

Curriculum Vitae

Name Gwynedd Adelaide Thomas Webster

Occupation Associate Professor Emerita (Mechanical Engineering)

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Academic Background

B.S. Textiles, Georgia Institute of Technology, 1974
M.S. Textiles, Georgia Institute of Technology, 1987
Ph.D. Textile and Polymer Science, Clemson University, 1991

Auburn University Work Experience

2015 - 2016 Associate Professor, Mechanical Engineering Department, Auburn University
2001-2014 Associate Professor, Polymer and Fiber Engineering Department, Auburn University
1995 – 2001 Assistant Professor, Textile Engineering Department, Auburn University

Previous Work Experience (Beginning with most recent)

1990-1995 Professor, Institute of Textile Technology, Charlottesville, Virginia.

1981-1986 Textile Technical Investigations (Textil Technische Untersuchung), Sulzer-Rüti, Incorporated, Spartanburg, SC

1978-1981 Industrial Engineer, Springs Industries, Fort Mill, SC

1976-1978 Industrial Engineer, J.P. Stevens and Company, Inc., Rock Hill, SC

1975-1976 Industrial Engineering and Quality Control, Cone Mills, Inc., Forest City, NC

Scholarly Works

Selected Publications and Patents

1. Thomas, G.A., Chapter 2, "Nonwoven Fabrics for Military Applications", Military Textiles, Woodhead Publishing Limited, Cambridge, UK 2007
2. US Patent No. 8,009,120 "Reinforcement Fabrics with Electronic Transmission Capabilities", August, 2011
3. Thomas, G.A., US Patent No. 7,700,503, "Layered Ballistic Resistant Material", April, 2010
Also issued as:
DE602004028622 D1, Sept. 2010, Germany
EP1644684 B1, Aug. 2010, Europe
4. Thomas, Gwynedd A. "Impact Absorbing Material", U.S. Patent No. 6,846,545; 2005
Also issued as:
CA2435804 C, June 2008, Canada
EP1358376 B1, Nov. 2009, Europe
DE60234313 D1, Dec. 2009, Germany
1358376, Nov. 2009, UK
1358376, Nov. 2009, France
157030, Dec. 2009, Israel
5. G.A. Thomas and A. R. McClain, "Optimization of Preparation Procedures for Manufacture of Vascular Implant Textiles", *Journal of Industrial Textiles* Vol. 31, No. 1, July 2001
6. Thomas, G.A. Applications of Multicomponent Materials for High Level Ballistic Protection, *Nonwovens/Technical Textiles*, 4/2000
7. Thomas, G.A. "Manufacture of Vascular Implant Textiles under Restrictions from International Regulatory Considerations", *ITB*, 4/2000
8. Thomas, G.A. "Sizing of Filament Yarns for Medical Uses", *ITB*, July 10, 2000
9. Thomas, G.A. and Zeiba, J.M. Warp Size Lubrication Methods for Air Jet Spun and Ring Spun Warp Yarns, *Journal of Cotton Science*, June 2000.
10. Thomas, G.A., "Multistructure Ballistic Material". U.S. Patent No. 5,736,474, 1998
Also issued as:
DE69726125 D1
DE69726125 T2
EP 0885117 B1, Ballistisches mehrschichtmaterial, Thomas, H. L., Jr., Nov. 2003
Israeli Patent 126,057, A Multi-structured Ballistic Material and a Method of Utilizing Same, April, 2002
11. Thomas, G.A., Moore, G.W. And Brock, P.N. Application of Surfactants and Salt Auxiliaries as Lubricating Agents in Warp Sizing, *American Dyestuff Reporter*, Sept. 1997

12. Thomas, G.A. and Brayshaw, J.B., "Mechanical Effects of Lubricant Auxiliary Agents in Size Film Reinforcement of Warp Yarns Pt. 1". Textile Chemist and Colorist, Vol.28, 3, Mar.1996
13. Ghosh S., Dever M., Thomas G., Tewksbury C., "Effects of Selected Fiber Properties and Needle-punch Density on Thermally-Treated Nonwoven Fabrics", Indian Journal of Fibre & Textile Research, 9/94.

Selected conference proceedings

1. "On Radiation Modes of Anisotropic Plain Weave Textile Antenna", Li, H., Riggs, L., Thomas, G., 7th International Conference on Wireless Communications, Networking and Mobile Computing, Wuhan, China, Sept. 23-25, 2011, http://www.ieee.org/conferences_events/conferences/conferencedetails/index.html?Conf_ID=16733
2. "Rapid Deployment Wireless Text Messaging Network for Disaster Relief", Li, H., Riggs, L., Thomas, G., 7th International Conference on Wireless Communications, Networking and Mobile Computing, Wuhan, China, Sept. 23-25, 2011, http://www.ieee.org/conferences_events/conferences/conferencedetails/index.html?Conf_ID=16733
3. G.A. Thomas, "Novel Uses of Synthetic Fibers in Insect Barrier Geotextiles", INDA Needle-punch 2002 Conference, Greenville, SC, March 19-20, 2002
4. G.A. Thomas, Geotextiles to Inhibit Insect Pest Colonies in Private and Commercial Residences INDA Needle-punch Nonwovens Conference, Greenville, SC, March 2000
5. G.A. Thomas, Multicomponent Ballistic and Trauma Reducing Materials for Body Armor Clemson Industrial Fabrics Seminar, Clemson University, June 2000
6. Thomas, G.A., Geotextile Insect Barrier Fabrics to Prevent Ant and Termite Infestations Clemson Industrial Fabrics Seminar, Clemson University, June 2000
7. G.A. Thomas, Successful Planning for Weaving, (2 sessions) Woven Fabric Design and Structure, Clemson University, April 1999
8. G.A. Thomas, Basics of Weaving Design and Representation Woven Fabric Design and Structure, Clemson University, April 1999
9. G.A. Thomas, Update on the International Sizing Symposium at Denkendorf Germany, AATCC Slashing Technology Seminar, University of Georgia, April 1999
10. G.A. Thomas, Preparation of Specialty Warp Yarns for Medical Uses AATCC Slashing Technology Seminar, University of Georgia, April 1999
11. G.A. Thomas, Multicomponent Materials for High Level Ballistic Protection – Solving Problems Synergistically, Industrial Textiles Seminar of Clemson University, Charlotte, NC, February 1999
12. G.A. Thomas, Personal Body Armor and Protection, INDA Needle-punch Nonwovens Conference, Charlotte, NC, October 1998
13. G.A. Thomas, Sizing of Filament Yarns for Medical Implant Uses, Alabama Textile Manufacturers Association Slashing Short Course, Auburn, AL, September, 1998

14. "Overview of Warping and Sizing" Thomas, G.A., AATCC Symposium on Warp Sizing, Greenville, SC, May 1997
15. Thomas G.A. Use of Surfactants as Lubricating Agents in Warp Sizing, Auburn University Textile Slashing Short Course Proceedings, Oct. 23-24, 1996
16. "Recent Findings About The Use Of Lubricants In Warp Sizing ", Thomas, G.A., AATCC Symposium on Warp Sizing, Atlanta, GA, Jan. 1995.
17. Thomas G., Taber R. Weaving: Toward 2000 Toward 2000 Conference, Mar. 10, 1993.
18. Thomas, G.A. The Role of Lubricants in Warp Sizing: New Results and Conclusions, Auburn University Textile Slashing Short Course Proceedings, Sept. 21-23, 1992
19. Thomas, G.A. and Thompson, G.J. "Characteristics and Performance of Needle-punched Flexible Ballistic Personal Protection Fabric Constructed from High Performance Fibers" 4th International Techtexil Symposium, Frankfurt, Germany June 1992
20. Thomas G.A., "Slashing For Projectile Weaving Machines", Auburn University Textile Slashing Short Course Proceedings, Sept. 1982

Invited papers

1. „Handels- und Entwicklungstrends in der USA Textil Industrie“, Thomas, G.A., Sharov, A. And Thompson, H., 16. Internationales Schlichtereikolloquium,, Denkendorf, Germany, 29 Sept, 2004
2. „Statistische Bewertung beim Vornetzen von Kettgarnen in der Schlichterei“, Thomas, G.A., 14. Internationales Schlichtereikolloquium,, Denkendorf, Germany, Dec. 7, 2001.
3. „Schlichten von Filamentgarnen zur Medizinischen Verwendung“, Thomas, G.A., 13. Internationales Schlichtereikolloquium, Denkendorf Germany, June, 1998
4. "Use of Surfactants and Ionic Salt Auxiliaries as Lubricating Agents in Warp Sizing Formulations", Thomas, G.A. and Brock, P.N., 12. Internationales Schlichterikolloquium, Denkendorf, Germany, Apr. 1996
5. „Quantitativ Bestimmte Ergebnisse bei der Verwendung von Schmiermitteln im Schlichtebad“ Thomas, G.A., 10. Internationales Schlichtereikolloquium, Denkendorf, Germany, Dec. 1992