton Exchange Membrane Fuel Cells for Automotives", Techtextil North America Symposium, May 18-20, 2010, Georgia World Congress Center, Atlanta, GA.
20. *Adanur, S.*, and Selver, E., "Processing and Properties of nanoclay reinforced polypropylene monofilaments", The 4th International Technical Textiles Congress, 16-18 May 2010, Istanbul, Turkey.
21. *Adanur, S.,* and Gocek, I., "Nanoclay and Compatibilizer Effects on Polypropylene Cast Film Processing and Properties", Fiber Society Spring 2010 International Conference, May 12-14, 2010, Bursa, Turkey.

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22. Keskin, R., and *Adanur, S.*, "Improving Toughness of Polypropylene Injection Molded Parts with Thermoplastic Elastomer Materials", The Fiber Society 2009 Fall Meeting and Technical Conference, The University of Georgia, Athens, GA, Oct. 28-30, 2009.
23. *Gocek, I.,* and Adanur, S., "Effect of Processing Parameters on Polypropylene Film Properties", The Fiber Society 2009 Fall Meeting and Technical Conference, The University of Georgia, Athens, GA, Oct. 28-30, 2009.
24. *Selver, E.,* and Adanur, S., "Processing and Property Relationship of Nanoclay Reinforced Polypropylene Monofilaments", The Fiber Society 2009 Fall Meeting and Technical Conference, The University of Georgia, Athens, GA, Oct. 28-30, 2009.
25. *Liu, W.,* and Adanur, S., "Application of Activated Carbon Fibers in Fuel Cell Cathode Filter Media", The Fiber Society 2009 Spring Conference: International Conference on Fibrous Materials 2009, Shanghai, China, May 27-29, 2009.
26. *Adanur, S.,* Nanotechnology Applications in Textiles, The 6th Textile Congress, Suleyman Demirel University, Isparta, Turkey, May 1-3, 2009.
27. *Liu, W*., and Adanur, S., "Activated carbon fiber filter media for PEM fuel cell cathode", AU Annual Research Forum, 10 March 2009.
28. *Adanur, S.*, "Nanotechnologies are Coming Your Way", Industrial Fabrics Association International (IFAI) Expo '08, October 21-23, 2008, Charlotte, NC (invited presentation).
29. *Adanur, S.,* and Isikel, L., "Manufacturing of Carbon Nonwoven Gas Diffusion Layers with Wet-Laying Process", Techtextil North America Symposium, April 1-3, 2008, Atlanta, GA.
30. *Adanur, S.,* Gumusel., L. and Bas, H., "A Novel 3D Woven-Knit Hybrid Fabric for Composites", Techtextil North America Symposium, April 1-3, 2008, Atlanta, GA.
31. *Adanur, S.,* and Isikel, L., "Nonwoven Fabrics for Gas Diffusion Layers in Polymer Electrolyte Membrane Fuel Cells", Conference on Structural Composites Applications in Defense, Infrastructure, Transportation, Corrosion-Prevention and Power Industry, March 4-6, 2008, Birmingham, AL.
32. *Auad, M. L.* , Mosiewicki, M. A., Richarson, T., Adanur, S., Aranguren, M. I. , Marcovich, N. E., Medeiros, E. S., and Mattoso, L. H. C., "Shape Memory Polyurethanes Reinforced with Electrically Conductive Cellulose Crystals" , COMAT 2007, December, 2007, Brazil.
33. *Ascioglu, B.*, and Adanur, S., "Nanofiber Coating and Nanofiber Based Continuous Yarn Manufacturing" (including proceedings), 2nd Textile Technology and Textile Machinery Congress, 19-20 October 2007, Gaziantep, Turkey.
34. *Adanur, S*., "Innovation in Textiles, Nanotechnology Practices and Technical Textiles", 1st International Textile and Apparel Summit, June 2-3, 2007, Denizli, Turkey.
35. *Adanur, S.,* and Isikel, L., "Design and Characterization of Nonwoven Fabrics for Gas Diffusion Layer in Polymer Electrolyte Membrane Fuel Cells", May 23, 20007, Karadeniz Technical University, Trabzon, Turkey.
36. *Ascioglu, B*., and Adanur, S., "Hexagonal Unit Cell Model for Thermal Conductivity of Nano-Micro Fiber Composites", ULIBTK '07, The 16th Heat Transfer Congress, May 30- June 2, 2007, Erciyes University, Kayseri, Turkey.
37. *Isikel, L.*, and Adanur, S., "Manufacturing of Gas Diffusion Layers for Polymer Electrolyte Membrane Fuel Cell", Auburn University 17th Annual GSC Research Forum, 7 March 2007, Foy Union, AU.
38. *Adanur, S.,* and Irsale, S., "Textile Stent Prototyping and Modeling", IFAI Expo 2006 Medical Textiles Symposium, Atlanta, Oct. 31, 2006.
39. *Adanur, S.,* "Wide World of Industrial Textiles", presentation given to the teachers at the Istanbul Textile Vocational School, June 22, 2006, Istanbul, Turkey.
40. *Adanur, S.,* "Dynamics of Air-Jet Weaving", The First Istanbul International Textile and Textile Machinery Congress, June 1-2, 2006, Istanbul, Turkey.

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41. *Adanur, S.,* Aglan, H., Gumusel, L., and Bas, H., "Textile Machinery and Processes for Composite Preform Manufacturing", The First Istanbul International Textile and Textile Machinery Congress, June 1-2, 2006, Istanbul, Turkey.
42. *Adanur, S*., Isikel, L., and Abdelhady, F., "Coated and Laminated Fabrics for Fuel Cells", TechTextil Symposium North America, March 28-30, 2006, Atlanta, GA.
43. *Isikel, L.,* and Adanur, S., "Comparative Evaluation of GDL Media for PEMFCs", Auburn University Annual Graduate Student Research Paper Competition, 9 March 2006, Foy Union, AU.
44. *Adanur, S*., Schwartz, P., Broughton, R., S., Thomas, H., Byrne, M., and Hong, J. W., "Novel Polymeric Materials and Structures for Biomedical/Health Applications", presentation given to the AU internal committee for NSF Major Research Instrumentation (MRI) Program, 9 Dec. 2005.
45. *Adanur, S*., "Application of Industrial Textiles", Seminar given to ITAS 8960 Class, 8 Sept. 2005.
46. *Adanur, S.,* "High Tech Textiles", Bossa, Adana, Turkey, 18 July 2005.
47. *Adanur, S.,* "Coated and Laminated Fabrics for Fuel Cells", 2nd International Technical Textiles Congress, Istanbul, Turkey, 13-15 July 2005.
48. *Adanur, S.,* and Ascioglu, B., "Challenges and Opportunities in Nano Fiber Manufacturing and Applications", 2nd International Technical Textiles Congress, Istanbul, Turkey, 13-15 July 2005.
49. *Adanur, S.,* "Higher Education in the U.S", Suleyman Demirel University, Isparta, Turkey, 8 July 2005.
50. *Adanur, S.,* "High Tech Textiles", Suleyman Demirel University, Isparta, Turkey, 8 July 2005.
51. *Adanur, S.,* "High Tech Textiles", Denizli Chamber of Commerce, Turkey, 7 July 2005.
52. *Adanur, S.,* "High Tech Textiles", Pamukkale University, Denizli, Turkey, 6 July 2005.
53. *Adanur, S.,* "Higher Education in the U.S", Karadeniz Technical University, Trabzon, Turkey, 30 June 2005.
54. *Irsale, S.,* and Adanur, S., "Exporing Textile Stents: Prototyping and Modeling", Fiber Society Spring 2005 Conference, May 25-27, 2005, St. Gallen, Switzerland.
55. *Ascioglu, B*., and Adanur, S., "Heat Transfer Modeling in Nanofiber Reinforced Composite", Auburn University Annual Graduate Student Research Paper Competition, 10 March 2005, Foy Union, AU.
56. *Irsale, S*., and Adanur, S., "Textile Prosthesis for Vascular Applications", NTC Paper presentation, 10 January 2005, Spidle Hall, Auburn University.
57. *Ascioglu, B*. and Adanur, S., "Heat Transfer Modeling in Nanofiber Reinforced Composite", NTC Paper presentation, 10 January 2005, Spidle Hall, AU.
58. *Adanur, S*.," High Performance and Nano Fibers", Twtichell Corporation, Dothan, AL, Sept. 2, 2004.
59. *Adanur, S.*, "Dynamic Analysis of Air-Jet Filling Insertion: Effect of Timing on Air and Yarn Velocity", SECTAM XXII, 22nd Southeastern Conference on Theoretical and Applied Mechanics, August 15-17, 2004, Tuskegee, AL.
60. *Ascioglu, B*., and Adanur, S., "Heat Transfer Behavior of Particle Reinforced Nanofibers", SECTAM XXII, 22nd Southeastern Conference on Theoretical and Applied Mechanics, August 15-17, 2004, Tuskegee, AL.
61. *Irsale, S*., and Adanur, S., "Compression Force Modeling of Braided Textile Stents", SECTAM XXII, 22nd Southeastern Conference on Theoretical and Applied Mechanics, August 15-17, 2004, Tuskegee, AL.
62. *Ascioglu, B*., and Adanur, S., "Modeling of Thermal Conductivity in Nanofiber Composites", ICCE-11, 11th Annual International Conference on Composites/Nano Engineering, Hilton Head, SC, August 8-14, 2004.
63. *Adanur, S*., and Ascioglu, B., "Processing Characterization of PVA Nanofibers in Electrospinning", ICCE-11, 11th Annual International Conference on Composites/Nano Engineering, Hilton Head, SC, August 8-14, 2004.
64. *Adanur, S.,* "Geotextiles", Unsa, Inc., Istanbul, Turkey, July 19, 2004.
65. *Adanur, S.,* and Vakalapudi, J. S., "Fabric Design and Analysis System in 3D Virtual Reality", The 2nd International Istanbul Textile Congress, April 22-24, 2004, Istanbul, Turkey.

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66. *Irsale, S.,* and Adanur, S., "Monofilament Yarns in Braided Vascular Prostheses", TechTextil Symposium North America, Atlanta, GA, March 30-April 1, 2004.

67. *Ascioglu, B*., Adanur, S., Patra, P. K., Inan, G., Kim, Y., and Warner, S., "Heat Transfer Modeling in Nanofiber Reinforced Composites", ICCE-10, New Orleans, July 20-26, 2003.

68. *Inan, G.*, Patra, P. K., Warner, S. B., Kim, Y. K., Ascioglu, B., and Adanur, S., "In-Situ Polymerized Flame Retardant Nanocomposites", ICCE-10, New Orleans, July 20-26, 2003.

69. *Onal, L*., and Adanur, S., "A Novel 3D Structure, 3D Hybrid Woven/Knitted Fabric", Proceedings of the The Fiber Society 2003 Spring Symposium, "Advanced Flexible Materials and Structures: Engineering with Fibers", June 30-July 2, 2003, Loughborough, England.

70. *Adanur, S*., "Wide World of Industrial Textiles", June 19, 2003, Marmara University, Istanbul, Turkey,

71. *Sathendra, V*., and Adanur, S., "Fabric Design and Analysis System in 3D Virtual Reality", Auburn University Annual Research Forum, Auburn, AL, 20 March 2003.

72. *Adanur, S*., "Wide World of Industrial Textiles", Dong Hua University, Shanghai, China, 26 Sept. 2002.

73. *Adanur, S*., and Onal, L., "Experimental Analysis of Textile Composites", TechTextil North America Symposium, Atlanta, GA. April 9-11, 2002, April 9-11, 2002.

74. *Elton, D. J*., Howie, D. L., and Adanur, S., "Bubblepoint Testing of Nonwoven Geotextiles", 37th Symposium on Engineering Geology and Geotechnical Engineering, Boise, Idaho, March 27-29, 2002.

75. *Adanur, S*., and Turel, T., "Mechanics of Air-Jet Filling Insertion", 2001 ASME International Mechanical Engineering Congress & Exposition, New York, NY, Nov. 14, 2001.

76. *Adanur, S*., "Role of Technical Fabrics in Papermaking: An Overview", Techtextil Symposium North America, March 13-15, 2001, Atlanta, Georgia.

77. *Adanur, S*., and Onal, L., "Effects of Production Variables on Stress-Strain Behavior of Glass/Epoxy Textile Composites in Compression Molding", The 2000 American Society of Mechanical Engineers (ASME) Congress & Exposition, Orlando, FL, Nov. 5-10, 2000.

78. *Adanur, S*., and Onal, L., "Impact Failure Analysis of Glass/Epoxy Textile Composites", The 2000 American Society of Mechanical Engineers (ASME) Congress & Exposition, Orlando, FL, Nov. 5-10, 2000.

79. *Adanur, S.*, and Orak, H., "Textile Composites", DOE/TACOM Army 21st Century Truck Program, Auburn University, Auburn, Al. 3 August 2000.

80. *Adanur, S.,* Xu, B., and Orak, H., "Braided Composite Automotive Chassis Frame", ICCE/7 Seventh International Conference on Composites Engineering, July 2-8, 2000, Denver, CO.

81. *Elton, D. J*., and Adanur, S., "Varying Pore Sizes in Hydroentangled Geotextiles", Techtextil North America International Trade Fair for Technical Textiles and Nonwovens", March 22-24, 2000, Atlanta, GA.

82. *Adanur, S*., Bakhtiyarov, S., and Beale, D., "Characterization of Air-Yarn Interface in Air-Jet Weaving", National Textile Center Annual Forum, January 27-29, 2000, Myrtle Beach, SC.

83. Hou, Z., and *Adanur, S*., "Direct Use of Waste PVC Coated Fabrics to Reinforce Composites", 1999 International Mechanical Engineering Congress & Exposition, November 17, 1999, Nashville, Tennessee.

84. *Bakhtiyarov, S*. (50%), and Adanur, S. (50%), "Airflow over Wavy Yarn in Air-jet Filling Insertion", Second International Symposium on Mathematical & Computational Applications, Baku, Azerbaijan, September 1-3, 1999.

85. Adanur, S. (50%), and *Bakhtiyarov, S*. (50%), "Numerical Study of Collision Efficiency of Dust Particles", Second International Symposium on Mathematical & Computational Applications, Baku, Azerbaijan, September 1-3, 1999.

86. *Yuksekkaya, M. E.,* Thomas, H., and Adanur, S., "Analysis of Elastic Deformation of Braided Tubular Structures for Medical Applications, The Fiber Society 58th Annual General Conference, Symposium on Textile and Polymer Based Biomaterials, Philadelphia, PA, May 3-4, 1999.

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87. *Adanur, S.*, Gowayed, Y., and Thomas, H., "On-Line Measurement of Fabric Properties ", National Textile Center Annual Forum, January 28-30, 1999, Myrtle Beach, SC.

88. *Adanur, S.*, and Xu, B., "Influence of Microwave Fast Preheating on Epoxy Resin Chemorheology Properties", The 1998 International Mechanical Engineering Congress and Exposition, November 15-20, 1998, Anaheim, CA.

89. *Adanur, S.*, and Liao, T., "3D Modeling of Textile Composite Preforms", ICCE/5 Fifth International Conference on Composites Engineering, July 5-11, 1998, Las Vegas, NV.

90. *Adanur, S.*, and Xu, B., "Impact Resistance of Microwave Cured Glass/Epoxy Composites", ICCST/2, Second International Conference on Composite Science and Technology, Durban, South Africa, June 9-11, 1998.

91. Mallick, S. B., Elton, D. J., and *Adanur, S.*, "A New Approach in Modeling of Soil-Geotextile Interface Behavior in Pullout Tests", Sixth International Conference on Geosynthetics, March 25-29, 1998, Atlanta, GA.

92. *Adanur, S.*, and Hou, Z., "Recycling and Reuse of PVC Coated Polyester Fabric", TCL7, The 7th International Conference on Textile Coating and Laminating, Nov. 17-18, 1997, Charlotte, NC.

93. *Adanur, S.*, and Xu, B., "Characteristics of Microwave-Cured Braided Glass/Epoxy Composites", Composites at Lake Louise, CALL '97, October 12-17, 1997, Canada.

94. *Adanur, S.*, Arumugam, Y. S., and Xu, B., "Fast Net Shape Manufacturing of Braided Textile Structures", ICCE/4, Fourth International Conference on Composites Engineering, July 6-12, 1997, Big Island of Hawaii.

95. *Adanur, S.*, and Sreekanthreddy, G., "Compression Behavior of 3D Reinforced Glass/Epoxy Laminar Composite Profiles", ICAPC-97, International Conference on Advanced Polymer Composites, Materials, Processing and Applications, Beijing University of Aeronautics and Astronautics, Beijing, China, June 3-5, 1997.

96. *Adanur, S.*, "Geotextiles: Design and Applications in Alabama", Presentation to Alabama Congressional Delegation, May 9, 1997.

97. Basu Mallick, S., Elton, D. J., and *Adanur, S.*, "An Experimental Characterization of Soil-Woven Geotextile Interface in Large Box Pullout Tests", Geosynthetics '97, March 10-13, 1997, Long Beach, CA.

98. Yuksekkaya, M., *Thomas, H.,* Adanur, S., Chaikof, E., "Polymeric Braided Stents for Medical Applications", 1996 ASME International Mechanical Engineering Congress and Exposition, Nov. 17-22, 1996, Atlanta, GA.

99. *Ghosh, T.*, and Adanur, S., Design and Characterization of Geotextiles for High Performance Applications, Nonwovens Cooperative Research Center, Semi-Annual Meeting, Year 5, Nov. 20, 1996, Raleigh, NC.

100. *Adanur, S.*, Mallick, S., and Zhai, H., "Analysis of Geotextile-Soil Interaction in Pull-Out Tests", IS Kyushu '96, International Symposium on Earth Reinforcement, November 12-14, 1996, Fukuoka, Japan.

101. Warren, A., El-Halwagi, M. and *Adanur, S.*, "Design of a New Process for Converting Textile Solid Waste into Transportation Fuel", *TIEES-96,* The First Trabzon International Energy and Environment Symposium, July 29-31, 1996, Karadeniz Technical University, Trabzon, Turkey.

102. *Adanur, S.*, and Gongalareddy, S., "Compressive Properties of Stitched Woven Fiberglass Fabric Reinforced Composite Sections for Civil Engineering Applications", ICCE/3, Third International Conference on Composites Engineering, July 21-26, 1996, New Orleans, LA.

103. *Adanur, S.*, Design and Characterization of Geotextiles for High Performance Applications, Nonwovens Cooperative Research Center, 5th Annual Meeting, May 29, 1996, Raleigh, NC.

104. *Adanur, S.*, "Manufacturing of Industrial Textiles: Requirements and Opportunities", Sulzer-Ruti Technical Fabric Symposium, February 21-23, 1996, Spartanburg, SC.

105. *Adanur, S.*, "State of the Art in Technical Textiles", Discover EXPO '95, Industrial Fabric and Equipment Exposition, Industrial Fabrics Association International, Charlotte, NC, Oct. 12-14, 1995.

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106. Wang, S., *Adanur, S.* and Jang, B. Z., "Thermo-Mechanical Behavior of Fiber/Filler Reinforced Phenolic Matrix Composites", 2nd International Conference on Composites Engineering (ICCE/2), August 21-24, 1995, New Orleans, LA.

107. *Adanur, S.,* and Tam, C. A., "On-machine Stitching of 3-D Laminate Structures for Composites", 2nd International Conference on Composites Engineering (ICCE/2), August 21-24, 1995, New Orleans, LA.

108. Wang, S., *Adanur, S.* and Jang, B. Z., "Mechanical Behavior of Fiber/Filler Reinforced Phenolic Matrix Composites", Proceedings of the 2nd International Conference on Composites Engineering (ICCE/2), August 21-24, 1995, New Orleans, LA.

109. *Adanur, S.,* Mallick, S. B., and Zhai, H., "Design and Characterization of Geotextiles for High Performance Applications", Hi-Tech Textiles Exhibition and Conference, July 24-26, 1995, Greenville, SC.

110. *Broughton, R. M.,* Bakhtiyarov, S. I., Brady, P., and Adanur, S., "Initial Design of Nonwoven Fabrics for Air Filtration", Hi-Tech Textiles Exhibition and Conference, July 24-26, 1995, Greenville, SC.

111. *Adanur, S.*, and Tsao, Y. P., "Stitch Bonded Textile Structural Composites", The 26th International Technical Conference, SAMPE, October 24-27, 94, Atlanta, GA.

112. *Adanur, S.*, Tsao, Y. P., and Tam, C. W., "Improving Fracture Resistance in Laminar Textile Composites", First International Conference on Composites Engineering, August 28-31, 1994, New Orleans, LA.

113. *Adanur, S.*, "Design and Structure of Fabrics for Papermaking", Third International Hi-Tech Textiles Exhibition & Conference, June 21-22, 1994, Greenville, SC.

114. *Adanur, S.*, and Walker, B., "Yarn Preparation for Weaving in the Future (Yarn Preparation for the Second Loom)", 33rd Annual Textile Slashing Short Course, September 22, 1993, Auburn University, AL.

115. *Adanur, S.*, "Paper Machine Clothing", Istanbul Technical University, Textile Engineering Department, August 4, 1993.

116. *Adanur, S.*, "Effects of Forming Fabric Design on Paper Properties", 2nd International Hi-Tech Textiles Conference, July 21, 1993, Greenville, SC.

117. ElMogahzy, Y., Gowayed, Y. and Adanur, S., "Mechanical Characterization of Geotextiles/Soil Interaction", The Fiber Society Spring Meeting, May 1993, Raleigh, NC.

118. *Adanur, S.*, "Design and Applications of Forming Fabrics in Papermaking", North Carolina State University, College of Textiles, Fiber, Polymer and Textile Seminar Program, March 17, 1993, Raleigh, NC.

4.B.4 Poster Sessions Presented (presenter in Italic)

1. L. Alby and S. Adanur, Novel Reusable Textile Facemask to Prevent Spread of COVID-19, AU SGCoE, Graduate Engineering Research Showcase, Huntsville, AL, March 29, 2022.
2. A. Jayswal and S. Adanur, Characterization of Composite Filaments for 3D Printing of Fabrics, AU SGCoE, Graduate Engineering Research Showcase, Huntsville, AL, March 29, 2022.
3. *Alby, L.,* and Adanur, S., Design, Fabrication, and Testing of Novel Medical Facemasks to Prevent Covid-19, 2021 Graduate Engineering Research Showcase, 28 October 2021.
4. *Jayswal, A*. and Adanur, S., Characterization of PLA/TPU Composite Filaments Manufactured for 3D Printing with FDM, Poster presentation, 2021 Graduate Engineering Research Showcase, 28 October 2021.
5. *Jayswal, A*., and Adanur, S., Additive Manufacturing of Fabric-like Structures, 2020 Virtual Student Research Symposium, April 2020.
6. *Adanur, S*., "Air-Jet Filling Insertion System", Mechanical Engineering Undergraduate Research Information Poster Session, 10 October 2017, Wiggins Hall, Auburn University.
7. *Adanur, S.,* "Air-Jet Filling Insertion System", Mechanical Engineering Undergraduate Research Information Poster Session, 1 September 2016, Wiggins Hall, Auburn University.

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8. *Adanur, S.*, Shen, Y., "Braided Structures Based on Helical Auxetic Yarns", Uludag Textile Exporters Association UTIB International R&D Brokerage Event, Bursa, Turkey, May 27-29, 2015.
9. Shen, Y., Adanur, S., Broughton, R., Beale, D. and Foster, B., "Failure Analysis of Micro-joints in Open-architecture Composites Structures (O-ACS)", Fall 2014 Graduate Engineering Research Showcase, Auburn University, Oct. 23, 2014.
10. Shen, Y., and Adanur, S., "Finite Element Analysis of Monofilament Woven Fabrics under Uniaxial Tension", 2nd Annual Graduate Engineering Research Show Case, Auburn University, Oct. 24, 2013.
11. Adanur, S., "A Novel Braided Structure to Increase Compression and Torsion Resistance of Composites", The 5th International R&D Project Brokerage Event, Bursa, Turkey, 4-5 April 2013.
12. Adanur, S., "Prevention of PEM Fuel Cell Poisoning via Adsorption using Activated Carbon Fiber Based Cathode Filters", The 5th International R&D Project Brokerage Event, Bursa, Turkey, 4-5 April 2013.
13. Adanur, S., "Health and Safety Effects of Nanoparticles Embedded in Textile Materials", The 5th International R&D Project Brokerage Event, Bursa, Turkey, 4-5 April 2013.
14. Adanur, S., and Broughton, R., "Recovery and Reuse of Waste PVC Coated PET Fabrics", The 4th International R&D Project Brokerage Event, Bursa, Turkey, Feb. 2-3, 2012.
15. Adanur, S., "PVA Nanofiber Based Membrane for Proton Exchange Membrane Fuel Cells", The 4th International R&D Project Brokerage Event, Bursa, Turkey, Feb. 2-3, 2012.
16. *Adanur, S.*, A Novel Filling Insertion System for Weaving, The 3rd International R&D Project Brokerage Event, Bursa, Turkey, Feb. 10-11, 2011.
17. *Adanur, S.*, Conceptual Design and Characterization of 3D Interlaced Fibrous Structures, The 3rd International R&D Project Brokerage Event, Bursa, Turkey, Feb. 10-11, 2011.
18. Liu, W., and Adanur, S., "Activated carbon fiber filter media for proton exchange membrane fuel cell cathode", The Fiber Society 2009 Spring Conference: International Conference on Fibrous Materials 2009, Shanghai, China, May 27-29, 2009 (chosen as one of the 4 best posters).
19. Liu, W., and Adanur, S., "Activated carbon fiber filter media for proton exchange membrane fuel cell cathode Fiber Society Meeting, Shanghai, China, June 2009. Won the best poster award.
20. Adanur, S., and Irsale, "Development of Drug Eluting Textile Stents", NTC Forum, June 3, 2008, Greenville, S.C.
21. Lee, S., Liu, W., and Adanur, S., "Nonwoven Fibrous Structures from Electrospun Nanofibers", NSF Research Experience for Undergraduates REU Program in Micro/Nano-Structured Materials, Therapeutics and Devices Poster Session, AU Saugahatchee Club, July 26, 2007.
22. Liu, W., and Adanur, S., "Characterization of PVA and PAN Electrospun Nonwoven Fibers", Auburn University 17th Annual GSC Research Forum, 7 March 2007, Foy Union, AU.
23. Isikel, L., Adanur, S., Tatarchuk, B., Isikel, L., (Auburn University), Warner, S., Fan, Q., and Narvekar, V., "Coated and Laminated Fabrics for Fuel Cells", NTC Forum, Feb. 25-27, 2007, Hilton Head, S.C.
24. Thomas, H., Riggs, L., Elton, D., and Adanur, S., "Reinforcement Fabrics with Electronic Antenna Capabilities", NTC Forum, Feb. 25-27, 2007, Hilton Head, S.C.
25. Yacoob, S., Isikel, L., and Adanur, S., "Nonwoven Fabric Manufacturing and Testing Using Electrospinning", NSF Research Experience for Undergraduates (REU) Program, Moores Mill Club, Auburn, 4 August 2006.
26. Adanur, S., Isikel, L., and Abdelhady, F., "Coated and Laminated Fabrics for Fuel Cells", TechTextil Symposium North America, March 28-30, 2006, Atlanta, GA.
27. Adanur, S., Choe, B., Fan, Q., and Warner, S., "Coated and Laminated Fabrics for Fuel Cells", National Textile Center 14th Annual Forum, February 19-21, 2006, Hilton Head, SC.
28. Adanur, S., Swagat, I., Warner, S., and Chaikof, E., "Textile Prostheses for Vascular Applications", National Textile Center 14th Annual Forum, February 19-21, 2006, Hilton Head, SC.

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29. Adanur, S., Choe, B., Fan, Q., and Warner, S., "Coated and Laminated Fabrics for Fuel Cells", National Textile Center 13th Annual Forum, March 20-22, 2005, Raleigh, NC.
30. Adanur, S., Swagat, I., Warner, S., and Chaikof, E., "Textile Prostheses for Vascular Applications", National Textile Center 13th Annual Forum, March 20-22, 2005, Raleigh, NC.
31. Adanur, S., Ascioglu, B, Prabir, K. P., Warner, S. B. et al, "Nano Engineered Fire Resistant Composite Fibers", National Textile Center 13th Annual Forum, March 20-22, 2005, Raleigh, NC.
32. Irsale, S., and Adanur, S., "Exploring Textile Stents: Prototyping and Modeling", AU Annual Graduate Student Research Forum, March 10, 2005, Auburn, AL.
33. Adanur, S., and Irsale, S., "Textile Prosthesis for Vascular Applications", Presentation and Poster Session, TechTextil Symposium North America, Atlanta, GA, March 30-April 1, 2004.
34. Adanur, S., Ascioglu, B, Prabir, K. P., Warner, S. B. et al, "Nano Engineered Fire Resistant Composite Fibers", National Textile Center Annual Forum, February 15-17, 2004, Hilton Head, SC.
35. Adanur, S., Swagat, I., Warner, S., and Chaikof, E., "Textile Prostheses for Vascular Applications", National Textile Center Annual Forum, February 15-17, 2004, Hilton Head, SC.
36. Ascioglu, B., and Adanur, S., "Nano Engineered Fire Resistant Composite Fibers", Auburn University Annual Research Forum, Auburn, AL, 20 March 2003. This poster won the 2nd place in Engineering.
37. Adanur, S., Ascioglu, B, Prabir, K. P., Warner, S. B. et al, "Nano Engineered Fire Resistant Composite Fibers", National Textile Center Annual Forum, February 16-18, 2003, Hilton Head, SC.
38. Adanur, S., and Sathendra, V., "Fabric Design and Analysis System in 3D Virtual Reality", National Textile Center Annual Forum, February 16-18, 2003, Hilton Head, SC.
39. Adanur S., and Onal, L., "Design and Characterization of a Novel 3D Hybrid Knitted/Woven Fibrous Structure for Composites", 2003 NSF Design, Service and Manufacturing Grantees and Research Conference, January 6-9, 2003, Birmingham, AL.
40. Turel, T., Adanur, S., Bakhtiyarov, S., Ahmed, A., and Beale, D., "Filling Yarn Insertion in Air-Jet Weaving", National Textile Center Annual Forum, February 10-12, 2002, Charlotte, NC.
41. Sathendra, V., and Adanur, S., "Fabric Design and Analysis System in 3D Virtual Reality", National Textile Center Annual Forum, February 10-12, 2002, Charlotte, NC.
42. Adanur, S., and Onal, L., "Factors Affecting the Mechanical Properties of Laminated Glass/Graphite-Epoxy Hybrid Composites", 2002 NSF Design, Service and Manufacturing Grantees and Research Conference, January 7-10, 2002, San Juan, Puerto Rico.
43. Tascan, M., and Adanur, S., "Filling Yarn Insertion in Air-Jet Weaving", 11th Research Forum, Auburn University, March 19, 2001.
44. Onal, L., and Adanur, S., "Impact Properties of Textile Composites", 11th Research Forum, Auburn University, March 19, 2001.
45. Kilinc, F. S., and Adanur, S., "3D Fabric Design and Analysis", 11th Research Forum, Auburn University, March 19, 2001.
46. Tascan, M., Adanur, S., Bakhtiyarov, S., Ahmed, A., and Beale, D., "Filling Yarn Insertion in Air-Jet Weaving", National Textile Center Annual Forum, February 11-13, 2001, Myrtle Beach, SC.
47. Kilinc, F. S. and Adanur, S., "Fabric Design and Analysis System in 3D Virtual Reality", National Textile Center Annual Forum, February 11-13, 2001, Myrtle Beach, SC.
48. Adanur, S., and Orak, H.., "Design and Manufacturing Automotive Chassis Frame with Net Shape Braided Composite Structures", 2001 NSF Design and Manufacturing Research Conference, January 7-10, 2001, Tampa, FL.
49. Adanur, S., Bakhtiyarov, S., and Beale, D., "Filling Yarn Insertion in AirJet Weaving", National Textile Center Annual Forum, January 27-29, 2000, Myrtle Beach, SC.

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50. Adanur, S., and Xu, B., “Design and Manufacturing Automotive Chassis Frame with Net Shape Braided Composite Structures”, 2000 NSF Design and Manufacturing Research Conference, January 3-6, 2000, Vancouver, British Columbia, Canada.
51. Adanur, S., Gowayed, Y., and Thomas, H., "On-Line Measurement of Fabric Properties ", National Textile Center Annual Forum, January 28-30, 1999, Myrtle Beach, SC.
52. Adanur, S., and Xu, B., “Fast Net Shape Manufacturing of Braided Textile Composites”, NSF CAREER Awardees Meeting, January 10-12, 1999, Washington D.C.
53. Adanur, S., and Xu, B., “Process Development of Microwave Preheating and Infrared Post Curing of Braided Polymer/Epoxy Composites”, The 1999 National Science Foundation (NSF) Design and Manufacturing Grantees Conference, January 5-8, 1999, Long Beach, CA.
54. Adanur, S., Liao, T., and Ghosh, T., "Design and Characterization of Geotextiles for High Performance Applications", National Textile Center Annual Forum, January 29-31, 1998, Panama City, FL.
55. Adanur, S., Gowayed, Y., and Thomas, H., "On-Line Measurement of Fabric Properties", National Textile Center Annual Forum, January 29-31, 1998, Panama City, FL.
56. Adanur, S., and Xu, B., "Fast, Net Shape Manufacturing of Textile Composites", National Science Foundation, Design and Manufacturing Grantees Conference, January 5-8, 1998, Monterrey, Mexico.
57. Adanur, S., Gowayed, Y., Ghosh, T., Goswami, B., Mallick, S. B., Zhai, H., "Design and Characterization of Geotextiles for High Performance Applications", National Textile Center Annual Forum, January 28-30, 1997, Myrtle Beach, SC.
58. Adanur, S., Thomas, H., Gowayed, Y., "On-Line Monitoring", National Textile Center Annual Forum, January 28-30, 1997, Myrtle Beach, SC.
59. Adanur, S., and Xu, B., "Fast, Net Shape Manufacturing of Textile Composites", National Science Foundation, Design and Manufacturing Grantees Conference, Seattle, Washington, Jan. 7-10, 1997.
60. Adanur, S., Mallick, S., and Zhai, H., "Analysis of Geotextile-Soil Interaction in Pull-Out Tests", IS Kyushu '96, International Symposium on Earth Reinforcement, November 12-14, 1996, Fukuoka, Japan.
61. Adanur, S., Mallick, S., and Zhai, H., "Design and Characterization of Geotextiles for High Performance Applications", National Textile Center Annual Forum, January 24-26, 1996, Raleigh, NC.
62. Adanur, S., et al., "Textile Structural Composites", National Textile Center Annual Forum, January 24-26, 1996, Raleigh, NC.
63. Adanur, S., Mallick, S., and Zhai, H., Design and Characterization of Geotextiles for High Performance Applications, National Textile Center, Annual Forum, Atlanta, GA, January 26-28, 1995.
64. Mohamed, M., Adanur, S., et al., "Textile Structural Composites”, National Textile Center, Annual Forum, January 26-28, 1995, Atlanta, GA.
65. Adanur, S., and Tam, C. W., "Fabrication and Testing of On-loom Stitched 3-D Glass/Epoxy Laminar Composites", The 8th Annual Alabama Materials Research Conference, Tuscaloosa, AL, Sept. 26-27, 1994.
66. Walker, B., Beale, D., Broughton, R., and Adanur, S., "Improving the Woven Fabric Production Rate by Braiding Process", National Textile Center, Annual Forum, Greenville, SC, February 1994.
67. Mohamed, M., Adanur, S., et al., "Textile Structural Composites", National Textile Center, Annual Forum, Greenville, SC, February 1994.
68. Walker, B., Beale, D., Broughton, R., and Adanur, S., "Improving the Woven Fabric Production Rate by Braiding Process", National Textile Center, Annual Forum, Auburn, AL, February 1993.
69. Mohamed, M., Adanur, S., et al., "Textile Structural Composites", National Textile Center, Annual Forum, Auburn, AL, February 1993.

4.B.5 Senior Design Projects Supervised

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1. Chris Upp and Nicholas Hammond, “GKN Postcured Composite Structures”, Spring 2018.
2. Matthew A. Phillips and Alexandria Gunter, PFEN 4820, GKN Aerospace Vacuum Port Redesign”, Spring 2017.
3. John C. Sampson, and Jon C. Walker, PFEN 4820, “Solving the Edge Problem During Manufacturing of Composite Parts for the Bell 525 Helicopter Project”, Spring 2016.
4. Webb Broussard and Blake Townsend, “Normalizing Autoclave Heat Rate Regardless of Mass or Mold Material”, PFEN 4820, Spring 2015.
5. Chris Lee, Chris Porter and Austin Yuill, “Formula SAE Composite Wheel”, Spring 2013.
6. Mason Brummal and James Smith (PFEN 4810-4820), “Weight Reduction of Mandrels Used in Composite Manufacturing”, GKN Aerospace Alabama, Tallassee, AL, Spring 2012.
7. Melanie McDonald and Charles Blackwell (PFEN 4820), “Bulkhead Core Crushing”, GKN Aerospace Alabama, Tallassee, AL, Spring 2011.
8. Joseph Rossi Schell, Steven Crace and James Clay Graben (PFEN 4820), “Carbon Tow Tension Control in Malimo Stitch Bonding Process for Composite Preform Manufacturing”, V2 Composites, Auburn, AL, Spring 2011.
9. Sam A. Missioum and Betsy Claunch (PFEN 4820), “Engineering Solutions for Increased Efficiency in Hollow-fiber Production of Hemodialysis”, Gambro Renal Products, Opelika, AL, Spring 2011.
10. Ozbasli, Halil, “Stadium Covers”, TXMT 4900, Fall 2006.
11. Anthony, Rebecca, and Hudson, Katie, “Hail Storm Protective Fabrics, FBEN 4910-4920, Fall-Spring 2006.
12. George, Mellany, “Performance of Coated and Laminated Fabrics for Fuel Cells”, FBEN 4920, Fall 2005.
13. Bates, Tiffany, and Williams, Jennie, “Medical Stents: Textile Materials versus Metals”, FBEN 4920, Spring 2005.
14. Willams, Gerald, “Endovascular Stent Grafts”, TXMT 4910, Spring 2005.
15. Cooper, Jared, “Biocompatible Polyester Stents for Vascular Applications”, FBEN 4920, Fall 2004.
16. McCollum, Brian, “Composite Drumsticks”, FBEN 4920, Fall 2004.
17. Stroud, Megan, “The Price of Turf”, FBEN 4920, Fall 2004.
18. Nicole Sizemore, “Bubble Point Test Method”, TXEN 4920, Summer 2004.
19. Andrea Rogers, “Operating Room Material Requirements”, TXMT 4910, Spring 2004.
20. Joseph Godfrey, “Fiber Optics Woven into Fabrics”, TXEN 4920, Fall 2003.
21. Melissa Mitchell “UV Resistance of Coated Fabrics for Stadium Covers”, Summer 2003.
22. Andrea Janel Smith, “Turfgrass Reinforcement”, Spring 2003.
23. Thomas Hogan, “Composite Tree Climber”, Spring 2003.
24. Carlos Eduardo Handal, “Recycling of T-shirt Waste, Spring 2003.
25. Jason Mattox, “Geocomposite Design”, Spring 2003.
26. Kalitha Mitchell, “Carpet Tile Manufacturing Problems”, Fall 2002.
27. Eric Chambers, “Composite Baseball Bat”, Fall 2002.
28. Jeremy Legg, “Heat Stress Analysis: Making Aubie Cooler”, Fall 2002.
29. Paula Bates, “An Examination of Acoustic Textile Structures”, Spring 2002.
30. Margaret Harris, “Design of a Polymeric Y Shaped Braided Stent for Aortic Implantation”, Spring 2002.
31. Colin Dawson, “The Design, Construction and Testing of Composite Canoes”, Spring 2002.

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32. Sarah Robinson, “Western Saddle Design”, Spring 2002.
33. Dan C. Siggers, “Canine Body Armor”, Spring 2002.
34. Leslie Alexander, “Development of Golf Driver Shaft Using Industrial Textiles”, Fall 2001.
35. Rebecca A. Bevis, “Interfacial Shear Strength Evaluation of Thermplastic and Thermoset Resins by the Single Fiber Pullout Test”, Fall 2001.
36. Kevin Hughes, “Carbon Composite Billiard Cue”, Spring 2001.
37. Meredith Kaye Fetner, “Evaluation of Quality Problems Associated with the Manufacture of Inflatable Evacuation Systems”, Spring 2001.
38. Fatma Erdonmez, “Fiber Reinforced Bricks”, Spring 2000.
39. Heather M. Anders and Daniel A. Butts, “Fiber Reinforced Concrete”, Spring 2000.
40. Mary M. Jacobs, Leia A. Cutcliffe and Ron Levitzke, Jody Aaron, “Composite Golf Club”, Spring 2000.
41. Julee E. Diplacido, “Design and Fabrication of a Three-Dimensional Woven Fabric Structure Using a Jacquard Loom”, Winter 2000
42. Dina R. Tareea, “Composite Bone”, Winter 2000.
43. Elizabeth A. Bray, “Braided Tennis Racquet”, Winter 2000.
44. Tareek Mohamed, “Permeability of Geotextiles”, Winter 99.
45. Leigh N. Haugseth, “Application of Sampling Plan for Codon Airbag Fabric”, Winter 99.
46. Robert Gallardo and Dustin Jowers, "Design of a Polymer Stent", Winter 99.
47. Jason Eisele, "Puncture Resistant Military Textiles", Winter 99.
48. Rebecca Kenney and Charles Moore, "Design and Development of a New Geotextile Structure for Soil Reinforcement", Winter 99.
49. Casey Blythe and Wesley Greer, "Incorporating Polypropylene Filament Yarns and Nonwoven Structures for Geotextile Applications", Fall 98.
50. Jeannie Stephens, Erica Graves and Ryan Radel, "Composite Bicycle Frame", Spring 1998 (co-advisor with Dr. Gowayed).
51. James Collier and Kasey Myers, "Flame Resistant Military Fabrics", Spring 1998.
52. Mary Elizabeth Stahr, "Properties of Airbag Fabric Contributing to Strength and Foldability", Winter 1998.
53. Paul Roberts, "Geotextile Pullout Test: Study of Geotextile-Soil Interaction", Fall 1997.
54. Kenneth Cole and Russell Matoy, "Effects of Forming Fabrics on Paper Formation", Spring 1997.
55. Jonathan Douglas and Samuel Mooney, "Design and Development of a Y-Shaped Braided Polyester Aortic Stent", Winter 1997.
56. Barclay Payne, "Warp-out Process", Winter 1997.
57. Leanna Land, "Design of Polyester Stent for Aortic Implantation", Fall 1996.
58. Tara Schaneville and Rotricia Smith, "Design and Applications of Biomaterials for Coronary Artery Reinforcement", Spring 1996.
59. Michelle Struth, "Tiger Textiles", Winter 1996.
60. Stephanie Carnley, "Computers and Computer Aided Design in the Textile Industry", Winter 1995.
61. Coley Jay Smith, "Effects of Fabric Structure on Bending Stiffness", Winter 95.
62. Karen Countess, "Performance Comparison of Woven Geotextiles in Fabric-Soil Interaction", Winter 95.
63. Keith Rollins, “Adhesion Characteristics of Reinforcement Fabrics to Rubber”, Fall 1994.
64. Amy N. Goddard, "Ultrasonic Seaming", Spring 94.

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65. Dayna M. Smith, "Medical Textiles: Design of Absorbency Tester for Medical Toweling", Spring 94.
66. Brian Allen, "The Effects of ISO 9000 Quality Systems on Textile Product Quality", Winter 94.
67. Mike McCauley and Eva Shelton, "Design and Fabrication of a New Textile Structural Composite Racket" Winter 1994.
68. Brian Wingfield, "Pack Design for a 3/4" Laboratory Extruder", Winter 94.
69. Thomas L. Pritchard, "The Properties of Non-crimp Fabric Based Composites", Winter 94.
70. Westley Mixon, "The Effects of Forming Fabric Design Parameters on Tissue Paper Properties", Spring 93.
71. Philip Douglas Tierce, Jr., "The Effect of Forming Fabric Design on Final Sheet Qualities", Winter 93.
72. David C. Terrell, "Laminated Textile Structural Composites", Winter 93.

4.B.6 Patents / Inventions / Disclosures

1. Adanur, S., Alby, L., and Jayswal, A., "A Novel Multiuse Facemask with Hybrid Materials", filed on 2/26, 2021 (patent disclosure).
2. Adanur, S., "Improving Sheet Dryness in Papermaking with the Inclusion of High Surface Area Polymeric Fibers", filed on 1/24/2017 (patent disclosure).
3. Adanur, S, and Zheng, H., "A novel way of measuring proton conductivity of fuel cell membranes", AU Technology Disclosure, filed on 7/9/2010.
4. Adanur, S., Vakalapudi, J. S., and Liao, T., "VirtualFabric Design and Analysis System", Auburn University Software Disclosure, 20 July 2006.
5. Adanur, S., and Ascioglu, B., "Modification of Smooth Polymeric Surfaces with Nanofibers using Electrospinning", Auburn University Technology Disclosure, 12 October 2005.
6. Adanur, S., and Irsale, S., "Polymeric Textile Prostheses for Vascular Surgery Applications", Auburn University Technology Disclosure, 25 July 2005.
7. Adanur, S., "Air-Jet Filling Insertion Simulator", Auburn University Patent Technology Disclosure, Dec. 16, 2003.
8. Adanur, S., "Rotational Curing Device for Fast Net-shape Manufacturing of Braided Composites", Auburn University Patent Technology Disclosure, July 20, 2000.
9. Bakhtiyarov, S. I., Overfelt, R. A., and Adanur, S., "Reinforced Sand-Binder System for Coremaking Process", Patent Disclosure, November 1998.
10. Adanur, S., Hou, Z., and Broughton, R. M., "A New Method to Separate the Components of Coated Fabrics", Patent Disclosure, July 22, 1997.
11. McCumsey, K., and Adanur, S., "Two Layer Fabric with Two Extra Strands", Patent Disclosure, April 15, 1992.

4.B.7 Other Research Contributions

1. Irsale, S., "Exploring Textile Stents: Prototyping and Modeling", submitted to the Fiber Society Graduate Student Research Competition, March 3, 2006.

Technical Reports Submitted

1. Adanur, S., Design, Fabrication and Testing of Novel Medical Facemasks to Prevent COVID-19, 6 Quarterly Reports and Final Report, submitted to Alabama Department of Economic and Community Affairs (ADECA), 18 May 2022.
2. National Science Foundation annual reports

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3. Adanur, S., Gowayed, Y., Elton, D., and Ghosh, T. K., Design and Characterization of Geotextiles for High Performance Applications, Nonwovens Cooperative Research Center, Annual Report, Year 5, May 29, 1996, Raleigh, NC.
4. National Textile Center (NTC) quarterly and annual reports
5. Semi-annual and annual reports to US Army Natick
6. NSF EPSCoR annual reports
7. Final report to NSF for Instrumentation and Laboratory Improvement Program
8. Monthly progress reports to Wellington Sears Company, Valley, AL.

Thesis and Dissertation

1. Adanur, S., "Dynamic Analysis of Single Nozzle Air-Jet Filling Insertion", Ph.D. Thesis, North Carolina State University, May 1989, 219 pages.
2. Adanur, S., "Air-Jet Filling Insertion: Velocity Measurement and Influence of Yarn Structure", Master's Thesis, North Carolina State University, 1985, 133 pages.

4.B.8 Grants and Contracts

1. Jayswal, A. (PI) and Adanur, S., "Manufacturing, characterization, and computational analysis of composite filaments for additive manufacturing of fabrics", submitted to ICAMS (Interdisciplinary Center for Advanced Manufacturing Systems, 15 May 2022-15May 2023, $2,610.00.
2. Griffin, K., and Adanur, S., Additive Manufacturing of Braided Structures for Composite Reinforcement, AU Undergraduate Research Fellowship, $2,250.00 for student, $750.00 for mentor, May 15 – August 15, 2022.
3. Design, Fabrication and Testing of Novel Medical Facemasks to Prevent COVID-19, $75,000.00, State of Alabama, Department of Economic and Community Affairs (ADECA), Feb. 1, 2021 – May 15, 2022.
4. OVPR Undergraduate Research Program Project, Electrospinning of Polymeric Fibers, Adanur budget: $1,500.00 (Student, Kiana LaBombard, assistantship: $5,000.00). May 15, 2017-May 15, 2018.
5. Adanur, S., "Polymeric and Textile Materials for Spherical Air Ships". Sponsor: Skyborne International, Duration: 2 years (2/1/2015-1/31/2017), Budgeted: $75,000.00.
6. Broughton, R. (PI), Beale, D., Adanur, S., and "Design and Analysis of Stiffeners and Tension Compression Struts Using Braided, Open-Architecture Composite Structures (O-ACS)", $150,000.00, 21 November 2013-December 2015.
7. Adanur, S. (PI), Meir, A. J., and Cao, Y., "Virtual 3D Interlaced Fabric Design and Characterization", $50,890.44, AU-IGP, 1 February 2012 - 31 December 2015.
8. National Science Foundation, REU Site for Micro/Nano-Structured Materials, Therapeutics, and Devices, PI: M.E. Byrne, Co-PI: S. Duke, Period: 03/1/11 - 02/28/14; $357,191. Faculty Mentors: S. Adanur, M. Auad, M. Byrne, S. Duke, A. Gorden, E. Davis, V. Davis, O. Fasina, R. Gupta, J.W. Hong, E. Lipke, B. Prorok, W. Ravis, C. Roberts.
9. Adanur, S., "Development of Composite and Sandwich Structured Fuel Cell Membranes", Department of Commerce, Sept. 2009-Aug. 2010, $100,000.00, 9/1/2009-8/31/2010.
10. Secured donation of 10, 862 kg of polymers and color additives to the Polymer and Fiber Engineering by Thermo Fisher, whose value is around $21,600 (April 2010).
11. Adanur, S., Graduate Outreach Program (GOP) Grant, $135.00, Spring 2009 (teaching grant).
12. Adanur, S., "Nanoparticle Reinforced Hybrid Fibers and Films", Department of Commerce, $119,999.00, 6/1/08-5/31/09.

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13. Davis, Ed (PI/Mentee), and Adanur, S. (Mentor), "Imogolite/PEO Nanocomposite Fibers and Membranes", $4,000.00, AU 2008 Faculty Mentoring Program.
14. Adanur, S., and 4 other researchers from Clemson University, "Development of Drug Eluting Textile Stents", $4,000, NTC, 2008-2009.
15. Tatarchuk, B. (PI), Adanur, S., and Broughton, R., Tank and Automotive Command Center (TACOM) Project, Prevention of Fuel Cell Poisoning, PFEN share $72,000, Fall 2005-Spring 2010.
16. Ikiz, Y., "Development of Nanofibers for Filtration Using Electrospinning", Pamukkale University, sponsored by TUBITAK of Turkey, 80,500 YTL (~$ 61,923), Jan. 2006-Dec. 2008, (Dr. Adanur is a "consultant" with no compensation).
17. Duke, S. (PI), Byrne, M. E. (Co-PI), Adanur, S., and 10 other researchers," REU Site for Micro/Nano-Structured Materials, Therapeutics, and Devices", NSF Research Experiences for Undergraduates (REU), $297,846, Summer 2006-Summer 2008.
18. Adanur, S. (PI), and Aglan, H. (Co-PI, Tuskegee University), "U.S.-Turkey Cooperative Research: Design and Processing Characteristics of Novel Three Dimensional Fibrous Preforms for Composite Reinforcement", $34,201.00, Sept. 1, 2004-Aug. 31, 2007, National Science Foundation.
19. Adanur, S. (PI), Choe, B., Fan, Q., and Warner, S., "Coated and Laminated Fabrics for Fuel Cells", $318,074.00, May 1, 2004-April 30, 2008, National Textile Center.
20. Thomas, H., (PI), Adanur, S., Elton, D., and Riggs, L., "Reinforcement Fabrics with Electronic Transmission Capabilities", $278,390.00, May 1, 2005-April 30, 2008, National Textile Center.
21. Adanur secured donation of two injection molding machines to Auburn University on May 3, 2007 by Thermofisher Scientific of Auburn (teaching grant):

    - FU CHIN SHIN 75 TON, MODEL: KT-75G, SERIAL # H03185, YEAR: 1988, Value: $4,500.00
    - FU CHIN SHIN 75 TON, MODEL: KT-75, SERIAL # H03172, YEAR: 1988, Value: $4,500.00.
22. Adanur, S., (PI), and Warner, S., "Textile Prostheses for Vascular Applications", $389,753.00, Auburn's share: $241,510.00, May 1, 2003-April 30, 2006, National Textile Center.
23. Patra, P. (PI), Adanur, S., and 4 other researchers, "Nano Engineered Fire Resistant Composite Fibers", Auburn's share: $90,920.00, May 1, 2002-April 30, 2005, National Textile Center.
24. Parker, F., Dyer, D. (leaders), Adanur, S., and several other Engineering Faculty, "AU Priority Areas; Transportation Pinnacle: Commercial Highway Systems", October 1, 99-September 30, 2004 (total budget amount is unknown at this time). Budget for Adanur: $24,000.
25. Adanur, S., Travel fund for the ITMA 2003, Birmingham, England, Funding Agent: Takata Highland Industries, $3,428.92, Oct. 21-30, 2003.
26. Adanur, S., (leader) ElMogahzy, Y., and Abdelhady, F., "Yarn and Fabric Design and Analysis in 3D Virtual Reality", National Textile Center, $ 177,938, May 1, 2000 - April 30, 2003.
27. Adanur, S. (PI), Bakhtiyarov, S., and Beale, D., "Characterization of Air-Yarn Interface in Air-Jet Weaving", National Textile Center, $ 262,742.00, May 1, 1999-April 30, 2002.
28. Equipment Secured for Air-Jet Research

    L5200 S 210 N2 IK TE Air-Jet Weaving Machine (L5200 series, filament execution, 210 cm max. reed width, low built (without superstructure), two color picks at will, crank shedding motion, electronic filling feeders)

    Manufacturing # 031166
    Serial # JA 2663
    Machine # 0003
    Manufacturing date: 1997.08
    Market Value: $15,000.00.
    Donor: Sulzer Textile, Inc.
    Date Received: Nov. 22, 2002

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29. Adanur, S., Fast Net-Shape Manufacturing of Polymer Composite Structures, 1995 NSF Faculty Early Career Development (CAREER) Program, National Science Foundation, $ 210,000.00; duration: 5 years, Sept. 1, 96-Aug. 31, 2001.
30. ElHalwagi, M. (leader), Adanur, S., and 15 other faculty, "Bicomplexity Incubation Project Proposal FY 2000-2002", $ 220,000.00, National Science Foundation, Duration: 1 year, Sept. 2000- August 2001.
31. Adanur, S., and Shalaby, S. E. (Egypt), "Design and Manufacture of Stitch Bonded, Thermoplastic Textile Composites", US-Egypt Science and Technology Joint Fund, $ 39,978, September 1, 1998 - August 31, 2001.
32. P. Jones (leader), C. A. Flood, S. Adanur, "Developing a Course Based on Equipment Design for Introduction to Engineering"; AU College of Engineering; $ 24,050; June 1, 1999-May 31, 2000 (teaching grant).
33. Adanur, S. (team leader), Thomas, H., Gowayed, Y. and Ghosh, T., On-line Measurement of Fabric Mechanical Properties for Process Control, National Textile Center, $ 446,912.00; duration: 3 years, March 1, 96 – April 31, 2000.
34. Adanur, S., and 3 others; Travel fund for IFAI Expo 1999, San Diego, CA, Funding Agent: Takata Highland Industries, $4,000.00, Oct. 28-30, 1999 (teaching grant).
35. Jang, B. Z., Yang, X. F., and Adanur, S. (30%), "Solid Free Form Fabrication of Advanced Alloys and Metal Matrix Composites", College of Engineering Graduate Research Assistantship, $ 20,000.00; duration: October 1, 1997-September 30, 1999.
36. Elton, D., and Adanur, S. (50%), "Waterjet Manufacturing of Custom Geotextiles", College of Engineering Infrastructural Awards, $ 62,524.00; duration: October 1, 1997-September 30, 1999.
37. Utilization of Solid Waste in Alabama, Y. Gowayed (Project Coordinator), S. Adanur and 15 other researchers, NSF/EPSCoR, $ 3 million, Dr. Adanur's share: $ 150,000.00; duration: 4 years, Aug. 95-July 99.
38. Adanur, S., and Walsh, W., Travel fund for Messe Frankfurt Industrial Textiles Fair, Frankfurt, Germany, Funding agent: Takata Highland Industries, $4000.00, May 11-18, 1998 (teaching grant).
39. Design and Characterization of Geotextiles for High Performance Applications, National Textile Center, Sabit Adanur (PI) and 5 other researchers from 4 universities; amount: $ 915,000.00; Auburn's share $ 520,000.00; duration: March 1, 1994 - April 30, 1998.
40. A New Military Fabric with Flame Resistance Properties; US Army Natick R&D and Engineering Center; PI: S. Adanur (100%), $ 40,000.00; 24 months, Dec. 1995 - Dec. 97.
41. Fingerprinting and Backward Quality Projection in Textile Products, PIs: Y. Elmogahzy (leader), R. Broughton, S. Adanur, Y. Gowayed (Auburn), S. Jayaraman (Ga Tech), M. Suh, W. Oxenham, J. Woo, J. Rust (NC State), E. Backe (ITT), $ 540,000.00, Dr. Adanur's share: $ 40,000.00, National Textile Center, Duration: 1 year, March 1, 1995 - February 28, 1996.
42. Textile Structural Composites Laboratory, National Science Foundation, Instrumentation and Laboratory Improvement (ILI) Award, $ 87,185.00 (42.5% NSF, 42.5 % Auburn cost share, 15% Private Industry Contribution), PI: S. Adanur (95%), Co-PIs: W. Walsh, R. Walker, B. Jang, 30 months, September 1, 94 - August 31, 96 (See 4.A.5).
43. Textile Structures for Composites: Stitch Bonded Laminar Composites, National Textile Center, $ 2,310,000 for 4 universities; Auburn's share $ 223,656.00, PI: S. Adanur (50 %), Yasser Gowayed (50%), March 1, 1993 - February 28, 1996.
44. Wellington Sears Handbook of Industrial Textiles, Wellington Sears Company, Valley, AL, PI: Sabit Adanur (100%), $ 60,000.00, October 1, 1993-March 15, 1995.
45. Design of a Braiding Machine to Produce Wide, Flat Woven Structures at a Significantly Increased Production Rate, PIs: R. Walker (leader), R., Broughton, S. Adanur, D. Beale, M. Nelms, National Textile Center, $ 570,000.00, Adanur's share: $ 90,000.00, March 92 - February 94.
46. Adanur, S., Title: Discretionary Teaching Grant-in-Aid, Funding Agent: Auburn University, $ 200.00, Nov. 1, 92 - Apr. 30, 93.

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Research Brief/Pre-proposal Submittals

1. Adanur, S., Multiuse Facemask with Hybrid Materials, TechConnect Spring Submission, 1 March 2021.
2. Adanur, S., and Gashler, M. (Univ. of Arkansas), "Machine Learning System for Weaving", LOI submitted to Walmart U.S. Manufacturing Innovation Fund, $522,000.00, submitted Aug. 24, 2016.
3. Fibers and Textiles Revolution, concept paper submitted to the U.S. Army as part of the Manufacturing Innovation Institute federal initiative, Adanur is the PI from Auburn University, 26 June 2015.
4. Adanur, S., Broughton, R., Beale, D., and, Shen, Y.,"Failure Analysis of Open-Architecture Composite Structures (O-ACS), $60,000.00; submitted to Uludag Textile Exporters Association UTIB International R&D Brokerage Event, Bursa, Turkey, 9 April 2015.
5. Adanur, S., and Shen, Y., "Modeling of Tensile Properties of Multi-Layer Fabrics by Multi-Scale Finite Element Method", $150,000.00; submitted to Uludag Textile Exporters Association UTIB International R&D Brokerage Event, Bursa, Turkey, 9 April 2015.
6. Adanur, S., Shen, Y., "Braided Structures Based on Helical Auxetic Yarns", $60,000.00; submitted to Uludag Textile Exporters Association UTIB International R&D Brokerage Event, Bursa, Turkey, 9 April 2015.
7. Adanur, S. (PI), and 7 other CoE faculty, "Innovative Injection Molding", NSF Major Research Instrumentation Program (MRI), Internal white paper, $424,080.00, May 1, 2014.
8. Adanur, S. (PI), Zhang, X. (AU), Budak, S., Alim, M., Bhattacharjee, S. (Alabama A&M), Gupta, A. (UA), Karabacak, T., Viswanathan, T. (UArkansas Little Rock), Energy Harvesting using Thermoelectric Properties of Conductive Polymer Composites, 2-page LOI submitted to NSF EPSCoR RII Track 2, Sept. 2, 2013, $2,000,000.00.
9. Broughton, R., Adanur, S., Branscomb, D. and Beale, D., "Structural Composite Materials for Use in NASA Launch Vehicle", White Paper, submitted to NASA, Oct. 12, 2012, $50,000.00.
10. Adanur, S. (PI) and 7 other researchers, "Innovative Injection Molding", $392,121.00, submitted to AU for NSF-MRI internal competition, November 3, 2011.
11. Adanur, S., A Novel Filling Insertion System for Weaving, $100,000.00, submitted to UTIB, Bursa, Turkey, January 2011.
12. Adanur, S., Conceptual Design and Characterization of 3D Interlaced Fibrous Structures, $100,000.00, submitted to UTIB, Bursa, Turkey, January 2011.
13. Adanur, S., Beale, D., and Broughton, R., "Light Weight, Low-Cost Structures for Energy Efficient Transportation", for NASA EPSCoR, Exploration Systems Mission Directorate (ESMD): Advanced Spacecraft Materials, Jan. 2011.
14. Adanur, S., (PI), Schwartz, P., Evans, J., Prorok, B., Dean, R., Ashurst, R., Jackson, R., Gross, S., "Innovative Injection Molding", $366,210.00, submitted for the NSF-MRI, 14 Oct. 2010.
15. Adanur, S., Kemppainen, B., and 6 other researchers, "Center for Health and Safety of Engineered Nanomaterials", $2,409,000.00, submitted for the FY'12 Federal Agenda, 25 May 2010.
16. Adanur, S., and Beale, D., "Light Weight, Low-Cost Structures for Energy Efficient Transportation", white paper submitted for the NASA EPSCoR Exploration Systems Mission Directorate (ESMD): Advanced Spacecraft Materials program, Dec. 8, 2009, $750,000.00.
17. Adanur, S., and Schwartz, P., "Innovative Injection Molding", white paper submitted for the NSF Major Research Instrumentation Program: Recovery and Reinvestment (MRI-R^2) , May 28, 2009, $366,210.00.
18. Adanur, S., (PI), Tatarchuk, B., and Davis, V., "Nanofiber Mat Production Technology", $660,000.00; white paper submitted to Defense Threat Reduction Agency, 5 March 2007.
19. Adanur, S. (PI), Schwartz, P., and Thomas, H., "Optimization of Heat and Mass Transfer in Protective Fibrous Structures", $496,000.00; white paper submitted to Defense Threat Reduction Agency, 2 March 2007.

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20. Schwartz, P., Broughton, R., Adanur, S., Thomas, H., Byrne, M., and Hong, J. W., "Novel Polymeric Materials and Structures for Biomedical/Health Applications", NSF Major Research Instrumentation (MRI) Program: Instrument Acquisition, Synopsis, 30 Nov. 2005.
21. Schwartz, P., Broughton, R., Adanur, S., and Thomas, H., "Low Cost, Light Weight Structures for Military Vehicles", Prospectus, U.S. Military (SMDC), 15 Sept. 2005.
22. Tatarchuk, B. J., Adanur, S., et al., "High Volumetric Chemical Reactivity", A Proposal for the Initiation of a Biorefining Thrust as a Critical Multidisciplinary Infrastructure Team, submitted to Provost's Office, July 2004, TE share: $50,000/year for 3 years.
23. Gupta, R., Tatarchuk, B. J., Adanur, S., and 19 other researchers, "MicroStructural Design of Solids for High Volumetric Reactivity, Proposal to NSF IGERT Program, $3,394,091.00, April 2004.
24. Cullinan, H. T., Tatarchuk, B. J., Robert, C., (organizers), Adanur, S., and 23 other researchers from multiple universities, "MicroStructured Solids for High Volumetric Chemical Processing", White Paper Proposal to Create an NSF Engineering Research Center at Auburn University, November 6, 2003.
25. Adanur, S., Schwartz, P., McClain, A., Bakhtiyarov, S., and Gross, R. S., "Kinetics of Fast, Net-Shape Polymeric Composite Curing with Microwave, Infrared and Ultraviolet Energy in Braiding and Filament Winding", Letter of Intent for Alabama DEPSCoR (10 pages), submitted July 26, 2002, $ 755,490.00.
26. Adanur, S., and Maimaiti, A., "Design and Characterization of Braided Composite Prostheses for Hard Tissue Implants", AU Biogrants Preproposal, $ 46,200.00, Oct. 25, 2001.
27. Adanur, S., "Textile Engineering Links to Advanced Automotive Manufacturing", one page document submitted to Dr. Owens for the Advanced Manufacturing Technology Center, Jan. 31, 2001.
28. Adanur, S., "Compression Molding of Braided Textile Composites for Automobile Industry", TACOM U.S. Army Tank and Automotive Command National Automotive Center white paper, 2 years, $90,000. Submitted Aug. 23, 2000.
29. Adanur, S., et al, "Design Characteristics of a Hybrid Geotextile for Infrastructure", submitted to National Textile Center, August 18, 2000, 3 years, $ 410,000.
30. Adanur, S., et al, "Microdynamic Analysis of Liquid Penetration into Textile Structures", submitted to National Textile Center, August 17, 2000, 3 years, $ 450,000.
31. Adanur, S., Schwartz, P., and McClain, A., "Prevention of Polymer Degradation During PET Reclamation", submitted to National Textile Center, August 17, 2000, 3 years, $ 560,000.
32. Adanur, S., and Chaikof, E. L., "Advanced Textile Prostheses for Vascular Applications", submitted to National Textile Center, August 16, 2000, 3 years, $ 420,000.
33. Adanur, S., and Bakhtiyarov, S., "Characterization of Heat and Mass Transfer in Fibrous Structures", submitted to National Textile Center, August 15, 2000, 3 years, $ 360,000.
34. Thomas, H., Adanur, S., et al, "Textile-based Systems for Protection and Injury Prevention", submitted to National Textile Center, August 15, 2000, 3 years, $ 450,000.
35. ElMogahzy, Y., Adanur, S., et al, "Developing a Design-Oriented Fabric Comfort Model", submitted to National Textile Center, August 15, 2000, 3 years, $ 300,000.
36. Dyer, D. (leader) , Adanur, S. and several other COE faculty, "Mobile Data Acquisition and Processing System (MODAPS) for Commercial Vehicle Highway Systems Research", A Pre-proposal Submitted to the Office of the VP for Research for NSF MRI Program, Nov. 9, 99; Total Budget: $1,130,500.00. Dr. Adanur's share: $57,500.00.
37. Adanur, S., and Chaikof, E. L., "Development of Textile Prostheses for Vascular Applications", Biological Sciences Research Grant (BioGrants) Program; 2 years; $ 50,000.00; submitted Nov. 5, 1998.
38. Parker, F. (leader), Adanur, S., and 8 other Engineering Faculty, "Enhancing AU Research in Highway and Transportation Systems", submitted to AU as a priority program, September 1998.

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39. Madsen, N. (leader), Adanur, S., and 10 other Engineering Faculty, “Engineering Education”, submitted to AU as a priority program, September 1998.
40. Adanur, S. (team leader), Bakhtiyarov, S., and Beale, D., "Filling Yarn Performance Evaluations in Airjet Weaving", 3 years, $ 180,000.00, submitted to National Textile Center, August 5, 1998.
41. ElMogahzy, Y. (team leader), Buschle-Diller, G., Adanur, S., Thomas, H., "A Fundamental Look at Causes of Effects of Quality Problems in the Textile Process", submitted to National Textile Center, August 1998.
42. ElMogahzy, Y. (team leader), Adanur, S., Liao, T., Radhakrishna, P., Behery, H., Mahrous, M., "Simulation of the Structural Features of Spun Yarn", submitted to National Textile Center, August 1998.
43. Adanur, S., and Bakhtiyarov, S., "Mechanistic Modeling of Laminar Composite Structures", DEPSCoR, $ 270,000.00 for 3 years, submitted June 24, 1998; 5 pages.
44. Adanur,S., and Chaikof, E. L., "Design and Characterization of Textile Prostheses for Vascular Applications", Biological Sciences Research Grant (BioGrants) Program; 2 years; $ 50,000.00; submitted October 22, 1997.
45. Adanur, S. (team leader), Bakhtiyarov, S., and Beale, D., "Filling Yarn Performance Evaluations in Airjet Weaving", 2 years, $ 225,000.00, submitted to National Textile Center, July 18, 1997.
46. Adanur, S. (team leader), Liao, T., Thomas, H., Realff, M. L. and Keefe, M., "Development of Fabric 3D Design and Analysis System", 3 years, $ 500,000.00, submitted to National Textile Center, July 18, 1997.
47. Adanur, S. (team leader), Thomas, H., and Chaikof, E. L., "Advanced Textile Prostheses for Vascular Applications", 2 years, $ 125,000.00, submitted to National Textile Center, July 17, 1997.
48. Adanur, S. (team leader), Liao, T., Brady, P., and Elton, D., "Design and Analysis of a Novel Fabric with Woven and Nonwoven Properties for Civil Engineering Applications", 2 years, $ 225,000.00, submitted to National Textile Center, July 18, 1997.
49. Thomas, H., (team leader), Adanur, S., "Selection and Modification of Gas Content in Compressed Fluid Systems for Textile Material Fabrication", National Textile Center, $ 150,000.00, July 18, 1997.
50. Thomas, H. (team leader), Adanur, S., Gross, C., Realff, M. L., and Michelson, R., "Linear Motion Control for Optimization of Fabric Formation Systems", National Textile Center, $ 170,000.00, July 18, 1997.
51. Adanur S., Lickfield, G., Kumar, S., Mohamed, M., "Advanced Fibrous Reinforced Structures for Industrial Applications", $ 600,000.00, 3 years, submitted National Textile Center, June 6, 1996.
52. Adanur, S., Thomas, H., Broughton, R. and Chaikof, E., "Advanced Textile Prostheses for Vascular Applications", $ 300,000.00, 3 years, submitted to National Textile Center, June 6, 1996.
53. Adanur, S., Broughton, R., Thomas, H., Realff, M. L., and Keefe, M., "Engineering Modeling of Textile Structures", $ 600,000.00, 3 years, submitted to National Textile Center, June 7, 1996.
54. Thomas, H., (team leader), Adanur, S., "Selection and Modification of Gas Content in Compressed Fluid Systems for Textile Material Fabrication", National Textile Center, $ 150,000.00, June 6, 1996.
55. Jang, B. Z., Fang, X. F., Adanur, S., Gowayed, Y., and Mills, G., "Layered Manufacturing of Fiber Reinforced Composites", a white paper submitted to Office of Naval Research, MURI '96/ONR 361, Nov. 30, 1995.
56. Gowayed, Y. (PI), Adanur, S., and 10 other researchers; Atomic Force Microscope, NSF Academic Research Infrastructure Program, January 26, 1995, $ 221,000.00, January 26, 1995.
57. Preform Technology for Resin Transfer Molding (RTM), National Science Foundation; $ 300,000.00 for 3 years; 1 page; submitted as part of the proposal Textile Composites Science and Engineering Research Center by Auburn, NC State, Clemson, Ga. Tech, NC A&T, Un. of Delaware, Spelman College, Southwest Research Institute, Oak Ridge National Lab, total project $ 21 million over 5 years, 1994.
58. Development of Textile Preform Stiffness Structures, 2 pages white paper submitted to Martin Marietta Manned Space Systems, New Orleans, 1993.
59. Development of Textile Preform Stiffness Structures, one-page white paper submitted to Pratt&Whitney, West Palm Beach, FL, 1993.

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60. Development of Novel Composite Structures with On-loom Stitching, white paper submitted to Pratt&Whitney, West Palm Beach, FL, 1994.
61. Engineering Design of Forming Fabrics with Computers; Asten Forming Fabrics, Inc., Appleton, WI; $ 37,500.00, 24 months (April 1, 93 - March 30, 95); PI: S. Adanur.
62. Tactical Wall Shelter; US Army Natick R&D and Engineering Center; $ 60,000.00; 12 months, PI: S. Adanur; submitted 1993.
63. No-Power Microclimate Cooling System for Infantry Personnel; US Army Natick R&D and Engineering Center; $ 400,000.00; 48 months; PI: S. Adanur (80 %); Co-PIs: W. Walsh (5 %); Y. Cengel - Univ. of Nevada at Reno (15 %); submitted 1993.
64. Synthesis, Fabrication and Characterization of Smart Textile Fibers and Structures for the Twenty First Century, S. Adanur (co-PI), Auburn: R. M. Broughton, B. Z. Jang, W. K. Walsh, Clemson: M. S. Ellison, R. V. Gregory, Ga. Tech: S. Kumar (co-PI), M. B. Polk, National Textile Center, $ 770,000.00 for 3 years, submitted 1993.
65. Development of a New Hybrid Yarn and Fabric with Flame Resistance Properties, S. Adanur (PI), W. K. Walsh, Y. ElMogahzy, R. P. Walker, D. Hall, National Textile Center, $ 300,000.00 for 3 years, submitted 1993.
66. Applications of Advanced Computational and Design Simulation Techniques for Modeling Performance of Woven Industrial Textiles, National Textile Center, B. S. Gupta (PI), A. Seyam (NC State), S. Adanur, $ 410,000.00 for 3 years, submitted 1993.
67. High Speed Weaving of Low Size Add-on Warp Yarns, National Textile Center, M. H. Mohamed (PI, NC State), S. Adanur, et al, $ 730,000.00 for 3 years, submitted 1993.
68. Coated Fabrics: Adhesion, Structural Design and Evaluation, National Textile Center, J. R. Aspland (PI, Clemson), S. Adanur, et al, $ 1,000,000.00 (Auburn's share $150,000) for 3 years, submitted 1993.

Fully Developed Proposals Submitted

1. DoD/SBIR Topic A224-010: "Bio-based Fabric/Material/Textiles for Military Applications", with Optowares Inc., AU budget: $70,000 for 6 months, submitted June 2, 2022.

2. DOD/SBIR Topic CBD222-001: "Non-Perfluoroalkyl and Non-Polyfluoroalkyl Substances (PFAS) Elastomeric Chemical Barrier Materials", with Optowares Inc., AU budget: $50,000 for 6 months, submitted June 2, 2022.

3. Adanur, S., Additive Manufacturing of Engineered Woven Fabric Structures, Auburn RSP, January 2022, $50,000.00.

4. Adanur, S., Novel High Performance Oriented Films for Ballistic Protection, submitted to DOD STTR 21.3 Topic: A21C-T025 with Karagozian & Case, LLC, Glendale, CA, 21 October 2021, 6 months, Auburn share: $75,000.00.

5. Adanur, S., Recycling of Polyvinyl Chloride (PVC) Coated Polyester (PET) Fabrics, Submitted to Alabama Department of Economic and Community Affairs, AL Research and Development Enhancement Fund (ADECA-ARDEF, $160,455.00, July 20, 2021.

6. Adanur, S., 3D Printing of Engineered Woven Fabric Structures, Submitted to AU 2021 RSP Award Program, $50,000.00, 24 March 2021.
7. Coleman, J., and Adanur, S., "Recycling of Polymeric Structures", submitted to AU Undergraduate Research Fellowship, $5,000.00, 17 January 2020.

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8. Adanur, S., and Teel, K., "Additive Manufacturing of Interlaced Polymeric Structures", submitted to AU 2020 IGP Interdisciplinary Team Research Grant, $50,000.00, 10 January 2020.
9. Adanur, S., Polyvinylchloride (PVC) Coated Polyester Material Recycling, Submitted to Kittrich LLC, $55,465.00, 17 October 2019.
10. Xu, K., and Adanur, S., "Polymer Fiber Interlacing with Additive Manufacturing", submitted to AU Undergraduate Research Fellowship, $ 5,000.00, 5 February 2019.
11. Adanur, S., Activated Carbon Fiber Based Cathode Filters for Proton Exchange Membrane Fuel Cell Poisoning Prevention via Adsorption, submitted to AU-IGP, $50,000.00, 5 November 2018.
12. Adanur, S., Separation of Detrimental Contaminants via Adsorption to Prevent Proton Exchange Membrane Fuel Cell Poisoning, submitted to NSF, 36 months, $366,707.00, 18 May 2018.
13. Adanur, S., Jiang, Z., and Aksoy, B., "Improving Sheet Dryness in the Press Section with the Inclusion of High Surface Area Polymeric Fibers"; $149,698.00, submitted to Agenda 2020 Technology Alliance, 30 January 2017.
14. Adanur, S., "Activated Carbon Fiber Based Cathode Filters for Proton Exchange Membrane Fuel Cell Poisoning Prevention via Adsorption", $359,098.00, submitted to NSF, 13 October 2016.
15. Adanur, S., and Cao, Y., "Multiscale Design Methodology for Engineered Fibrous Structures", $451,206.00, submitted to NSF, 15 September 2016.
16. Fibers and Textiles Revolution, submitted to the U.S. Army as part of the Manufacturing Innovation Institute federal initiative, $150,000,000.00. Adanur is the PI from Auburn University along with other six co-PIs, 21 September 2015.
17. Adanur, S., "3D Hybrid Weaving/Knitting Technology for Advanced Fabric Structures", $63,098.00, submitted to Gehring-Tricot Corp., 4 September 2014.
18. Adanur, S., "Recycling of PVC Coated Fiberglass Fabric Waste", $43,520.00, submitted to Mermet Corporation, 23 May 2014.
19. Adanur, S., "Activated Carbon Fiber Based Cathode Filters for Proton Exchange Membrane Fuel Cell Poisoning Prevention via Adsorption", $356,068.00, submitted to NSF, 1 Oct. 2014.
20. Adanur, S., and Cao, Y., "A Novel Scientific Methodology for Interlaced Fibrous Structure Design and Behavior in 3D Virtual Reality", $432,220.00, submitted to NSF, 4 September 2014.
21. Adanur, S., "Activated Carbon Fiber Based Cathode Filters for Proton Exchange Membrane Fuel Cell Poisoning Prevention via Adsorption", $363,514.00, submitted to NSF, 17 Oct. 2013.
22. Adanur, S., and Cao, Y., "A Novel Scientific Methodology for Interlaced Fibrous Structure Design and Behavior in 3D Virtual Reality", submitted to NSF, 24 Sept. 2013, $442,001.00.
23. Broughton, R. (PI), Beale, D., Adanur, S., and Foster, W. A., "Rib Stiffening of Struts and Rockets Using Braided, Open-Architecture Composite Structures (O-ACS)", submitted to NASA, 7 June 2013, $398,484.00.
24. Adanur, S., "Exposure Assessment of Nanoparticles Embedded in Fibrous Materials for Safety and Health Effects", $297,938.00, submitted to NSF, 12 February 2013.
25. Adanur, S., Meir, A. J., and Cao, Y., "A Novel Scientific Methodology for Interlaced Fibrous Structure Design and Behavior in 3D Virtual Reality", $481,515.00, submitted to NSF, Oct. 1, 2012.
26. Adanur, S., "Activated Carbon Fiber Based Cathode Filters for Proton Exchange Membrane Fuel Cell Poisoning Prevention via Adsorption", $190,415, submitted to NSF, 18 Sept. 2012.
27. Adanur, S., "Health and Safety Effects of Nanoparticles Embedded in Fibrous Materials", $192,469.00, submitted to NSF, 14 February 2012.

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28. Reich, A., Dykes, W., Broughton, R., Beale, D., and Adanur, S., "Light Weight Material for Full Scale Parachutes", SBIR proposal by Streamline Automation, $100,000.00, submitted to the U.S. Army, Sept. 28, 20011.
29. Adanur, S., "Recovery and Reuse of Waste PVC Coated PET Fabrics", $62,865.00, submitted to Covidien, 13 September 2011, 12 months.
30. Adanur, S., "Properties of Carbon Nanotube (CNT) Reinforced Injection Molded Polycarbonate (PC) Nanocomposites", $28,228.00, submitted to NSF, 25 August 2011, 12 months.
31. Adanur, S., "Composite Design, Manufacturing and Testing", $13,771.00, submitted to Quality Resource Technologies, Inc., 15 March 2011, 12 months.
32. Adanur, S., "Nanofiber Based Modified SPI/SPAES Composite Membrane for Proton Exchange Membrane Fuel Cells", $200,069.00, submitted to NSF, 1 March 2011, 36 months.
33. Adanur, S., "Prevention of Proton Exchange Membrane Fuel Cell Poisoning via Adsorption Using Activated Carbon Fiber Based Cathode Filters", $210,719.00, submitted to NSF, 1 March 2011, 36 months.
34. Adanur, S., "Nanofiber Based Modified SPI/SPAES Composite Membrane for Proton Exchange Membrane Fuel Cells", $200,069.00, submitted to NSF, 1 March 2011, 36 months.
35. Adanur, S., and Davis, E., "Controlled Release from Halloysite/Polyethylene Oxide Nanocomposites", $291,040.00, submitted to NSF, 15 February 2011, 36 months.
36. Adanur, S., (PI), Baginski, M., and Marghitu, D., "Design and Characterization of a Novel Filling Insertion System for Weaving Machines", $324,595.00, submitted to NSF, 29 Sept. 2010.
37. Adanur, S., (PI), and Davis, E., "Halloysite/Polyethylene Oxide Nanocomposite Fibers and Membranes", $312,857.00, submitted to NSF, 29 Sept. 2010.
38. Adanur, S., "Bi-component Fiber Based Membrane Processing and Characterization", $19,250.00, submitted to NSF, 20 Sept. 2010.
39. Adanur, S., "Synthesis and Characterization of a New Sulfonated Polyimide Based Membrane for Proton Exchange Membrane Fuel Cells", $189,663.00, submitted to NSF 15 Sept. 2010.
40. Adanur, S., "Prevention of Proton Exchange Membrane Fuel Cell Poisoning via Adsorption using Activated Carbon Fiber Based Cathode Filters", $202,163.00, submitted to NSF 9 Sept. 2010.
41. Adanur, S., Health and Safety Effects of Engineered Textile Structures", $ 187,727.00, submitted to NSF, 19 August 2010.
42. Adanur, S., and Davis, Ed., "Halloysite/Polyethylene Oxide (PEO) Nanocomposite Fibers and Membranes", $313,811.00, submitted to NSF, 15 February 2010.
43. Adanur, S., and Meir, A. J., "Conceptual Design and Characterization of 3D Interlaced Fibrous Structures for High Performance Applications", duration: 36 months, submitted to National Science Foundation, Oct. 1, 2009, $343,138.00.
44. Adanur, S., and Baginski, M., "Design and Characterization of a Novel Filling Yarn Insertion System for Weaving Machines", duration: 36 months, submitted to National Science Foundation, Oct. 1, 2009, $392,301.00.
45. Adanur, S., and Schwartz, P., "Measurement and Characterization of Proton Exchange Membrane Fuel Cell Poisoning Using Newly Designed Cathode Filters with Activated Carbon Fibers"; duration: 36 months, submitted to Department of Commerce, NIST (National Institute of Standards and Technology), Recovery Act Measurement Science and Engineering Research Grants Program, 2009-NIST-ARRA-MSE-Research-01, July 8, 2009, $682,899.00.
46. Adanur, S. (PI), Kemppainen, B. (PI), Co-PIs: P. Schwartz, R. A. Kennis, K. S. Joiner, A. B. J. Presley, D. D. Schwartz, F. W. Van Ginkel, "Characterization and In Vitro/In Vivo Evaluation of Health and Safety Effects of Engieneered Textile Nanomaterials", duration: 24 months, submitted to NIEHS Grand Opportunity Grant Program in Engineered Nanomaterial Environmental Health and Safety (RC2), 28 May 2009, $1,112,338.00.

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47. Adanur, S. (PI), Davis, E., Kraska, M., and Schwartz, P., "Development and Improvement of a New Program in Polymer and Fiber Engineering: Integration of Undergraduate Research and Education Through a Cohort Project", duration: 26 months; submitted to NSF, 21 May 2009, $199,492.00
48. Schwartz, P. (PI), and 14 other co-PIs including Adanur, S., "IGERT: Polymer Engineering –Graduate education beyond the boundaries of traditional departments", Submitted to NSF, 13 March 2009; $2.00 (preliminary proposal).
49. Adanur, S., "Application of 3D Knitting/Weaving Technologies to Non-Apparel Markets", $36,491.00, Start Date: 7/1/2009, duration: 12 months, Institute of Textile Technology, Feb. 25, 2009.
50. Adanur, S., (PI), and Meir, A., "Conceptual Design and Characterization of 3D Interlaced Fibrous Structures for High Performance Applications", $305,177.00, Start date: 09/01/09, duration: 3 years, submitted to National Science Foundation, Feb. 4, 2009.
51. Adanur, S., and 4 other researchers from Clemson University, "Development of Drug Eluting Textile Stents", submitted to NTC, 14 Nov. 2008 (no budget).
52. Adanur, S., and Davis, Ed., "Halloysite/Polyethylene Oxide (PEO) Nanocomposite Fibers and Membranes", $281,743.00, modified and resubmitted to NSF, 29 Sept. 2008.
53. NSF, NSF REU Site for Micro/Nano-Structured Materials, Therapeutics, and Devices, **PI**: M.E. Byrne, Co-PI: S. Duke, Faculty Mentors: S. Adanur, M. Auad, M.E. Byrne, E. Davis, V.A. Davis, S. Duke, O. Fasina, A. Gorden, R. Gupta, J.W. Hong, E. Lipke, B. Prorok, W. Ravis, C. Roberts. Period: 03/01/09- 02/29/12; $331,880.
54. Adanur, S., "Design and Characterization of a Novel Filling Yarn Insertion System for Weaving Machines", $180,493.00, submitted to NSF, 24 Sept. 2008.
55. Adanur, S., and Davis, Ed., "Halloysite/Polyethylene Oxide (PEO) Nanocomposite Fibers and Membranes", $281,743.00, submitted to NSF, 13 Feb. 2008.
56. Adanur, S., Auad, M., and Schwartz, P., "Development and Improvement of New Polymer and Fiber Engineering Program", $148,708.00, submitted to NSF, 20 May 2008.
57. Adanur, S. (PI), Meir, A., Thomas, H., and Yilmaz, L., "Conceptual Design and Characterization of 3D Interlaced Fibrous Structures for High Performance Applications", $402,914.00, Start date: 04/01/08, duration: 3 years, submitted to National Science Foundation, Oct. 1, 2007.
58. Adanur, S., "Nonwoven Nanofilter Design and Characterization Using Nanoclay Reinforced PEO Fibers", $48,000.00, Duration: 07/01/08-07/01/09, submitted to ITT/NCSU Textile and Materials Research Consortium, Sept. 13, 2007.
59. Adanur, S., "Expert System for Weavability of Filling Yarns with Air-jet", $19,530.00, Duration: 07/01/08-03/01/09, submitted to ITT/NCSU Textile and Materials Research Consortium, Sept. 13, 2007.
60. Adanur, S., "Characterization and Application of a Novel 3D Hybrid Woven/Knit Fabric for Composites", $19,968.00, Duration: 07/01/08-03/01/09, submitted to ITT/NCSU Textile and Materials Research Consortium, Sept. 13, 2007.
61. Palamutcu, S. (PI), Adanur, S., (consultant), and 19 other researchers, "Denizli Multiple Discipline Textile Research Application and Education Laboratories Infrastructure", submitted to Turkish State Planning Agency, submitted 16 July 2007.
62. Contribution to proposal AU-Ga Tech Polymer Center to NSF.
63. Vaidya, U., Dean, D., (POCs), Davis, V., Adanur, S. (Co-PIs from Auburn) and 8 other Co-PIs from UAB, AU, TU and UA, "Engineered Lightweight Multiscale Materials and Structures for Energy Efficient Transportation", $1,950,000.00 (Auburn's budget: $828,003.00), Start date: 01/01/2008, duration: 3 years, submitted to Department of Energy/EPSCoR, 31 August 2007.
64. Adanur, S., "Enhancing New Polymer and Fiber Engineering Curriculum Through Faculty and Course Development", $133,157.00, Start date: 01/01/2008, duration: 3 years, submitted to National Science Foundation, 8 May 2007.

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65. Adanur, S. (PI), Meir, A., Thomas, H., and Yilmaz, L., "Virtual Manufacturing and Characterization of High Performance Interlaced Fibrous Structures", $429,668.00, Start date: 09/01/07, duration: 3 years, submitted to National Science Foundation, Feb. 15, 2007.
66. Hirt, D. (PI), Husson, S., Luzinov, I., and Adanur, S., "Textile Stents: Advances Toward Drug Elution", submitted to National Textile Center, Aug. 31, 2006, Auburn's share: $46,355.00.
67. Netravali, A. N. (PI), "Modification of UHMWPE Fibers for Triple Protection", submitted to National Textile Center, Aug. 31, 2006, Auburn's share: $13,510.00.
68. Netravali, A. N. (PI), Adanur, S., and Leigh, S., "Cellulose/Soy Protein Based 'Green' Composites", submitted to National Textile Center, Aug. 29, 2006, Auburn's share: $42,347.00.
69. Adanur, S. (PI), and Davis, V., "Synthetic Nanoclay Reinforced PVA and PEO Nanocomposite Fiber Based Membrane Processing and Characterization with Solution-Induced Intercalation", $427,774.00, Start date: 04/01/07, duration: 3 years, submitted to National Science Foundation, Sept. 29, 2006.
70. Thomas, H (PI), Seals, C., Adanur, S., Presley, A. B., and Simmons, K., "Individualized Character Product Generation from Gaming Software", submitted to National Textile Center, Aug. 31, 2006.
71. Adanur, S., "Wellington Sears Handbook of Industrial Textiles", $53,473.00, July 1, 2006-Dec. 31, 2007, Johnston Textiles, Inc., submitted April 10, 2006.
72. Adanur, S. (PI), Auad, M. L., Davis, V., Warner, S., and Netravali, A., "Nanoparticle Reinforced Hybrid Fibers", submitted to National Textile Center, Aug. 28, 2006.
73. Adanur, S. (PI), Thomas, H., Meir, A. J., and Yilmaz, L., "Finite Element Modeling of Woven Fabric Performance", submitted to National Textile Center, Aug. 28, 2006.
74. Fan, Q. (PI), Calvert, P., Ugbolue, S. C., Yang, C., and Adanur, S., "Photovoltaic Textiles using Dye Sensitized Nanostructures", submitted to National Textile Center, Aug. 31, 2006.
75. Adanur, S., "Bifurcated Polymeric Braided Stent Manufacturing and Testing", $44,353.00, July 1, 2006 – Dec. 31, 2006, Medtronic Vascular, submitted April 14, 2006.
76. Adanur, S., "Development and Characterization of Polymeric Textile Stents and Medical Devices", $78,446.00, May 1, 2006 – Oct. 31, 2007, Medtronic Vascular, submitted March 6, 2006.
77. Adanur, S., and Davis, V. A., "Synthetic Nanoclay Reinforced PVA and PEO/PEG Nanocomposite Fiber Based Membrane Processing and Characterization with Solution-Induced Intercalation", $386,546.00, Sept. 1, 2006 – Aug. 31, 2009, National Science Foundation, submitted Jan. 25, 2006.
78. Aglan, H. (PI, Tuskegee Univ.), Adanur, S., Webster, J., and 3 other professors (Tuskegee Univ.), "NIRT: Formulation and Characterization of Nanoadhesive Systems", $1,364,767.00, Auburn's share: $187,317.00; July 1, 2006-June 30, 2010; National Science Foundation, submitted Nov. 29, 2005.
79. Adanur, S. (PI), Tatarchuk, B., Choe, B., Abdelhady, F., Fan, Q., and Warner, S., "Coated and Laminated Fabrics for Fuel Cells", May 1, 2005-April 30, 2006, National Textile Center, $110,550.00, submitted 26 September 2005.
80. Adanur, S., and Davis, V. A., "Dielectric and Radiation Fast Curing of Net-Shape Polymeric Composites in Braiding", submitted to National Science Foundation, $380,331.00, 19 Sept. 2005.
81. Adanur, S. (PI), Thomas, H., Meir, A., and Yilmaz, L., "Finite Element Modeling of Woven Fabric Performance", submitted to National Textile Center, 24 August 2005.
82. Adanur, S. (PI), and 7 other researchers, "Metal/Nonmetal Particle Modified Hybrid Micro/Nano Fibers", submitted to National Textile Center, 26 August 2005.
83. Abdelhady, F. (PI), Broughton, S., and Adanur, S., "An Innovative Approach in Electrospinning Process", submitted to National Textile Center, 26 August 2005.
84. Adanur, S. (PI), and Schwartz, P., "Educational Partnership Initiative Between the U.S. and Turkish Students", submitted to U.S. Department of State, $133,788.00, March 24, 2005.

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85. Adanur, S., “Braided Stent Manufacturing”, proposal submitted to Guidant Corporation, Santa Clara, CA., $3,500.00, 3 Jan. 2005.

86. Aglan, H. (PI, Tuskegee Univ.), Adanur, S., Webster, J., and Ludwick, A. (Tuskegee Univ.), “NIRT: Design and Manufacturing Processes for Nanoadhesive Systems”, $1,437,197.00, Auburn’s share: $187,317.00; July 1, 2005-June 30, 2009; National Science Foundation, submitted Nov. 11, 2004.

87. Adanur, S. (PI), Tatarchuk, B., Choe, B., Abdelhady, F., Fan, Q., and Warner, S., “Coated and Laminated Fabrics for Fuel Cells”, May 1, 2005-April 30, 2006, National Textile Center, $139,199.00, submitted Oct. 2004.

88. Adanur, S. (PI), and Warner, S., and Chaikof, E. L., “Textile Prostheses for Vascular Applications”, May 1, 2005-April 30, 2006, National Textile Center, $87,632.00, submitted Sept. 2004.

89. Thomas, H. (PI), Elton, D., Riggs, L., and Adanur, S., “Reinforcement Fabrics with Electronic Transmission Capabilities”, submitted to National Textile Center, $117,756.00, Aug. 31, 2004.

90. Adanur, S. (PI), Thomas, H., and Meir, A., “Finite Element Modeling of Woven Fabric Performance”, submitted to National Textile Center, Aug. 31, 2004.

91. Adanur, S. (PI), Slaten, L., Aglan, H., Netravali, A., and Patra, P., “Metal/Nonmetal Particle Reinforced Hybrid Micro/Nano Fibers”, submitted to National Textile Center, $130,205.00, Aug. 31, 2004.

92. Byrne, M. E., Adanur, S., and 20 other researchers, “REU Site for Micro/Nano-Structured Materials and Devices”, submitted to NSF Research Experiences for Undergraduates (REU), $500,000.00, Aug. 16, 2004.

93. Gupta, R., Tatarchuk, B. J., (leaders), Adanur, S., and 29 other researchers, “MicroStructural Design of Solids for High Volumetric Reactivity, Proposal submitted to the NSF IGERT Program, $3,394,091.00, June 2004.

94. Adanur, S., and McClain, A., “NIRT: Design and Manufacturing Processes for Nanoadhesive Systems”, submitted to NSF through Tuskegee University, Oct. 22, 2003, Auburn’s share: $ 274,893.00 (Total project amount: $1,999,819).

95. Adanur, S., Beale, D., Abdelhady, A., and Pan, N., “Characterization of a Novel 3D Hybrid Woven/Knit Structure”, submitted to National Textile Center, 3 years, 8 September 2003.

96. Adanur, S., Slaten, B. L., and Chang, K., “Expert System for Weavability of Filling Yarns in Air-Jet”, submitted to National Textile Center, 3 years, 8 September 2003.

97. Adanur, S., Thomas, H., Meir, A., and Realff, M. L., “Finite Element Modeling of Woven Fabric Performance”, submitted to National Textile Center, 3 years, 8 September 2003.

98. Adanur, S., Schwartz, P., McClain, A., Bakhtiyarov, S., and Gross, R. S., “Dielectric, Infrared and Radiation Fast Curing of Net-Shape Polymeric Composites in Braiding and Filament Winding”, submitted to Alabama DEPSCoR, Aug. 13, 2003, $ 750,000.00; duration: 3 years.

99. Bransby, D. (PI), Adanur, S., and 12 other researchers from Auburn and Tuskegee, “MUSES: Lignocellulosic Biomass Resources, Paper, Energy and Society: Research and Education to Define and Improve System Relationships”, submitted to National Science Foundation, March 4, 2003, $100,000.00.

100. McClain, A. R., Adanur, S., and Lange, C. R., “Development and Evaluation of Novel Fibrous Structures for Sorption of Environmental Contaminants”, submitted to National Science Foundation, Feb. 25, 2003, $362,268.00.

101. Adanur, S., McClain, A., and Realff, M. L., “Characterization and Modeling of a Novel 3D Hybrid Woven/Knitted Fibrous Structure for Composite Reinforcement”, submitted to National Science Foundation, Feb. 1, 2003, $423,143.00.

102. Adanur, S., and McClain, A., “Optimization of a Hybrid Weaving/Knitting Machine for Novel 3D Fibrous Structures as Composite Reinforcement Materials”, submitted to National Science Foundation, Jan. 21, 2003, $ 38,803.

103. Adanur, S., and McClain, A., CCLI-A&I “Integrating the ‘Textile Teaching and Learning Initiative’ into Textile Engineering Undergraduate Education”, submitted to National Science Foundation, Dec. 4, 2002, $ 191,869.00.

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104. Adanur, S., and McClain, A., "NIRT: Design and Manufacturing Processes for Nanoadhesive Systems", submitted to NSF through Tuskegee University, Oct. 24, 2002, Auburn's share: $ 400,000.00 (Total project amount: $2,400,000.00).

105. Adanur, S., and McClain, A., "Radiation Curing Characteristics of Polymer Composites", submitted to National Science Foundation, Sept. 16, 2002, $345,369.00.

106. Adanur, S., Slaten, B. L., and Chang, K., "Expert System for Weavability of Filling Yarns in Air-Jet", submitted to National Textile Center, Sept. 6, 2002.

107. Adanur, S., Warner, S., Chaikof, E. L., and, Johnson, K., "Textile Prostheses for Vascular Applications", submitted to National Textile Center, Sept. 6, 2002, $150,346.00.

108. Adanur, S., Beale, D., and Pan, N., "Characterization of a Novel 3D Hybrid Woven/Knit Structure", submitted to National Textile Center, Sept. 6, 2002.

109. Adanur, S., Thomas, H., Meir, A. J., and Realff, M. L., "Finite Element Modeling of Woven Fabric Performance", submitted to National Textile Center, Sept. 6, 2002, $211,492.00.

110. Adanur, S., Bakhtiyarov, S., McClain, A., and Slaten, B. L., "Characterizing Heat and Mass Transfer in Fibrous Structures", submitted to National Textile Center, Sept. 6, 2002.

111. Adanur, S., Schwartz, P., McClain, A., Bakhtiyarov, S., and Gross, R. S., "Kinetics of Fast, Net-Shape Polymeric Composite Curing with Microwave, Infrared and Ultraviolet Energy in Braiding and Filament Winding", full proposal submitted to Alabama DEPSCoR, Aug. 27, 2002, $ 756,294.00.

112. Adanur, S., "Net-Shape Braided Composite Manufacturing with Microwave and Ultraviolet Energy", submitted to GKN Aerospace Alabama, Aug. 5, 2002, $46,329.00.

113. Adanur, S., "Engineered 3D Fibrous Structures", $ 137,336.00, submitted to National Science Foundation, June 5, 2002.

114. Adanur, S., Bakhtiyarov, S., and McClain, A., "Kinetics of Net-Shape Braided Composite Curing with Microwave and Ultraviolet Energy", $364,416.00, submitted to National Science Foundation, May 23, 2002.

115. Adanur, S., El-Halwagi, M., Hatch, L., and McClain, A., "Optimization of Synthetic Fibrous Materials Processing and Use: Coated and Laminated Structures", $ 99,956.00, Submitted to National Science Foundation, March 6, 2002.

116. Adanur, S., Broughton, R., and McClain, A., "Design Characterization of a Novel 3D Hybrid Knitted/Woven Fibrous Structure for Composites", $ 375,973.00, Submitted to National Science Foundation, January 30, 2002.

117. Adanur, S., "Design and Processing Characteristics of Net-Shape Braided Composites with Microwave Preheating and UV Curing", $ 240,918.00. Submitted to National Science Foundation, Oct. 1, 2001; 40 pages.

118. El-Halwagi, M., Adanur, S., and 20 other investigators, "A Multidisciplinary Integrative Doctoral Education, Research, and Training Program in Manufacturing Systems and Environmental Biocomplexity", Submitted to National Science Foundation in July 2000, Dr. Adanur's share: $ 240,000.00; 5 years.

119. Adanur, S., "3D Fibrous Structures for High Performance", $ 154,699.00. Submitted to National Science Foundation, June 6, 2000, 25 pages.

120. Adanur, S., "Design and Processing Characteristics of Net-Shape Braided Composites with Microwave Preheating and UV Curing", $ 244,511.00. Submitted to National Science Foundation, March 31, 2000; 18 pages.

121. Elton, D., and Adanur, S., "Geosynthetics Laboratory Test Apparatus Development", Auburn University, $2997.50, Dec. 7, 1999.

122. Adanur, S. (leader), and Bakhtiyarov, S., "Mathematical Modeling and Experimental Analysis of Thermal Insulation Materials", $ 97,706.00; National Textile Center, Nov. 99.

123. Adanur, S. (leader) and 5 other researchers, "Fabric Design and Analysis System in 3D Virtual Reality", $190,215.00; National Textile Center, Nov. 99.

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124. Adanur, S. (leader) and 3 other researchers, “Characterization of Air-Yarn Interface in Air-Jet Weaving”, $205,870.00; National Textile Center, Nov. 99.

125. Thomas, H. (leader), Adanur, S., and 4 other researchers, “Physiologically Designed Injury Prevention Textiles”, $197,848.00; National Textile Center, Nov. 99.

126. ElMogahzy, Y. (leader), Adanur, S., and 3 other researchers, “Establishing A Problem Theory in the Textile Process”, $129,687.00; National Textile Center, Nov. 99.

127. ElMogahzy, Y. (leader), Adanur, S., and 3 other researchers, “Simulation of the Structural Features of Spun Yarn”, $158,685.00; National Textile Center, Nov. 99.

128. Rahn, C. D. (leader), Adanur, S., and Dawson, D., “Synchronized Data Acquisition and Image Analysis for High-Speed On-line Monitoring”, $190,972.00; National Textile Center, Nov. 99.

129. Elton, D. (leader), Adanur, S., and Broughton, R., “Custom Geotextile Soil Filter Production and Evaluation for Infrastructure Projects”, $ 385,382.00; submitted to National Science Foundation Sept. 1999.

130. Adanur, S. (team leader), ElMogahzy, Y., Walsh, W., Liao, T., and Guo, H., "Development and Analysis of Improved Worsted Fabrics", $ 225,000.00, submitted to National Textile Center, August 7, 1998.

131. Adanur, S. (team leader), Broughton, R. M., Liao, T., and Elton, D., "A Hybrid Woven and Nonwoven Fabric for Infrastructure", 3 years, $ 190,000.00, submitted to National Textile Center, August 6, 1998.

132. Adanur, S. (team leader), Thomas, H., Liao, T., Realff, M. L., Kim, Y. K., Abouiiana, M., and Keefe, M., "Fabric Design and Analysis System in 3D Virtual Reality", 3 years, $ 450,000.00, submitted to National Textile Center, August 4, 1998.

133. Thomas, H. (team leader), Adanur, S., ElMogahzh, Y., and Stegmaier, T., "Redesign of Weaving To Eliminate or Reduce Warp Sizing", $ 375,000.00, submitted to National Textile Center, August 1998.

134. Thomas, H. (team leader), Adanur, S., Beckham, H., Oi, D., Oi, F., and Walsh, W., "Bioengineered Geotextiles to Reduce Insect Infestations", $ 395,000.00, submitted to National Textile Center, August 1998.

135. Adanur, S. (PI), Bakhtiyarov, S., and Overfelt, R., "FRP/Concrete Hybrid Structural Components for Waterfront Construction", Naval Facilities Engineering Command Contracts Office, $ 74,695.00, July 1, 1998 - June 30, 1999.

136. Adanur, S., "Design and Development of a Novel Stitching Method for Laminar Textile Composites", Dow-United Technologies Composite Products, Inc., $ 38,346.00, 1 year.

137. Jang, B. Z. (PI), Adanur, S., and Stamper, R., "Manufacture of Integrated 3-D Composite Structures Using Solid Freeform Fabrication", National Science Foundation, $ 284,268.00, three years, Start date: 10/01/98.

138. Adanur, S., and Kenney, R., "Design and Characterization of Advanced Fibrous Reinforced Structures", NASA Lewis, Marshall Space Flight Center, $ 19,000.00, April 1, 1999-June 30, 2000.

139. Adanur, S., and Chaikof, E. L., "Design and Characterization of Textile Prostheses for Vascular Applications", Auburn University Biogrants Program, $ 66,563.00, June 1, 1998 - May 31, 2000, 21 pages.

140. Adanur, S., Liao, T., Thomas, H., Realff, M. L. (Ga Tech) and Keefe, M. (U. of Delaware), "Development of Fabric 3D Design and Analysis System", National Textile Center, May 1, 98-April 30, 1999, $ 191,861.

141. Adanur, S., Liao, T., Brady, P., and Elton, D., F98A-18, "Design and Analysis of a Novel Fabric with Woven and Nonwoven Properties for Civil Engineering Applications", National Textile Center, May 1, 98-April 30, 1999, $ 138,225.

142. Adanur, S., Bakhtiyarov, S., and Beale, D., I98A-03, "Filling Yarn Performance Evaluations in Airjet Weaving", National Textile Center, May 1, 98-April 30, 1999, $ 140,075.

143. Jang, B. Z., Adanur, S., and Gowayed, Y., "Solid Free Form Fabrication of Advanced Alloys and Metal Matrix Composites", 36 months, $ 282,310.00, submitted to National Science Foundation, Feb. 1997.

144. Adanur, S., Broughton, R., Thomas, H., Realff, M., "Engineering Modeling of Textile Structures", National Textile Center, $ 165,919, duration: 1 year, 1997.

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145. Adanur, S., Development and Analysis of Stitch Bonded, Laminar Thermoplastic Composites, National Science Foundation, $ 250,000.00 for five years; Sept. 1, 96-Aug. 31, 2001.

146. Adanur, S., PFF 96, Presidential Faculty Fellows, National Science Foundation, $ 500,000.00 for five years; duration: October 1, 1996 - Sept. 30, 2001.

147. Adanur, S., Thomas, H., Broughton, R. and Chaikoff, E. L., "Advanced Textile Prostheses for Vascular Applications", National Textile Center, $ 85,639, duration: 1 year (March 1, 96 - Feb. 28, 97) submitted Sept. 95.

148. Adanur, S. (team leader), Gowayed, G., Lickfield, G., Wang, Y., Kumar, S., Mohamed, M., and Salama, M., "Advanced Fibrous Reinforced Structures for Industrial Applications", National Textile Center, $ 200,556, duration: 1 year (March 1, 96 - Feb. 28, 97), submitted Sept. 95.

149. Gupta, B. S. (team leader), Adanur, S., Pourdeyhimi, B., and Seyam, A. M., "Engineering Mechanical Properties of Woven Industrial Textiles Using Structural Modeling and Advanced Computer Simulation Techniques", National Textile Center, $ 250,000, duration: 1 year (March 1, 96 - Feb. 28, 97). Submitted Aug. 95.

150. Presidential Faculty Fellows 1995, S. Adanur, NSF, $ 500,000.00 for 5 years, 15 pages. Submitted Nov. 94.

151. Synthesis, Processing and Characterization of Novel Textile Fibers for the Twenty First Century, National Textile Center; Project Leaders and % contribution to proposal preparation: Sabit Adanur (50%) and Satish Kumar of Georgia Tech (50%); 6 other investigators from Auburn, Clemson and Georgia Tech; Total Budget: $ 1,164,000 for 3 years (March 1, 1995-February 28, 1996); submitted Aug. 94.

152. Textile Structures for Composites, M. H. Mohamed (leader), S. Adanur and 15 other researchers from NC state, Clemson, Ga. Tech, Auburn, $ 600,000, 1 year, submitted to NTC, 1994.

153. Design, Development and Characterization of a Novel Carbonaceous Yarn and Fabric with Ignition Resistance Properties, S. Adanur (Project Leader), W. K. Walsh, D. Hall, Y. ElMogahzy, $ 225,000; 3 years; submitted to NTC, 1994.

154. Advanced Textile Prosthesis for Vascular Applications, H. Olson Ga Tech, (leader), S. Adanur, P. Ludovice (Ga Tech), E. Chaikof (Emory U), $ 450,000, 3 years, submitted to NTC, Aug. 94.

155. Engineering Mechanical Properties of Woven Industrial Textiles Using Structural Modeling and Advanced Computer Simulation Techniques, B. S. Gupta (NC State, leader), S. Adanur, A. Seyam (NC State), $ 480,000, 3 years, submitted to NTC, Aug. 94.

156. Goswami, B. (Clemson, PI), Adanur, S., Wang, Y. (GA Tech), Batra, S. K., Ghosh, T. K. (NC State), "Coated Fabrics", $1,000,000.00, 3 years, submitted to NTC, Aug. 1994.

157. High Speed Weaving of Low Size Add-on Warp Yarns, M. H. Mohamed (NC State, leader), S. Adanur, L. Dorrity (Ga Tech), M. Salama, L. Moser (NC State), $ 730,000, 3 years, submitted to NTC, Aug. 94.

158. Fast Net-Shape Manufacturing of Polymer Composite Structures, S. Adanur, NSF Career 1994, $ 200,000 for 3 years; 32 pages.

159. An Integrated Approach to Resin Transfer Molding, ARPA, B. Jang (50%), S. Adanur (40%), Y Gowayed (10%),14 pages, $571,370 for 3 years, 1994.

160. Design, Development and Characterization of a Novel Carbonaceous Yarn and Fabric with Ignition Resistance Properties, S. Adanur (Project Leader), W. K. Walsh, D. Hall, Y. ElMogahzy, $ 225,000; 3 years; submitted to NTC, Aug. 94.

161. NSF Young Investigator Award 1994; $ 125,000.00 (could be increased to 500,000.00 if approved); duration: 36 months; 15 pages, submitted Jan. 94.

162. NSF Engineering Research Equipment: Resin Transfer Molding Machine; $ 56,000 (AU cost share $ 28,000); 36 months; PI: S. Adanur, CO-PIs: B. Z. Jang (Materials Eng) and Y. Gowayed; 28 pages, submitted Jan. 94.

163. NSF-RIA: Development and Analysis of Stitch Bonded, Laminar Thermoplastic Composites, $ 108,027.00 (AU $ 9,200 cost share), duration: 36 months, 30 pages, submitted Jan. 94.

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164. A Study of Braiding Mechanics and Factors Limiting the Compactness of Braided Structures Including the Design Consolidation and Testing of a 'Novel Yarn Slip Interlacing' System, R. Broughton (leader), S. Adanur, D. Beale, M. Nelms, T. Wang, R. Walker, National Textile Center, $ 206,940; March 94-Febr. 95, submitted Aug. 93.

165. Textile Fibers for the Twenty-First Century, National Textile Center; Project Leaders and % contribution to proposal preparation: Sabit Adanur (50%) and Satish Kumar of Georgia Tech (50%); 6 other investigators from Auburn, Clemson and Georgia Tech; Total Budget: $ 772,751 for 3 years (March 1, 1994-February 28, 1996); Aug. 93.

166. Intelligent Weaving: Logic and Mechanisms; National Textile Center; Project Leader: Mansour H. Mohamed of NC State (90% contribution); Investigators: Salah E. Elmaghraby (5%), and Sabit Adanur (5%); Total Budget: $ 571,137.00 for three years (March 1, 1994-Febr. 28, 1996); Aug. 93.

167. Presidential Faculty Fellows Awards 94, National Science Foundation, $ 500,000.00 over five years, 15 pages, submitted Nov. 93.

168. Computer Aided Design of Engineered Textile Structures, AU Grant-in-Aid Competitive Grants Program, $ 3,000.00, 11 pages, submitted 1993.

169. Industrial Plant Test of Murata Air-Jet Spinning Mill Monitoring System, NTC Technology Transfer Event Proposal, Project Leader: S. Adanur (80%), Investigators: R. Broughton (5%), Y. Elmogahzy (10%), K. Lynch (5%); Budget: $ 50,603; Duration: March 1, 94- Febr. 28, 95; submitted Nov. 93.

170. Application of Stitching Technology in Textile Composites Manufacturing, NTC Technology Transfer Event Proposal; Project Leader: S. Adanur (95%); Investigators: B. Jang (5%); Budget: $ 40,570.00; Duration: March 1, 94- Febr. 28, 95; submitted Nov. 93.

171. Course Development of "Design of Textile Manufacturing Systems and Mechanisms", NTC Technology Transfer Event Proposal; Project Leader: S. Adanur (40%); Investigators: D. Beale (40%), M. Nelms (5%), R. Walker (10%), R. Broughton (5%); Budget: $ 15,000.00 (approx.); Duration: 1 year; submitted Nov. 93.

172. Multi-functional Polymer Gel Materials, B. Z. Jang (PI), Co-PIs: G. Mills and S. Adanur, DEPSCoR, $459,499, 36 months, 40 pages, submitted 1993.

173. Research Initiation Award: Stitch Bonded Laminar Thermoplastic Composites, NSF, $ 107,716.00 (NSF: 98, 516.00, AU: 9,200.00); 36 months (June 15, 93- June 14, 96); PI: S. Adanur, 23 pages, submitted Jan. 93.

174. NSF Young Investigator Award (1993 NYI Program); NSF, $ 125,000.00 (potential to increase up to $ 500,000.00); 5 years (July 93 - June 98); PI: S. Adanur; submitted Jan. 93.

175. Engineering Research Equipment: Dynamic Mechanical Thermal Analyzer, NSF, $ 145,530.00, 12 months (Aug. 1, 93 - July 31, 93); PI: S. Adanur, Co-PIs: B. Jang, R. Broughton, W. Walsh; percent contribution in preparing the proposal: S. Adanur (100 %), submitted Jan. 93.

176. 3/4" Laboratory Extruder; AU College of Engineering Research Infrastructure Awards; $ 38,900.00; 24 months (Oct. 1, 93 - Aug. 31, 95); PI: S. Adanur (90 %), Co-PI: R. Broughton (10 %); 1993.

177. Computational and Mechanistic Modeling of 3-D Fabric Structures; AU College of Engineering, Research Initiatives, Graduate Research Assistantship; $ 10,000.00, 12 months (May 1, 93 - April 30, 95); PI: S. Adanur (85 %), Co-PI: D. Beale (15 %), 1993.

178. Computational and Mechanistic Modeling of Woven Fabric Structures and Weaving Process, AU-Research Grant-in-Aid, $ 8,080.00; 12 months (Jan. 1, 93-Dec. 31, 93), PI: S. Adanur (100%), 1992.

4.B.9 Description of the Scholarly Program

The objectives of my research program are to design, fabricate, test and analyze high-performance polymeric materials, fibrous structures and composites in order to improve overall performance; to develop new, innovative products and manufacturing processes and to reduce the total cost of high-performance materials production.

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As part of this plan, I have started new research programs in textile structural composites, nanocomposites, extrusion, injection molding, geotextiles, paper machine clothing, medical textiles, safety and protective materials, transportation materials, and nanomaterials in the department. Funding for several research projects has been secured from a variety of sources including National Science Foundation (NSF), US Army, National Textile Center (NTC) and private industry. A lab for high performance fibrous structures has been established in the department. The lab is equipped with state-of-the-art equipment for both research and teaching. The research results are being disseminated in national and international platforms as indicated in this document.

I am implementing an integrated design/fabrication/analysis/testing research program for high performance polymers, fibers, fabrics, composites, nanocomposites and plastics. The outline of my research program includes development of new structures, computer aided design and modeling, analysis, testing and database development. The research plan is aimed at increasing our understanding of the manufacturing, processing and performance of high-performance fibrous structures. This research program requires a multi-disciplinary background in mechanics, materials, physics, fibers, polymers, textile technology, heat transfer, computers and programming which are my expertise areas. I will continue to interact with other faculty and cooperate closely with other laboratories in local and regional universities.

My research group at Auburn University is recognized nationally and internationally in high performance polymeric, fibrous and composite structures. We are frequently invited to give lectures, seminars and papers in national and international organizations. We conduct both fundamental and applied research; in either case, we do original, state of the art research. Fundamental research expands our knowledge and contributes to the literature database. Fundamental research for the sake of doing research is not much use unless it is used in design, development, manufacturing and application of a useful product or process. Therefore, in every chance, I try to apply the knowledge gained from the fundamental work to a practical application. This is used to solve the current and emerging problems of the industry. Fundamental and theoretical research should be confirmed with experimental and real-life data whenever possible.

Graduate students are an important part of my research program. One of my goals is to develop an understanding and appreciation of research in my graduate students. Moreover, I strongly encourage my undergraduate students to take part in graduate research projects and I give them that opportunity whenever possible. I supported several undergraduate students to conduct research at Auburn through NSF REU program. I encourage and require team work strongly among my students while allowing each one to develop his/her own research personality, creativity and analytical thinking method. I have transferred several graduate research procedures into undergraduate courses.

I believe that research is essential to the future of Auburn University along with teaching and extension. Although, they may have been perfected in the industry, almost every major invention started at the universities. I incorporate my research findings into the classroom teaching promptly. A curriculum that is not continuously fed with new research findings may become stagnant. Research should not be done for the sake of doing research; it should be focused with a goal in mind while keeping an open eye for possible surprising developments along the way.

4.C EXTENSION

Short Courses / Workshops / Seminars (presenter's name is in *Italic*)

1. *Adanur, S.*, Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 2, 2013, Auburn University.
2. *Adanur, S.*, "Higher Education in Alabama", Panelist and presenter in "Workshop: Restructuring of Higher Education in Turkey, Problems and Solutions", Marmara University, Istanbul, Turkey, 6 July 2012.
3. *Adanur, S.*, Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 3, 2012, Auburn University.
4. *Adanur, S.,* Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 5, 2011, Auburn University.

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5. *Adanur, S.,* Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 6, 2010, Auburn University.
6. *Adanur, S.*, Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 7, 2009, Auburn University.
7. *Adanur, S.,* Composite Materials, Short course given to Boy Scouts at Merit Badge University, March 17, 2007, Auburn University.
8. *Adanur, S., and Isikel, L.*, Fuel cell research at PFE, presentation and demonstration given to Civil Air Patrol students, July 17, 2006, Auburn.
9. *Adanur, S.*, and Demir, A., Manufacturing of Industrial Textiles, Workshop given to Hassan Textile Inc., Istanbul, Turkey, July 20, 1999.
10. *Adanur, S.*, " Manufacturing of Geotextiles", 5th NSF/IFAI Professor Training Course for Geosynthetics, AU Engineering Extension Service, Auburn, AL, August 9-14, 1998 (also, gave an instructional tour of the Geotextiles and Fabric Formation labs to the course participants).
11. *Adanur, S.*, "Wide World of Industrial Textiles", Seminar given to the faculty of the Department of Textile Science, University of Port Elizabeth, Port Elizabeth, South Africa, June 8, 1998.
12. *Adanur, S.*, "Testing of Technical Textiles", Industrial Textiles Short Course, Clemson University, January 28-29, 1998, Clemson, SC.
13. *Adanur, S.*, "Textile Research Update", presented at the Georgia Association of Family and Consumer Sciences District K Meeting, Tuesday, Nov. 11, 1997, Columbus, GA.
14. *Adanur, S.*, and Broughton, R. M., "Manufacturing, Properties and Testing of Geotextiles", AU-IFAI (Industrial Fabrics Association International) Educate the Educators Short Course, July 20-25, 1997, Auburn, AL (also, gave an instructional tour of the Geotextiles and Fabric Formation labs to the course participants).
15. *Adanur, S.*, and Hou, Z., "Recycling of Coated Fabrics", Workshop on Added Value Reclamation of Solid Waste, NSF EPSCoR, July 22-23, 1997, Auburn, AL.
16. Adanur, S. (90%), and *Mohamed, M. H. (10%)*, "Manufacturing of Industrial Textiles", US-Egypt Workshop on Manufacturing Technologies, Dec. 6-9, 1996, Alexandria, Egypt.
17. Prepared the Weaving and Knitting sessions for the short course Introduction to Textiles for Industry Professionals (ITIP-96), May 14-15, 1996 (cancelled).
18. *Adanur, S.*, "Overview of Industrial Textile Applications", Industrial Fabrics Association International (IFAI) Tutorial "Textiles Used in Structural Composites", 41st International SAMPE Symposium and Exhibition, March 24-28, 1996, Anaheim, CA.
19. *Adanur, S.*, "ISO 9000", Total Quality Management in the Textile Industry (SPC & Quality Engineering), Quality Tech, March 20-22, 1996, Pine Mountain, GA.
20. *Adanur, S.* (70%), and Broughton, R. M. (30%), "Manufacturing, Properties and Testing of Geotextiles", AU-IFAI (Industrial Fabrics Association International) Educate the Educators Short Course, July 7-12, 1996, Auburn, AL (also, gave an instructional tour of the Geotextiles and Fabric Formation labs to the course participants).
21. *Adanur, S.* (50%) and Walker, R. P. (50%), "Yarn Preparation for Weaving in the Future (Yarn Preparation for the Second Loom)", the 33rd Annual Textile Slashing Short Course, September 20-22, 1993, Auburn University, AL.; enrollment: 81.

<u>Technical Sessions Developed/Chaired</u>

1. International Istanbul Textile Congress 2013, Session: New Materials, Room 3, May 30-31, 2013, 13.40-15.40, Istanbul, Turkey.

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2. Session 202: Composites, Techtextil North America Symposium, Wednesday, April 2, 2008, 8:30 a.m. - 11:00 a.m., Atlanta, GA.
3. Session 3 (afternoon session) at the First Istanbul International Textile and Textile Machinery Congress, June 2, 2006, Istanbul, Turkey.
4. Session 4, 2nd International Technical Textiles Congress, Istanbul, Turkey, 13-15 July 2005.
5. Session TC-1: Computational Mechanics, 1.45 pm – 3.15 pm, Tuesday, August 17, 2004, SECTAM XXII, Twenty Second Southeastern Conference on Theoretical and Applied Mechanics, August 15-17, 2004, Tuskegee University, Tuskegee, AL.
6. Session 4a, NANO 4, 7.20 pm-10.00 pm, Monday August 9, 2004, ICCE-11, 11th Annual International Conference on Composites/Nano Engineering, Hilton Head, SC, August 8-14, 2004.
7. Session 203 Paper Making Fabrics, Techtextil Symposium North America, March 13-15, 2001, Atlanta, Georgia. Developed and chaired the session with 5 speakers.
8. ICCE/5, Fifth International Conference on Composites Engineering, Session 7a, Textile I, 3.40 pm-6.00 pm, July 5-11, 1998, Las Vegas, NV.
9. ICAPC-97, International Conference on Advanced Polymer Composites, Materials, Processing and Applications, Session 2, Mechanics of Composite Materials (I), Beijing University of Aeronautics and Astronautics, Beijing, China, June 3-5, 1997.
10. ICCE/4, Fourth International Conference on Composites Engineering, Session 16c, Textile V, 8.00 am-11.00 am, July 6-12, 1997, Big Island of Hawaii.
11. The Fiber Society, Fall 1996 General Technical Conference, Session IV: Marine Applications of Textiles, Wednesday, Oct. 16, 1996, Newport, Rhode Island.
12. ICCE/3 Third International Conference on Composites Engineering, July 21-26, 1996, New Orleans, LA. Session 12b, July 25, 96, 3.45 pm-5.45 pm, Textile Composites III, Adanur, S., and Wang, Y.
13. ICCE/2 Second International Conference on Composites Engineering, August 21-24, 1995, New Orleans, LA.
    - Session 4d, Aug. 22, 1995, 10.10 am-12.10 pm, Textiles: 3D structures.
    - Session 5d, Aug. 22, 1995, 1.20 pm - 3.20 pm, Textiles: Applications.
    - Session 9d, Aug. 23, 1995, 3.35 pm-5.35 pm, Textiles: Analysis.
14. Paper Machine Clothing: Materials and Technologies. Third International Hi-Tech Textiles Exhibition & Conference, June 21-22, 1994, Greenville, SC. Planned and organized the presentation topics and found five speakers.

Workshops Attended

1. Attended the ITM Texpo Eurosia 2013, in Istanbul, Turkey, May 29, 2013.
2. Composite Manufacturing Workshop, March 30-31, 2005, Auburn, AL.

Editorships

1. Member of the Editorial Board for Journal of Industrial Textiles, Sage Publications (Jan. 2000 - present).
2. Member of the Editorial Board for the Electronic Journal of Textiles (August 2002 – 2010)
3. Member of the Editorial Board for the POLITEKNIK (Turkish/English), (Dec. 2004-2009).
4. Member of the Editorial Board for the Electronic Journal of Textiles (August 2002 – 2009).
5. Member of the Editorial Board for Journal of Coated Fabrics, Technomic Publishing, Co., Inc., Lancaster, PA, (January 1998 – Jan. 2000).
6. Member of the editorial board for Textile and Technique which is a specialized monthly textile magazine published in Turkey (Turkish/English), 1993-2003.

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4.D SERVICE

Department, College and University Service Work

1. Founding faculty advisor for AU Chess Club, August 2020 – present (105 members).
2. Member of the Academic Standards Committee, August 2020 – 2023.
3. Member of the Student Conduct Committee, August 2020 – 2023.
4. Mechanical Engineering Senator for AU Faculty Senate, June 2020 – present.
5. Member of the Academic Honesty Committee, Aug. 2019 – Aug. 2022.
6. Member of the Patent and Invention Disclosure Committee, Aug. 2017 - Aug. 2020.
7. Chair of the Academic Computing Committee, Aug. 2019 - Aug. 2020 (member Aug. 2017 - Aug. 2020).
8. Member of the Faculty Salaries and Welfare Committee, Aug. 2015 – Aug. 2018.
9. Prepared and submitted SACS Assessment Reports for PFEN Masters and Ph.D. programs, June 2017.
10. Prepared and submitted SLO7 report for SACS, 20 November 2014.
11. Member of the Calendar and Schedules Committee, Aug. 2014 – Aug. 2017.
12. Member of the Academic Program Review Committee, Aug. 2013-Aug. 2016.
13. Prepared the SACS assessment reports for PFEN B.S., M.S., and Ph.D. programs for the SACS visit, March 21-22, 2013; updated the reports Oct. 14, 2013, and June 2014.
14. ABET Coordinator for the PFEN department, 1992-2016. Successfully got ABET accreditation in 1998 (first time ever), 2004 and 2010. Prepared the Termination Report in 2016.
15. Participated in the AU Strategic Planning Focus Group sponsored by the Office of the Provost, 19 March 2013.
16. Member of the Academic Standards Committee, Aug. 2012-Aug. 2015.
17. Member of the Post Tenure Review Committee, Aug. 2012-Aug. 2015.
18. Prepared the 2011 SACS assessment reports for PFEN B.S., M.S., and Ph.D. programs, Jan.-Feb. 2012.
19. Member of the PFEN faculty search committee, Aug. 2011- Aug. 2012.
20. Member of the Faculty Handbook Review Committee, Aug. 2011-Aug. 2014.
21. Member of the Faculty Dismissal Committee, Aug. 2010-Aug. 2013.
22. Mentor - AU Early Career Faculty Mentoring Program, Sept. 2009-present.
23. Chair of the AU Faculty Grievance Committee, Aug. 2009-Aug. 2010.
24. Member of the Student Discipline Committee, Aug. 2009-Aug. 2012
25. Hosted TALON exhibit for incoming engineering freshman with Julia Freeman at the AU Hotel and Conference Center, Feb. 18, 2008.
26. Member of the new PFEN PhD Program Committee, Apr. 2008-present.
27. Member of the AU Faculty Grievance Committee, Nov. 2007-May 2009.
28. Member of the PFEN Faculty Search Committee (Chair: Dr. Buschle-Diller), Aug. 2007-Apr. 2008.
29. Member of the CoE Graduate Student Recruiting Committee (appointed by the Dean), Chair of the Best Practices Subcommittee, March. 2007-present (unofficially started Fall semester 2006).
30. Chair of the PFEN Faculty Search Committee, Fall 2006-Spring 2007.
31. Member of the Alumni Engineering Research Award Committee (meeting held on March 10, 2008).

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32. Responsible for the polymer processing equipment purchase (visited University of Akron, Oct. 2006).
33. Chair of the AU Student Academic Grievance Committee, Jan. 2006-Aug. 2008.
34. Member of the AU Student Academic Grievance Committee, Aug. 2005- Dec. 2005.
35. Member of the AU Academic Honesty Committee, 2003-2006.
36. Member of the Alumni Professorship Committee, 2002-2005.
37. Member of the Budget Advisory Committee, Feb. 2003-2005.
38. Graduate Faculty (reappointed November 2002)
39. Member of the Ginn Professorship Selection Committee, 2002.
40. Member of the Engineering Faculty Council (EFC), 2002-2205.
41. Member of the AU Diversity Leadership Council, May 2002-2004.
42. TE Department Futures Committee Member, 2001.
43. Mentoring Committee member for Dr. Aliecia McClain, Assistant Professor. February 2001- 2004.
44. Member of the AU Senate Research Grant-in-Aid Committee, Fall 2000- Fall 2003.
45. Member of the Textile Engineering Department Head Search Committee, 1999-2000.
46. Member of the College of Engineering Freshman Computing Initiative (FCI) Committee (1999-2000)
47. National Textile Center (NTC) Site Director for Department of Textile Engineering (June 1998 to October 2001). Responsible for the overall coordination of NTC proposals, projects and budgets for the Textile Engineering Department.
48. Chairman of the Textile Engineering Curriculum Committee (1993-2000).
49. Coordinated the Semester Transition activities for TXEN, TXCH, TXMT, TXTS and ITAS programs. Prepared/edited the departmental semester transition package (162-page document)
50. College of Engineering Priorities Task Force Member (1998). Participated in two task force teams: one in research and one in teaching.
51. Member of the College of Engineering Curriculum Committee (1993 to 2016).
52. Chairman of the Textile Engineering Award Committee. The committee nominated Pat Smith and Paul Brady for the Spirit of Excellence Award which they won (1992-2000).
53. Member of the new PhD program in Integrated Textiles and Apparel (ITAS) preparation committee (1994 - 1998).
54. Member of the three new faculty and two new technician search committees in Textile Engineering (1994-2000).
55. Participated in the 1994-1995 and 1995-96 Faculty/Student Mentor Program
56. Honorary Member of the Phi Psi Textile Fraternity.
57. Freshmen scholarship interviewer (1993-2000)

Professional Society Activities

1. Member of the TASSA (Turkish-American Scientists and Scholars Association) Interim Council, 2004-2006.
2. Member, Industrial Fabrics Association International (IFAI) Safety & Protective Products Division, 2003-2010.
3. Chair of the American Society of Mechanical Engineers-Textile Engineering Division, ASME-TED (2000-2001). Attended the ASME Technical Executives Committee (TEC) meeting in New York, NY, November 2001.

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4. Vice-Chair of the American Society of Mechanical Engineers-Textile Engineering Division, ASME-TED (1998-2000). Attended the ASME Technical Executives Committee (TEC) meeting in Houston, TX, March 3-5, 2000.
5. Newsletter Editor of the American Society of Mechanical Engineers-Textile Engineering Division, ASME-TED (1995-present). Prepared and published the ASME Textile Engineering Division Newsletter - Fall 1996 issue.
6. Secretary-Treasurer of the American Society of Mechanical Engineers-Textile Engineering Division, ASME-TED (1995-1997).
7. Program Chairman of the American Society of Mechanical Engineers (ASME), Chattahoochee Section (1995-96)
8. Secretary of the American Society of Mechanical Engineers (ASME), Chattahoochee Section (1994-95).
9. Treasurer of the American Society of Mechanical Engineers (ASME), Chattahoochee Section (1993-94).
10. Member of the American Society of Mechanical Engineers-Textile Engineering Division (ASME-TED) Revitalization Task Force. There has been a lack of enough activity in recent years in TED and the objective of the Task Force is to retain Textile Engineering as an active ASME technical division (1994 - 1995).

Membership

- American Society of Mechanical Engineers (ASME)
- Technical Association for the Pulp and Paper Industry (TAPPI)
- Manufacture Alabama
- Honorary member of the Phi Psi Textile Fraternity

Proposals Reviewed:

1. National Science Foundation, STTR Phase I. Reviewed 3 proposals online, Sept. 2, 2021.
2. National Science Foundation, CMMI-FM Future Manufacturing Program. Reviewed 3 multi-million dollar, 4-year proposals, 25 June 2021. Attended 2-day online panel on June 30-July 1, 2021.
3. National Science Foundation, SBIR/STTR Program (reviewed 5 proposals), Sept. 11, 2020.
4. National Science Foundation FMSG Materials and Construction Virtual Panel, 6 proposals reviewed out of 17 (panelist for others), July 27-28, 2020, Zoom Meeting.
5. National Science Foundation SBIR/STTR Program (reviewed 4 proposals), Oct. 10-11, 2019.
6. National Science Foundation SBIR/STTR Program (reviewed 4 proposals), March 11-12, 2019.
7. NSF Panelist for Nanomanufacturing Proposals (Panel #: P100737), Dec. 14, 2009, Arlington, VA. Reviewer/Lead/Scribe for 8 proposals, Panelist for 26 proposals.
8. Panelist for NSF SBIR-STTR Program, Aug. 23, 2007, National Science Foundation, Arlington, VA.
9. NSF Proposal No. 0242891 entitled "Human Powered Wearable Computers" by Hechmi Hamouda and Warren J. Jasper, November 2002.
10. Proposal No: INT-9811022, National Science Foundation, PI: C. L. Smith, North Carolina State University, June 1998.
11. Reviewer for the National Textile Center Proposals (Fabrication Competency), 1998-2001.
12. Visited National Science Foundation on Nov. 4, 1999 as a panel reviewer of 15 CAREER proposals.

Reviewing for Journals:

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Textile Research Journal, Journal of Elastomers and Plastics, International Composites Engineering Journal, Journal of Cotton Science, Journal of the Textile Institute (England). 92 articles have been reviewed to date.

Other:

1. Judge, 2022 ME Graduate Student Poster Competition, 25 Sept. 2022 (7 posters).
2. Judge, 2021 Graduate Engineering Research Showcase, 28 October 2021 (6 posters).
3. Judge, AU Research 2021 Student Symposium, 31 March 2021, (4 online presentations).
4. Judge, College of Engineering FiveInFive Graduate Student Presentations (4 online presentations), 28 October 2020.
5. Judge, 2020 Virtual Auburn Student Research Symposium (6 posters), 1 May 2020.
6. Judge for Three Minute Thesis (3MT), Auburn University, 24 October 2019.
7. Judge for ME Conference Graduate Student Poster Session, 15 Sept. 2019.
8. Judge, Auburn Research Student Symposium, 9 April 2019.
9. Judge for AU SG Graduate Engineering Research Showcase, 24 October 2018.
10. Judge for AU This is Research Student Symposium, Biomedical Health (Oral Presentations), 26 March 2018.
11. Judge for ME Conference Graduate Student Poster Session, 30 Sept. 2018.
12. Gave a presentation about the education opportunities in the U.S.A. to a group of university students in Istanbul, Turkey, July 16, 2018.
13. Judge for AU This is Research Student Symposium, Biomedical Health (Oral Presentations), 26 March 2018.
14. Judge for Graduate Student Poster Contest at ME Conference, 17 September 2017.
15. Prepared and submitted SACS Assessment Reports for PFEN Masters and Ph.D. programs, June 2017.
16. Judge for two proposals submitted to UTIB International R&D Brokerage Event, 27-28 April 2017, Bursa, Turkey (14 April 2017).
17. Judge for AU This is Research Student Symposium, 13 April 2017.
18. Judge, "2017 Finish in 5 Competition", AU SG College of Engineering Graduate Students (CEGS),22 March 2017.
19. Judge, AU SG College of Engineering, Graduate Engineering Research Showcase, 20 October 2016.
20. Judge for AU This is Research Student Symposium, 13 April 2016.
21. Judge for several proposals submitted to UTIB International R&D Brokerage Event, 12-13 May 2016, Bursa, Turkey.
22. Judge for AU SG College of Engineering Fall 2015 Graduate Engineering Research Showcase, 22 October 2015.
23. Judge for eight proposals submitted to UTIB International R&D Brokerage Event, 27-29 May 2015, Bursa, Turkey.
24. Judge for oral session; This is Research: Student Symposium 2015, Auburn University, 13 April 2015.
25. Feb. 27, 2015; gave polymer processing lab tours during the E-day.
26. Judge, Fall 2014 Graduate Engineering Research Showcase, Auburn University, Oct. 23, 2014.
27. Judge for the "Turkey Innovation Week", Dec. 6-8, 2012, Istanbul, Turkey. Judged 10 proposals.
28. Recommendation letter for promotion of a professor at an NTC University, December 2004.
29. Member of the Fiber Society Award Committee, 2011- 2013.
30. Member of the Scientific Committee for the International Congress of Innovative Textiles, ICONTEX2011, 20-22 October 2011, Tekirdag, Turkey. Reviewed manuscripts for acceptance to the conference.
31. Gave the commencement speech at Marmara University, College of Engineering Graduation Ceremony, Istanbul, Turkey, 6 July 2011.
32. Presented the NTC booth, 1.00-5.00 pm, Techtextil North America Symposium, April 2, 2008, Atlanta, GA.
33. Helped with the Engineering Technologies Academy for Civil Air Patrol cadets, July 8-12, 2003, Auburn University.
34. Organized the AU Textile Engineering booth for the Techtextil North America International Trade Fair for Technical Textiles and Nonwovens, March 23-25, 2000, Atlanta, GA.

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35. Gave a lecture to Prof. Richard Penaskovic's class RELG 0304 – Western Religions on June 1, 1999.
36. Attended the Milliken Summer Challenge University/Industry Programs (1997 and 1998).
37. Served as judge in the Industrial Fabrics Association International (IFAI)'s annual International Achievement Awards competitions (1995-2000)
38. International Advisory Board Member, International Conference on Composites Engineering (ICCE); ICCE/9 (2002 San Diego, CA), ICCE/8 (2001 Tenerif, Spain), ICCE/7 (2000, Denver, Colorado), ICCE/6 (1999, Florida Resort, FL), ICCE/5 (1998, Las Vegas, NV), ICCE/4 (1997, Big Island of Hawaii).
39. Reviewer of Proposals for National Science Foundation (NSF)
40. Attended the workshop "Integrating Design into the Engineering Curriculum", which was offered by the Southern Methodist University, in Dallas, TX on March 19-21, 1998. This was part of ABET preparation activities.
41. "Two-man, Three Season, Double Walled Tent for the US Marine Corps Systems Command (MARCORSYSCOM)". Proposal prepared on behalf of National Apparel, Inc., of Montgomery, AL for the US Marine Corps. Project Total: $ 18,750,000.00; 150 pages, July 97.
42. Gave a presentation to Alabama Congressional Delegation on Geotextiles, May 9, 1997.
43. Prepared and presented the AU Textile Engineering booth during the 3rd International High-Tech Textiles Conference, Greenville, SC, June 94.
44. Prepared and presented the AU Textile Engineering booth during the 2nd International High-Tech Textiles Conference, Greenville, SC, July 93.

Companies and Organizations Served

Some of the work was done on a no charge bases. Inquiries varied; some visits, some by analysis and transmittal of samples and/or data, some literature search, technical reports, patent infringement cases, testimonies, expert witness, trials, etc. The following list does not include companies that I served through the phone.

- 3Tex, Raleigh, NC. Analysis of McGinley System.
- A-Carb LLC
- Alexander Shunnarah
- Allied Signal, Medical Textiles, Virginia.
- Amoco Fabrics and Fibers Company, Bainbridge, GA.
- Asten Forming Fabrics, Appleton, WI.
- AU Vet. School, testing of ligaments on Instron, Sept. 29-Oct. 3, 1995.
- Berry Plastics
- Best Fabrics
- Bo-Tex Sales Corporation, Hogansville, GA. Recycling.
- Bruin Plastics Co. Recycling.
- C. M. Offray & Son, Inc. Recycling.
- Clark Schwebel, Inc. 3D weaving.
- Commissariat A L'energie Atomique and Aerospatiale of France. Composite research.
- Continental AG
- Cooley Inc. Recycling.
- Cordis Corp.
- Deerfield Specialty Papers, Inc., Augusta, GA on wear of forming fabrics.
- Development and testing of "Hail no Hail" fabric for Marks & Flinn of Montgomery, AL, 1994.
- DeWayne Layfield
- Doran Textiles, Shelby, NC. Mr. Reuben Bond on 'Team Weaving' concept. (6.5.93)

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- Dority-Manning
- Eastern Technologies
- Eaton Corp, Milwaukee, Woven and knit reinforcements for composites
- Emory University, Atlanta, GA. Polymeric stents.
- Environmental Technical Services. Recycling.
- EverCare Co.
- Flexol Packaging
- Gallery Co.
- Hanon Systems
- Hassan Textile Inc., Istanbul, Turkey.
- Hoechst Celanese, Mr.Dan Cain, Spartanburg, SC on developing a warp knitted structure using elastomeric monofilament fiber.
- Howard Rubenstein
- HSN
- Hunting rope testing for Alexander Shunnarah
- Illinois Tool Works
- Industrial Fabrics Association International (IFAI). Recycling.
- Industrial Textile Associates, Greer, SC. Analysis of a rayon fabric carbonized after weaving.
- InterVascular
- John Boyle & Co., Inc. Recycling.
- Johnston Composite Reinforcements, Inc., Phenix City, AL. Process improvement.
- Johnston Industries, Utilization Plant, Valley, AL. Fibrograph.
- KilpatrickStockton
- Kimberly Clark
- Kinedyne Corporation, Prettville, AL.
- Lindsay Wire, Florence, MS. Mr. Ton Rietzelt on Jacquard Weaving (6.30.93)
- Maples Industries
- Mesa Associates.
- Milliken
- Milliken & Company, Specialty Industrial Business, LaGrange, GA. Geotextiles, composites.
- Mr. Les Letlow
- N. V. Bekaert S. A., Belgium.
- National Apparel, Inc., Montgomery, AL. Combat tent.
- Nollapelli
- North Carolina State University, College of Textiles. Consultant for the Air-Jet Loom Simulator.
- Novus
- NSF Panelist
- PE Technikon and CSIR of South Africa. Textile Engineering education and research.
- Seattle Textile Company, Seattle, WA, on testing of PVC coated polyester sheeting designed for use in flame resistant, coated fabric type hose.
- Shakespeare Monofilament, Columbia, SC. Development of Forming Fabric, 1994.
- Softbelly's
- Southern Mills

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- Startex, Spartanburg, SC. Recycling of coated fabrics.
- State of Maine/AAAS
- Sulzer-Ruti, Inc., Spartanburg, SC. Forming fabrics.
- SulzerTextil.
- Textrade.com
- TrustForte Corporation.
- Twitchell Corporation, Dothan, AL.Weaving.
- Tyco Industries, AL.
- U.S. CRDF Science Center
- Unsa, Istanbul, Turkey.
- US Geotextiles, Opelika, AL., Evaluation of ultrasonic seams of geotextiles.
- Weblon, Inc. Recycling.
- Wellington Sears Co., Valley, AL.
- Zyvex Corporation

Community Service

1. Soccer coach, U13G, Auburn Parks and Recreation Department, Fall 2013 season
2. Soccer coach, U13G, Auburn Parks and Recreation Department, Spring 2013 season
3. Soccer coach, U13G, Auburn Parks and Recreation Department, Fall 2012 season
4. Soccer coach, U10G, Auburn Parks and Recreation Department, Spring 2012season
5. Participated at the Spring Fling, Yarbrough Elementary School, Apr. 29, 2011
6. Soccer coach, U10G, Auburn Parks and Recreation Department, Spring 2011season
7. Soccer coach, U16, Auburn Parks and Recreation Department, Fall 2010 season
8. Soccer coach, U16, Auburn Parks and Recreation Department, Fall 2009 season
9. Gave a tour of the Polymer Processing lab to Drake Middle School 6th graders Cosmic Cat team, Spring 2009.
10. Chaperon for AU Explore field trip of Yarbrough Elementary School 5th graders, Apr. 25, 2008, 8.30-13.30.
11. Soccer Coach for U13 Boys, Auburn Parks and Recreation Department, Fall 2007.
12. Soccer Coach for U6 coed team, Auburn Parks and Recreation Department, Spring 2007 and Fall 2007.
13. Attended the 'football throwing" booth at Yarbrough Elementary School's "Spring Fling", 28 April 2006.
14. Gave a seminar about Polymer and Fiber Engineering to Mrs. Fleming's 5th grade class at Yarbrough Elementary School, Thursday, April 27, 2006.
15. Soccer Coach for U10 and U13 Boys, Auburn Parks and Recreation Department, Spring 2006, Fall 2006, Spring 2007.
16. Soccer Coach for U10 and U13 Boys, Auburn Parks and Recreation Department, Spring 2005 and Fall 2005.
17. Participated at the Yarbrough Elementary School WinterFest, Feb. 25, 2005.
18. Soccer Coach for U8 Boys, Auburn Parks and Recreation Department, Fall 2004
19. President of the Auburn Ministerial Association (AMA) 2003-2004, member since 2002.
20. Seminar given at the Leadership Alabama Retreat: "Religion: Does it Unite or Divide?", Tuskegee University Chapel, Jan. 30, 2004.
21. Participated in home building for Habitat for Humanity (2002-present)

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22. Participated in Community Market activities (2003-present)
23. Presentation made at the Interfaith Community Service of Thanksgiving, Nov. 21, 2000, Auburn University Chapel.
24. Gave 5 seminars/tours to Auburn City School students between 1994 to 2000.
25. Member of the United Way of Lee County, Campus Division, Campaign pilot program, 1996-present.
26. Certified soccer coach for Under 6, Under 8, Under 10 and Under 13 years old kids, Auburn Parks and Recreation Department, 1993-present.
27. Gave a lab tour to AU Child Study Center Preschool Class, January 19, 2000.

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