

Shehzaib Yousuf Khan | Mechanical Engineering Postgraduate

Location: Karachi

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Personal Statement

“A research-minded Mechanical Engineering Postgraduate with enthusiasm and fervour in learning Thermo-fluids, eager to build a career in research and teaching.”

Core Skills

- Mechanical Engineering
- Research and Analysis
- Laboratory Techniques
- Numerical Modeling (CFD)
- Leadership and Teamwork
- Curriculum Administration
- Teaching and Training
- Risk Management
- Project Planning

Education

PhD	Mechanical Engineering <i>NED University of Engineering and Technology (2022 – Present)</i> <u>Research Area:</u> “Solar Thermal Energy System”.	(In Progress)
ME	Mechanical Engineering <i>NED University of Engineering and Technology (2021)</i> <u>Thesis:</u> “Simulation of a Ranque-Hilsch Vortex Tube using RANS Method”.	(CGPA 4.0)
MPE	Mechanical Engineering <i>The University of Sydney (2018)</i> <u>Capstone Project:</u> “Characterisation of Electrostatically Charged Sprays of Biodiesel”.	(62/100)
BE	Mechanical Engineering <i>NED University of Engineering and Technology (2014)</i> <u>Final Year Project:</u> “Design and Fabrication of Solar Fan with Lighting System”.	(72/100)

Career Summary

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| Mar 2023 – Present | Lecturer
NED University of Engineering and Technology |
| <ul style="list-style-type: none">• Materials and Metallurgy (Theory + Practical), Spring 2023. | |
| June 2022 – Present | Teaching Assistant
NED University of Engineering and Technology |
| <ul style="list-style-type: none">• Computer Aided Drawing (Practical), Fall 2022.• Dynamics Lab (Practical), Spring 2022. | |
| Mar 2018 – Mar 2023 | Administrator/Teacher
M.E Education System |
| <ul style="list-style-type: none">• Responsible for policymaking, infrastructure management, yearly planning, curriculum development and public relations.• Establish procedures to set educational standards and goals and develop instructional methods.• Teaching Year 9 – 12 pupils Physics and Mathematics and prepare pupils for Matriculation and Intermediate Exams. | |

Dec 2016 – Feb 2017

**Intern
The Warren Centre**

- Developed a spending profile for 2018 – 2030 identifying significant financial waste in major infrastructure projects of NSW including WestConnex, Sydney Metro and New Sydney Airport.
- Implemented different financial models, public policies, and latest technology upgrades.
- Responsible for Client meetings, presentations, project deliverables, team leadership, project planning, risk analysis and report writing.

May 2014 – Jun 2014

**Intern
Gandhara Nissan Limited**

Responsible for observations in procurement, assembly plant, and planning and control.

Jan 2014 – Jul 2015

**System Coordinator/Teacher
M.E Education System**

- Counselling to students regarding personal, academic, vocational, or behavioural issues.
- Coordination to the school facilities and managed classrooms, admissions, and examinations.
- Taught Physics to Year 9 – 12 pupils with structured lessons/activities and effective assessment.

Aug 2009 – Dec 2013

**Teaching Assistant
M.E Education System**

- Marked assessments Mathematics and Physics of Year 9 – 12.
- Assisted various IT applications, interactive lessons including slides, notes, or educational applets.
- Monitor pupil's individual development and give feedback.

Research Publication

Refereed Journals

1. S.Y. Khan, U. Allauddin, S.M.F. Hasani, R. Khan, M. Arsalan, "A CFD Analysis on the Effect of Tube Curvature, Hot Flow Control Valve Profile, and Inlet Swirl on Thermal Performance of Curved Vortex Tubes", *J. Therm. Anal. Calorim.* (2022).
2. S.Y. Khan, M. Uzair, U. Allauddin, A.R. Masri, "Experimental Investigation of Spray Characteristics of Electrodynamic Atomization", *GMSARN Int. J.* 15, 250–258 (2021).

Conference Proceeding

1. S.Y. Khan, U. Allauddin, S.M.F. Hasani, R. Khan, M. Arsalan, "The Effect of Tube Curvature on Temperature Separation Efficiency of Ranque-Hilsch Vortex Tube", *Proc. IPTC-2022*, Riyadh, February 2022.
2. S.Y. Khan, U. Allauddin, "The Effect of Inlet Swirl on Thermal Performance of Curved Vortex Tube", *Proc. IMEC-2022*, Karachi, January 2022.
3. S.Y. Khan, "Effect of Specific Charge in the Primary Atomization Zone of Electrostatically Charge Biodiesel Sprays", *Proc. IMEC-2019*, Karachi, March 2019.
4. P.X. Pham, A. Kourmatzis, S.Y. Khan, A.R. Masri, "Dual Angle Micro Particle Tracking Velocimetry in the Primary Atomization Zone of Electrostatically Charged Diesel Sprays", *Proc. ASPACC-2017*, Sydney, December 2017.

Software Proficiency

Computational

SolidWorks, ANSYS, Minitab, EES, Maple, MATLAB, Python, C++.

Document and Graphics

Photoshop, Illustrator, MS Project, Office, LaTeX.

References are available on request
