

## ITU- Department of Textile Engineering Faculty Curriculum Vitae

<b>Name, Surname</b>	Burçak KARAGÜZEL KAYAOĞLU			
<b>Academic Rank/Title</b>	Assoc. Prof. Dr.			
<b>Status</b>	Assoc. Prof. Dr.			
<b>Education (Earned Degrees)</b>	<b>Degree</b>	<b>Field</b>	<b>Institution</b>	<b>Year</b>
	<b>B.Sc.</b>	Textile Engineering	Uludağ University, Bursa, Turkey	2001
	<b>M.Sc.</b>	Textile Engineering	North Carolina State University, Textile Engineering, Chemistry and Science Raleigh, U.S.A.	2004
	<b>Ph.D.</b>	Fiber and Polymer Science	North Carolina State University, Fiber and Polymer Science Raleigh, U.S.A.	2007
<b>Years of Service on This Department</b>	<b>Rank</b>	<b>Year of Appointment</b>	<b>Total no. of years</b>	
	<b>Assistant Prof.</b>	2009-2015	6	
	<b>Assoc. Prof.</b>	2015-		
<b>Courses taught</b>	<b>Course</b>	<b>h/wk (theoretical)</b>	<b>h/wk (lab./tutorial)</b>	<b>Type of course</b>
	Ecological Textiles	3	0	Undergraduate
	Designing with Hi-Tech Fabrics	1	0	Undergraduate
	Introduction to Textile Engineering	1	0	Undergraduate
	Weaving Technology I	2	1	Undergraduate
	Fabric Design	2	1	Undergraduate
	Non-Woven Fabrics	3	0	Undergraduate
	Advanced Topics in Nonwovens	3	0	Graduate
<b>Areas of Research</b>	Nonwovens products and processes, electronic and biosensor applications in textiles, textile surface modification, textile composite structures			
<b>Principal publications of last five years (refereed papers)</b>	<p>1) <b>B. Karaguzel Kayaoglu</b>, “Characterization of Air Permeability Behavior of Needle-Punched Nonwoven Fabrics”, <i>Tekstil</i>, 61(1-6), 33–40 (2012)</p> <p>2) O.G. Armağan, <b>B. Karagüzel Kayaoğlu</b>, H. Canbaz Karakaş, F. S. Güner, “Improving the Adhesion Strength of Polypropylene Nonwoven Laminated Fabrics Using Low-Pressure Plasma”, <i>Fibres &amp; Textiles In Eastern Europe</i>, 21, 3(99), 96–101 (2013)</p> <p>3) O.G. Armağan, <b>B. Karagüzel Kayaoğlu</b> and H. Canbaz Karakaş, “Plasma-Induced Adhesion Improvement of Cotton/Polypropylene-Laminated Fabrics”, <i>Journal of Adhesion Science and Technology</i>, 27, 21, 2326– 2339 (2013)</p> <p>4) <b>B. Karaguzel Kayaoglu</b>, E. Ozturk, F. S. Guner, T. Uyar, “Improving Hydrophobicity on Polyurethane-Based Synthetic Leather through Plasma Polymerization for Easy Care Effect”, <i>Journal of Coatings Technology and Research</i>, 10(4), 549–558 (2013)</p> <p>5) <b>B. Karagüzel Kayaoğlu</b> and E. Öztürk, “Imparting Hydrophobicity to Natural Leather through Plasma Polymerization for Easy Care Effect”, <i>Fibers and Polymers</i>, 14(10), 1706–1713 (2013)</p>			

<p><b>Principal publications of last five years (refereed papers)</b></p>	<p>6) O.G. Armağan, <b>B. Karagüzel Kayaoglu</b>, H. Canbaz Karakas, F. S. Guner, “Adhesion Strength Behaviour of Plasma Pre-Treated and Laminated Polypropylene Nonwoven Fabrics Using Acrylic and Polyurethane-Based Adhesives”, Journal of Industrial Textiles, 43(3), 396–414 (2014)</p> <p>7) B.Y. Pekmezci, <b>B.K. Kayaoglu</b>, B. Pourdeyhimi and A.C. Karadeniz, “Utility of PVA Fiber-Based Needle-punched Nonwoven Fabric as Potential Reinforcement in Cementitious Composites”, Journal of Composite Materials, 48(25), 3129–3140 (2014)</p> <p>8) G. Baysal, S. Önder, İ. Göcek, L. Trabzon, H. Kızıl, F.N. Kök and <b>B. Karagüzel Kayaoglu</b>, “Microfluidic Device on a Nonwoven Fabric: A Potential Biosensor for Lactate Detection”, Textile Research Journal, 84(16), 1729–1741 (2014)</p> <p>9) N. Uykun, İ. Ergal, H. Kurt, A.T. Gökçeören, İ. Göcek, <b>B. Karagüzel Kayaoglu</b>, A.T. Akarsubaşı and A.S. Sarac, “Electrospun Antibacterial Nanofibrous Polyvinylpyrrolidone/Cetyltrimethylammonium Bromide Membranes for Biomedical Applications”, Journal of Bioactive and Compatible Polymers, Biomedical Applications, 29(4), 382–397 (2014)</p> <p>10) G. Baysal, S. Önder, İ. Göcek, L. Trabzon, H. Kızıl, F.N. Kök and <b>B. Karagüzel Kayaoglu</b>, “Design and Fabrication of a New Nonwoven-Textile Based Platform for Biosensor Construction”, Sensors and Actuators B: Chemical, 208, 475–484 (2015)</p> <p>11) S. Jevšnik, S.H. Eryürük, F. Kalaoğlu, <b>B. Karagüzel Kayaoglu</b>, P. Komarkova, V. Golombikova, S. Zoran, “Seam Properties of Ultrasonic Welded Multi-Layered Textile Materials”, Journal of Industrial Textiles, (2015) DOI: 10.1177/1528083715613632</p>
<p><b>Directed Theses/Dissertations</b></p>	<p><b>Masters Research Directed/Co-Directed</b></p> <p>1) Emre Öztürk, "Improving Hydrophobicity of Some Textile Surfaces Through Plasma Polymerization Method", M.S., Istanbul Technical University, Graduate School of Science Engineering and Technology, Textile Engineering, 06/2012, 2010-2012</p> <p>2) Gülçin Baysal, "Design, Fabrication and Characterization of Biosensor through Integration of Micro Channel System on Non-woven Textile Surfaces", M.S., Istanbul Technical University, Graduate School of Science Engineering and Technology, Textile Engineering, 01/2014, 2012-2014</p> <p><b>Doctoral Research Directed/Co-Directed</b></p> <p>1) Osman G. Armağan, "Adhesion Strength Improvement of Laminated Fabrics Through Plasma Surface Modification", Ph.D., Istanbul Technical University, Graduate School of Science Engineering and Technology, Textile Engineering, 05/2013, Co-advisor 2010-2013</p>
<p><b>Institutional services in the last five years</b></p>	<p>1) Istanbul Technical University, Graduate School of Science Engineering and Technology, Textile Engineering Graduate Programs Coordinator (2015-)</p> <p>2) Istanbul Technical University, Textile Technologies and Design Faculty, Faculty Board of Directors Member (2015-)</p> <p>3) Istanbul Technical University, Textile Technologies and Design Faculty, Faculty Board Member (2015-)</p> <p>4) Istanbul Technical University, Graduate School of Science Engineering and Technology, Textile Engineering Graduate Programs Execution Committee Member (2012-2015)</p> <p>5) Istanbul Technical University, Graduate School of Science Engineering and Technology, Graduate Education Continuous Quality Improvement Commission Member (2012- 2017)</p> <p>6) Establishing the 3+1+Graduate program between Istanbul Technical University, Textile Technologies and Design Faculty and N.C. State, College of Textiles, U.S.A. (in process)</p>

		Year of Appt.	Total no. of years	Place
<b>Other related experience</b>	<b>Industrial</b>	2007	1	Textile Manager at ITKIB, ITA Eğitim Araştırma ve Danışmanlık Ltd. Şti.
	<b>Industrial</b>	2008	1	R&D Manager at Flokser Tekstil San. ve Tic. A.S.
<b>Principal funded R&amp;D projects and professional services performed of last five years</b>	<p>1) Istanbul Technical University, Funding Program for Scientific Research and Development, <b>BAP-34315</b>, "Investigation of the Effect of Plasma Surface Modification of Textiles on Textile Lamination Processes", <b>Project leader</b>, 2010-2013.</p> <p>2) Istanbul Technical University, Funding Program for Scientific Research and Development, <b>BAP-34314</b>, "Use of Polymeric Nonwoven Textiles as Reinforcement in Concrete", <b>Researcher</b>, 2011-2013.</p> <p>3) Istanbul Technical University, Funding Program for Scientific Research and Development, <b>BAP-36171</b>, "Anti-Microbial Product Development for Medical Applications by Nano-and Micro-Scale Silver Integration and Its Characterization", <b>Researcher</b>, 2012-2014.</p> <p>4) <b>FP7-NMP-2011-CSA-5</b>, Project No. 290500, "2BFUNTEX–Boosting Collaboration Between Research Centres And Industry to Enhance Rapid Industrial Uptake of Innovative Functional Textile Structures and Textile Related Materials in a Mondial Market", <b>Researcher</b>, 2012-2015.</p> <p>5) Scientific and Technological Research Council of Turkey, <b>TUBITAK 111M464</b>, "The Study of Welding Parameters Affecting the Quality of Bonded Seams and Optimization of The Welding Process with regard to End Use of Textile Products", <b>Researcher</b>, 2012-2014.</p> <p>6) Scientific and Technological Research Council of Turkey, <b>TUBITAK 111M483</b>, "Design, Fabrication and Characterization of Biosensor through Integration of Micro Channel System on Non-woven Textile Surfaces", <b>Project leader</b>, 2012-2014.</p> <p>7) Scientific and Technological Research Council of Turkey, <b>TUBITAK 215M995</b>, "Application of UV Curable Water-borne Polyurathane Acrylate on Synthetic Leather through Screen Printing and Development of the Printing Method", <b>Project leader</b>, 2016-2018.</p>			
<b>Honors and awards</b>	<p>1) B. Karaguzel, C. R. Merritt, T. Kang, J.M. Wilson, H. T. Nagle, E. Grant and B. Pourdeyhimi, "Flexible, Durable Printed Electrical Circuits," The Journal of the Textile Institute, Vol. 100, No. 1, 2009, pp. 1-9, "<b>The Research Publication Award for the most outstanding paper</b> published in The Journal of the Textile Institute during calendar year 2009", The Textile Institute, November 2010.</p> <p>2) Uludag Textile Exporters' Union (UTIB) Turkish Textile and Apparel Sector, 4th International <b>R&amp;D Project Brokerage Event, First Place award</b> in Protective Textiles Category, February, 2012.</p> <p>3) Uludag Textile Exporters' Union (UTIB) Turkish Textile and Apparel Sector, 4th International <b>R&amp;D Project Brokerage Event, Third Place award</b> in Medical Textiles and Technical Clothing Category, May, 2015.</p>			
<b>Patents, Loyalties, Consulting, etc.</b>	<p>1) <b>United States Patent, US 7,712,373</b>, H.T. Nagle, T.-H. Kang, C. Merritt, B. Karaguzel, B. Pourdeyhimi, E. Grant, "Sensor Device for Real-Time Monitoring or Relative Movement Using Capacitive Fabric Sensors", May 11, 2010</p> <p>2) <b>World Intellectual Property Organization Patent, WO/2007/056557</b>, B. Pourdeyhimi, E. Grant, H. T. Nagle, C.R. Merritt, B. Karaguzel, T.-H. Kang, J.M. Wilson, "Methods and Devices for Providing Flexible Electronics", May 18, 2007</p>			
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