

Dr. Muhammad Owais Raza Siddiqui

Assistant Professor

HEC Approved Ph.D. Supervisor

Department of Textile Engineering,

NED University of Engineering & Technology, Karachi

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Objective

To obtain challenging position with proven abilities with an organization offering opportunity for rapid advancement utilizing my professional qualifications and experience for mutual advantage.

Research

I conducted research on textile thermal properties and software development for computational analysis during my PhD. After the completion of my PhD in 2015; I am working as an Assistant Professor in the Department of Textile Engineering, NED University of Engineering & Technology. Current research interests lie in the areas of Finite Element Method (FEM), Computational Fluid Dynamics (CFD), Multiscale modelling & Simulation, FSI, Image Analysis, 3D Reconstruction & Software Development.

Publications

Book Chapters

1. Sun D, **Siddiqui MOR**, Kashif Iqbal, *Specialty Testing Techniques for Smart Textiles*, Smart Textile Coatings and Laminates, Smith, W.C., 2nd Edition, 2019, p.99-115, Woodhead Publishing, Elsevier.
2. Sun D, Kashif Iqbal, **Siddiqui MOR**, *Thermal analysis of temperature responsive fibrous materials*, Thermal analysis of textiles and fibers, Michael Jaffe, Joseph D. Menczel, 2019, Woodhead Publishing, Elsevier.

Journals

3. **Siddiqui MOR**, Zubair M, Ali M, Sun D, *Prediction of Air Permeability of Knitted Fabric by Using Computational Method*, Tekstil ve Konfeksiyon Journal, 2018. 28(4): p.273-279. DOI: 10.32710/tekstilvekonfeksiyon.482877.
4. **Siddiqui MOR**, Sun D, *Development of experimental setup for thermal conductivity measurement of textile clothing and textile composites*, Clothing and Textile Research Journal, 2018. 36(3): p.215-230. DOI: 10.1177/0887302X18768041.
5. **Siddiqui MOR**, Sun D, *Geometrical modelling and heat transfer analysis of nonwoven fabrics*, Journal of Industrial Textiles, 2018. 48(2): p.405-431. DOI: 10.1177/1528083717725913.
6. **Siddiqui MOR**, Sun D, *Thermal analysis of conventional and performance plain woven fabrics by finite element method*, Journal of Industrial Textiles, , 2018. 48(4): p.685-712. DOI: 10.1177/1528083717736104.
7. **Siddiqui MOR**, Sun D, *Conjugate Heat Transfer Analysis of Knitted Fabric*. Journal of Thermal Analysis and Calorimetry, 2017. 129(1): p.209-219. DOI: 10.1007/s10973-017-6166-y.
8. **Siddiqui MOR**, Sun D, *Development of plug-ins to predict effective thermal conductivity of woven and microencapsulated phase change composite*. Journal of Composite Materials, 2017. 51(6): p. 733–743. DOI: 10.1177/0021998314545193.
9. **Siddiqui MOR**, Sun D, *Prediction of thermal conductivity of woven fabric using finite element method*, Science International, 2016. 28(4): p. 4079-4981.
10. **Siddiqui MOR**, Sun D, *Automated model generation of knitted fabric for thermal conductivity prediction using finite element analysis and its applications in composites*, Journal of industrial textiles, 2016.45(5):p.1038–1061. DOI: 10.1177/1528083714551440.

11. **Siddiqui MOR**, Sun D, *Porosity prediction of plain weft knitted fabrics*, fibers, 3: 1-11, 2015. DOI: 10.3390/fib3010001.
12. **Siddiqui MOR**, Sun D, *Computational analysis of effective thermal conductivity of microencapsulated phase change material coated composite fabrics*. Journal of Composite Materials, 2015. 49(19): p. 2337-2348. DOI: 10.1177/0021998314545193.
13. **Siddiqui MOR**, Sun D, *Finite element analysis of thermal conductivity and thermal resistance behaviour of woven fabric*, Computational Materials Science, 75, p. 45-51, 2013. DOI:10.1016/j.commatsci.2013.04.003.

International Conferences

14. **Siddiqui MOR**, Sun D, *Thermal behaviour of textile structures by computational method*, The Second International Forum on Textiles for Graduate Students, China, Sep 08-11, 2018.
15. Sun D, Kashif Iqbal, **Siddiqui MOR**, *Textiles incorporated with PCMs for temperature regulated garments*, 91st Textile Institute World Conference, UK, July 23-26, 2018.
16. **Siddiqui MOR**, Sun D, *Computational heat transfer analysis of textile structures*, 2nd NED International textile conference, Karachi, Pakistan, Feb 17-18, 2016.
17. **Siddiqui MOR**, Sun D, *Heat transfer analysis of thermo-regulated composite fabrics by using finite element method*, SIMULIA UK Regional User Meeting, November 3-4, 2015.
18. **Siddiqui MOR**, Sun D, *Investigation of thermal property of textile fabric*, 10th Annual Postgraduate Conference, June 10, 2015.
19. **Siddiqui MOR**, Sun D, *Prediction of effective thermal conductivity of micro-encapsulated phase change composites*, 15th Autex world textile conference, Bucharest, Romania, Accepted June 10-12, 2015.
20. **Siddiqui MOR**, Sun D, *Heat transfer analysis of textile fabric by finite element method*, Simulia community conference, 20-22 May, 2014.
21. **Siddiqui MOR**, Sun D, *Prediction of thermal conductivity of woven fabric using finite element method*, proceedings of 14th Autex world textile conference, Bursa Turkey, 26-28 May, 2014.
22. **Siddiqui MOR**, *Design modification of main nozzle of air jet loom to minimize the air consumption by using solid modelling and computational fluid dynamics*, 1st international Conference on value addition and Innovation in Textiles COVITEX Proceedings, 2011, p. 145-149.

Education

2012-2015	<p>PhD ‘Geometrical Modelling and Numerical Analysis of Thermal Behaviour of Textile Structures’ School of Textile & Design, Heriot Watt University, UK. Supervisor: Dr. Danmei sun</p>
2008-2009	<p>Masters of Textile Engineering NED University of Engineering & Technology, Karachi</p> <ul style="list-style-type: none"> • CGPA – 3.75
2003-2007	<p>Bachelor of Textile Engineering NED University of Engineering & Technology, Karachi</p> <ul style="list-style-type: none"> • Second Position – 85.34%

Work Experience

Nov 2015 to date Working as an **Assistant professor** in the Department of Textile Engineering, NED University of Engineering & Technology, Karachi, Pakistan

Teaching at Undergraduate Level:

- Introduction to Textile Engineering (First Year)
- Yarn Production Process (First Year)
- Thermodynamic (First Year)
- Engineering Mechanics (First Year)
- Basic Mechanical Engineering (First Year)
- Dyestuff Engineering (Second Year)
- Quality control in textiles (Third Year)
- Transport Phenomena (Final Year)

Teaching at Postgraduate Level:

- Project management & Framework Tools
- Total Quality Management (TQM)
- Operations Research

Other Responsibilities Include:

- Member of Technical and Organizing Committee, NED International Textile Conference
 - Final Year Project Advisor
 - Class Advisor
 - Project Committee Member
 - In-charge of Yarn Manufacturing Lab
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Jan 2008- Nov 2015 **Lecturer**, Department of Textile Engineering, NED University of Engineering & Technology, Karachi, Pakistan

Teaching at Undergraduate Level:

- Introduction to Textile Engineering (First Year)
- Thermodynamic (First Year)
- Engineering Mechanics (First Year)
- Dyestuff Engineering (Second Year)
- Quality control in textiles (Third Year)
- Transport Phenomena (Final Year)

Other Responsibilities Include:

- Project Committee Member
 - Final Year Project Advisor
 - Class Advisor
 - In-charge of Yarn Manufacturing and Weaving Lab
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Honours and Awards

- **Received** travel grant from Tiajin Polytechnic University to present paper in “The Second International Forum on Textiles for Graduate Students from (Sep. 8 to Sep. 11, 2018).
- **Awarded** Research Publication Award by NED Alumni Association of Southern California (2016).
- **Received** HEC Start-Up Research Grant of 0.485 million (2016-2017).
- **Post Graduate Student Representative** of School of Textiles & Design, Heriot Watt University, UK (Elected Member) 2013-2015.
- **HEC Approved** Ph.D. Supervisor.
- **Received** Rieter Award 2008.
- **2nd Position** in Bachelor of Engineering.

Editorial Board Member and International Journal Reviewer

- Scientific and Technical Committee & Editorial Review Board on Materials and Metallurgical Engineering WASET.
- Textile Research Journal.
- Journal of Industrial Textiles.
- Journal of Thermoplastic Composite Materials.
- Journal of Fashion Technology & Textile Engineering.
- AATCC Journal of Research.
- International Journal of Heat and Mass Transfer

Professional Memberships

- Member of International Association of Engineers (IAENG).
- Member of World Academy of Science, Engineering and Technology (WASET).
- Member of World Association of Young Scientists.
- Member of European Scientific Association for Material Forming (ESAFORM).
- Member of Innovation in Textiles.
- Member NEDAN, Pakistan.
- Lifetime member of PEC, Pakistan.