

# Curriculum Vitae



## Personal information

Name **Dr. MUHAMMAD AWAIS**

Address(es) House no. 10, Street no. 21, Qila Muhammadi, Ravi Road, Lahore

Telephone(s) 0092 313 1234588

E-mail muh.awais@uaf.edu.pk, m.awais@hotmail.com

Nationality Pakistan

Date of birth 27-02-1981

Gender Male

## Education

Dates	November 2020
Title of qualification awarded	<b>Ph.D. in the area of thermophysiological simulation of the human body-clothing-environment system.</b>
Principal subjects/occupational skills covered	Clothing technology, application of 2D & 3D CAD in the clothing industry, thermal simulation of human body heat regulation
Name and type of organization providing education and training	Technical University of Dresden, Germany
Level in national or international classification	Member of TU9, ranked between 201-300 worldwide and 14-22 in Germany by Shanghai Ranking
Dates	Oct 2010- Oct 2012
Title of qualification awarded	<b>M.Sc. Textiles and Clothing Technology</b>
Principal subjects/occupational skills covered	Clothing Technology, Technical Textiles, Application of 2D & 3D CAD in Textile, Mathematics, Technical Mechanics
Name and type of organization providing education and training	Technical University of Dresden, Germany
Level in national or international classification	Member of TU9, ranked between 201-300 worldwide and 14-22 in Germany by Shanghai Ranking
Dates	Sep 2000 to Dec 2004
Title of qualification awarded	<b>B.Sc Textile Engineering</b>
Principal subjects/occupational skills covered	Garment Manufacturing Technology
Name and type of organization providing education and training	National Textile University, Faisalabad, Pakistan.
Level in national or international classification	Pakistan's oldest and most prestigious textile institute since 1959

<b>Profession Experience</b>	
<b>Academic Experience</b>	
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p>	<p>February 2022 to date</p> <p><b>Assistant Professor</b></p> <p>Academic activities, Research work.</p> <p>Department of Fiber &amp; Textile Technology, University of Agriculture, Faisalabad, Pakistan.</p> <p>Research and Education</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p>	<p>October 2016 to March 2021</p> <p><b>Scientific Research Officer</b></p> <ul style="list-style-type: none"> <li>➤ Conducted thermal simulation of human body-clothing-environment system.</li> <li>➤ 3D fit simulations of clothing</li> <li>➤ Application of 2D/3D CAD in textiles</li> </ul> <p>Technical University of Dresden, Germany</p> <p>Education</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Name and address of employer</p> <p>Type of business or sector</p>	<p>September 2013 to April 2016 &amp; April 2021 to February 2022</p> <p><b>Assistant Professor</b></p> <p>Academic activities, Research work</p> <p>Teaching courses at undergraduate and postgraduate</p> <p>Supervision of BS and MS students</p> <p>University of Management and Technology</p> <p>Lahore, Pakistan</p> <p>Education</p>
<b>Industrial Experience</b>	
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p> <p>Type of business or sector</p>	<p>November 2006 to March 2010</p> <p><b>Assistant Manager / Best Practices Officer</b></p> <p>During my job at National Productivity Organization, I was engaged in following activities.</p> <ul style="list-style-type: none"> <li>◆ <b>Benchmarking in 12 Garment industries of Pakistan</b> for its technical up-gradation in the following areas. <ul style="list-style-type: none"> <li>• Industrial Engineering</li> <li>• Quality</li> <li>• Product development</li> <li>• System Maintenance</li> <li>• Occupational Health and Safety</li> </ul> </li> <li>◆ <b>Energy Efficiency Projects</b> in apparel and yarn manufacturing industries.</li> <li>◆ <b>Implementation of best practices</b> in supply chain management of textile industries.</li> <li>◆ <b>Energy Efficiency Projects</b> for processing industry.</li> <li>◆ <b>Productivity &amp; Quality audit</b> for apparel industry.</li> </ul> <p>National Productivity Organization, Ministry of Industries and Production.</p> <p>Government Organization</p>
<p>Dates</p> <p>Occupation or position held</p>	<p>March 2005 to May 2006.</p> <p><b>Assistant Manager Production</b></p>

Main activities and responsibilities	<p>During my job at Azgard 9 Ltd, I was responsible for the analysis of customer requirements, designing of product and process layout, managing the production at every stage; and their follow-up right from cutting to stitching, solving the production problems with industrial engineering tools such as</p> <ul style="list-style-type: none"> <li>• Line Balancing</li> <li>• Ergonomics</li> <li>• Time and Motion Study</li> <li>• Operator Skill Development</li> <li>• Method Study</li> <li>• Capacity study</li> </ul>
Name and address of employer	Azgard 9 Limited Mangamandi Road, District Kasur, Pakistan.
Type of business or sector	Multinational company deals in textile products.
<b>Courses Taught</b>	
	<p>I have been teaching following courses for MS and BS Programs</p> <ul style="list-style-type: none"> <li>◆ Sewn Product Engineering</li> <li>◆ Statistical Process Control in Apparel Industry</li> <li>◆ Garment Machinery</li> <li>◆ Apparel Manufacturing</li> <li>◆ Textile Raw Material</li> <li>◆ Textile Testing and Quality Control</li> <li>◆ Industrial Engineering</li> <li>◆ 2D/3D CAD Application in Apparel Industry</li> <li>◆ Procurement Management</li> </ul>
<b>Courses Developed</b>	
	<p>I have been working as Secretary of National Technology Council, Pakistan which worked on development of curriculum for BS Garment Manufacturing Technology. Moreover, I have developed course outlines for the following BS &amp; MS Programs.</p> <ul style="list-style-type: none"> <li>• Clothing Comfort</li> <li>• Virtual Product Development</li> <li>• Readymade Clothing Technology</li> <li>• Assembly of Technical Textiles</li> </ul>
<b>Consultancies and Industrial Projects</b>	
Textile Industry and WWF	<ul style="list-style-type: none"> <li>◆ Resource Efficiency Gap Assessment of Recycling Process of Fabric Waste and Conversion into Recycled Yarn (2023).</li> <li>◆ Scoping and assessment of power looms and sizing sector for the project Decarbonizing the Textile Manufacturing Sector of Pakistan (2022).</li> </ul>
Punjab Skills Development Fund	<ul style="list-style-type: none"> <li>◆ Development of trained persons in the field of sewing, industrial engineering, and production planning &amp; control of garment industry (2014)</li> </ul>
US Denim, Lahore	<ul style="list-style-type: none"> <li>◆ Cottonization of hemp fibers and product development (Denim)</li> </ul>
<b>Book Chapters</b>	
	<ul style="list-style-type: none"> <li>◆ Awais M. Thermophysiological simulation of human body-clothing-environment system. TUDpress Verlag der Wissenschaften GmbH; 2020 Dec 22.</li> <li>◆ M. Awais and S. Krzywinski, "Method Development for Modeling, Designing, and Digital Representation of Outdoor and Protective Clothing," in Functional Textiles and Clothing, A. Majumdar, D. Gupta, and S. Gupta, Eds. Singapore: Springer Nature Singapore, 2019.</li> </ul>
<b>Research Publications</b>	

	<ul style="list-style-type: none"> <li>◆ Naveed, Tayyab, Ahmad Fraz, Rehana Ilyas, Nadeem Afraz, Samander Ali Malik, Arooj Shahid, Mahreen Sarfraz, &amp; Muhammad Awais. " Study on denim dress designs in apparel industry for sustainability and cost-effectiveness." <i>Mehran University Research Journal of Engineering and Technology</i> [Online], 43.3 (2024): 156-174. Web. 11 Jul. 2024.</li> <li>◆ Awais, Muhammad, Tayyab Naveed, Fiaz Hussain, Samander Ali Malik, Assad Farooq, &amp; Sybille Krzywinski. " Simulation-based thermal analysis and validation of clothed thermal manikin." <i>Mehran University Research Journal of Engineering and Technology</i> [Online], 43.1 (2024): 45-54. Web. 11 Jul. 2024.</li> <li>◆ Awais M, Krzywinski S, Wölfling B-M, Classen E. A validation study on the thermal simulation of the human body-clothing-environment system through wear trials. <i>Journal of Engineered Fibers and Fabrics</i>. 2021;16. doi:10.1177/15589250211041361</li> <li>◆ Awais M, Krzywinski S, Kyosev Y. Numerical Investigation of the Air Gap Distribution of Jackets with Different Fits and its Influence on Human Temperature. <i>Fibres &amp; Textiles in Eastern Europe</i>. 2021.</li> <li>◆ Tareen, M. H. K., Hussain, F., Zubair, Z., Aslam, S., Saleem, T., Awais, M., ... &amp; Goda, I. (2022). Effects of carbon black on epoxidized natural rubber composites: Rheological, abrasion, and mechanical study. <i>Journal of Composite Materials</i>, 56(29), 4473-4485.</li> <li>◆ M. Awais, S. Krzywinski, and E. Wendt, "A novel modeling and simulation approach for the prediction of human thermophysiological comfort," <i>Textile Research Journal</i>. September 2020. doi:10.1177/0040517520955227.</li> <li>◆ Naveed, T., Babar, A.A., Ramzan, B.M., Naeem, A.M., Awais, M., Anwar, F., Fraz, A. and Abbas, M., 2022. Influence of rotor structure and process parameters on polyethylene oxide (PEO) nanofibers produced through centrifugal. <i>Industria Textila</i>, 73(5), pp.479-491.</li> <li>◆ M. Awais, S. Krzywinski, B.-M. Wölfling, and E. Classen, "Thermal Simulation of Close-Fitting Sportswear," <i>Energies</i>, vol. 13, no. 10. 2020.</li> <li>◆ Tayyab N, Javeed AA, Sayed RY, Mudassar A, Faisal R, Ahmad F, Wang W, Muhammad A. Dyeing and colour fastness of natural dye from <i>Citrus aurantium</i> on Lyocell fabric. <i>Industria Textila</i>. 2020 Jul 1;71(4):350-6.</li> <li>◆ Ramzan MB, Qureshi SM, Habib MS, Naveed T, Awais M, Jamshaid H. Evaluation of human factors on visual inspection skills in textiles and clothing: A statistical approach. <i>Journal of Engineered Fibers and Fabrics</i>. 2022;17.</li> <li>◆ M. AWAIS, E. WENDT, and S. KRZYWINSKI, "Analysis of Thermal Comfort of Clothing with Different Textile Material through Thermal Simulation," in <i>3DBODY.TECH 2019</i>, 22-23 Oct. 2019, Lugano, Switzerland, 2019, vol. 1, pp. 127–136.</li> </ul>
<b>Conference Participation</b>	
	<ul style="list-style-type: none"> <li>◆ E. Wendt, M. Awais, and S. Krzywinski, "Development of methods for the digital representation of the thermal wearing comfort of outdoor clothing," <i>IOP Conf. Ser. Mater. Sci. Eng.</i>, vol. 460, p. 12003, 2018.</li> <li>◆ M. Awais, S. Krzywinski, and E. Wendt, "Thermal simulation of human body - clothing - environment system," in <i>12th International Manikin and Modelling Meeting 29-31 August 2018</i>, St. Gallen, Switzerland, 2018, no. August, pp. 2–3.</li> <li>◆ Prediction of thermophysiological parameters of the human body for different fits of jackets, in <i>Clotech 2020 Innovative Technologies for Development and Assembling of Functional Textile Products Online Event September 7th – 11th, 2020</i>, Dresden, Germany</li> <li>◆ Analysis of Thermal Comfort of Clothing with Different Textile Material through Thermal Simulation, in <i>3DBODY.TECH 2019</i>, 22-23 Oct. 2019, Lugano, Switzerland.</li> <li>◆ Thermal simulation of human body - clothing - environment system, in <i>12th International Manikin and Modelling Meeting 29-31 August 2018</i>, St. Gallen, Switzerland.</li> </ul>
<b>Trainings and Workshops</b>	

	<ul style="list-style-type: none"><li>♦ Training workshop on Energy Efficiency in Textile Sector in Pakistan from August 4 - 17, 2007.</li><li>♦ Training Programme for Energy Audits in Germany on October 2007 operated by EUTech with cooperation of GIZ.</li><li>♦ Good House Keeping training in Heidelberg, Germany on October 2007 by PREMANet with cooperation of GIZ</li><li>♦ E-Learning course on Toyota Production System by National Productivity Organization with collaboration of Asian Productivity Organization.</li><li>♦ E-Learning Course on Energy Auditing (based on the Global Development Learning Network of the World Bank Platform) on 15 - 18 June, 2009.</li><li>♦ Development of Productivity Practitioners: Advanced Program by Asian Productivity Organization in Malaysia from 2 to 20 November 2009.</li></ul>																																																										
<b>Award and Honors</b>																																																											
	<ul style="list-style-type: none"><li>♦ HEC Faculty development scholarship (2016-2020) for Ph.D. studies in Germany.</li><li>♦ DAAD scholarship for MSc studies in Technical University of Dresden, Germany.</li><li>♦ Merit scholarship during studies of Textile Engineering at National textile University, Faisalabad.</li><li>♦ Merit scholarship for intermediate studies at Govt. Islamia College Civil Lines, Lahore.</li></ul>																																																										
<b>Membership and affiliations</b>																																																											
	<ul style="list-style-type: none"><li>♦ Editorial Board Member of an international, peer-reviewed, open-access journal "Communications in Development and Assembling of Textile Products".</li><li>♦ Member of Pakistan Engineering Council (PEC).</li><li>♦ Member of Graduate Academy Technical University (TU) Dresden, Germany.</li></ul>																																																										
<b>Personal skills and competencies</b>																																																											
Mother tongue(s)	Urdu, Punjabi																																																										
Other language(s)	English, German																																																										
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	<table><tr><th colspan="4">Understanding</th><th colspan="4">Speaking</th><th colspan="2" rowspan="2">Writing</th></tr><tr><th colspan="2">Listening</th><th colspan="2">Reading</th><th colspan="2">Spoken interaction</th><th colspan="2">Spoken production</th></tr><tr><td>C2</td><td>Proficient user</td><td>C2</td><td>Proficient user</td><td>C2</td><td>Proficient user</td><td>C2</td><td>Proficient user</td><td>C2</td><td>Proficient user</td></tr><tr><td>C2</td><td>Proficient user</td><td>B2</td><td>Independent user</td><td>C2</td><td>Proficient user</td><td>C2</td><td>Proficient user</td><td>B1</td><td>Basic user</td></tr><tr><td>C1</td><td>Proficient user</td><td>C1</td><td>Proficient user</td><td>C1</td><td>Proficient user</td><td>C1</td><td>Proficient user</td><td>C1</td><td>Proficient user</td></tr><tr><td>C1</td><td>Proficient user</td><td>C1</td><td>Proficient user</td><td>B2</td><td>Independent user</td><td>B1</td><td>Independent user</td><td>B2</td><td>Independent user</td></tr></table>	Understanding				Speaking				Writing		Listening		Reading		Spoken interaction		Spoken production		C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	B2	Independent user	C2	Proficient user	C2	Proficient user	B1	Basic user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	B2	Independent user	B1	Independent user	B2	Independent user
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	(*) <a href="#">Common European Framework of Reference for Languages</a>																																																										
Organizational skills and competencies	Excellent Presentation Skills, Project Management																																																										
Technical skills and competencies	Good understanding in the area of Clothing and Comfort Science Good understanding of the clothing properties that can influence the heat and mass flow between human body and environment Good knowledge of 2D and 3D software and their application in the Garment industry																																																										
<b>Computer skills and competencies</b>	Theseus-FE, Solidworks (3D CAD), Designconcept (3D CAD), Grafis (2D CAD), Lectra Modaris (2D & 3D CAD), Geomagic Studio, Microsoft Office																																																										
<b>References</b>	Professor Dr. Sybille Krzywinski Institute of Textile Machinery and High-Performance Material Technology (ITM), TU Dresden, Germany Email: sybille.krzywinski@tu-dresden.de Phone: +4935146339312																																																										