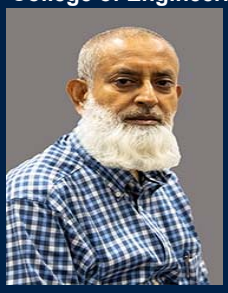
College of Engineering



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Education:

- **PhD in Mechanical Engineering,** University of Minnesota, Minneapolis, USA, 1988 – 1991.
- **MSc in Mechanical Engineering,** University of Minnesota, Minneapolis, USA, 1986 – 1988.
- **BEng in Mechanical Engineering.** NED University of Engineering and Technology, 1985

Honors & Awards:

- **National Research Award for Energy & Industry Sector, 2014.**
- **Best Researcher Award, SQU, 2012**
- **Outstanding Faculty Award, IIUM, Malaysia, 2000.**

PROFILE

Prof. Tasneem Pervez is working in the MIE Department, CoE at Sultan Qaboos University (SQU). He earned his BEng degree in Mechanical Engineering from Pakistan and his MSc and PhD degrees from USA. His research interests include FEM, Composite Materials, Material Homogenization and Multi-scaling, and Solid Expandable Tubular Technology (SETT) and Swellable Elastomers. He leads the Applied Mechanics/Advanced Materials Research Group at SQU. Actively engaged in research and consulting works and served as Associate and Guest editors for various journals. Actively participated in developing new engineering programs and its accreditation processes and conducted numerous accreditation workshops. He has authored 156 publications in international journals/conferences, 04 book chapters and 45 technical reports.

WORK EXPERIENCE

- **2012 - Present**
  Professor, Department of Mechanical Engineering and Industrial Engineering (SQU), Oman.
- **2010- 2016**
  Assistant Dean for Postgraduate Studies and Research College of Engineering (SQU), Oman.
- **2004 - 2008**
  Head of Department, Department of Mechanical Engineering and Industrial Engineering (SQU), Oman.
- **2000 - 2012**
  Associate Professor, Department of Mechanical Engineering and Industrial Engineering (SQU), Oman.
- **1999 - 2000**
  Deputy Dean (Academic Affairs), IIUM, Malaysia.
- **1995 - 1998**
  Head of Department of Manufacturing Engineering, IIUM.
- **1991 - 1994**
  Senior Engineer, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Pakistan.

RESEARCH INTERESTS

- **Laminated Compsites and Functionally Graded Materials**
- **Solid Expandable Tubular with or without Elastomers**
- **Appilication of FEM in Engineering Design and Analysis**
- **Material Homogeneization**

Professional Credentials, Certifications, or Licensing

- P.E. (Pakistan Engineering Council)

Membership in Professional Organization

- Life Member, Society of Petroleum Engineering (SPE) (Membership ID # 3130580)
- Life Member, Pakistan Engineering Council (PEC) (Membership ID#: 377002)

Professional Development Activities

- *Artificial Intelligence in Teaching*, Oman, 8th April 2025.
- *Artificial Intelligence in Research*, Oman, 15th April 2025
- *Designing an Inclusive Curriculum* (On-line), 08-February, 2024
- Critical Thinking Skills for the 21st Century, by Nikos Mourtos, SQU, Oman, 16 May 2017

Selected Journal Publications

1. M. Kabir, **T. Pervez**, F.K.S Al-Jahwari, and S.Z. Qamar, (2025). A New Weighted Approach for Homogenization of Composites, Materials Research Express, Vol. 12, no. 4 (2025): 045702, https://iopscience.iop.org/article/10.1088/2053-1591/adc786.
2. A.H. Pato, I.A. Chandio, S. Javaid, I.A. Channa, A. Balouch, B.A. Sharmmari, **T. Pervez**, F.K. Al-Jahwari, W. Liu, T.K. Ibrahim and A.D. Chandio (2025). Titania@ITO-grown Nano flakes: A Promising Hetero-catalyst for 4-nitrophenol reduction and synergetic Profile against Bacterial Growth, Accepted for publication in Applied Organometallic Chemistry, 2025.
3. M. Kabir, **T. Pervez**, F.K.S Al-Jahwari and M.S.M. Al-Kharusi, (2025). Material homogenization of human femur bone material using a new weighted approach, ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, Volume 8 Issue 3, 2025.
4. H. Al-Naamani, F.K. Al-Jahwari, **T. Pervez**, S. Al-Owaisi, A. Al-Shabibi and S. Joshi, (2024). Numerical prediction with finite element analysis (FEA) of burst pressure in pipelines with interacting internal & external corrosion defects; Accepted for publication in Engineering Research Express, 2024.
5. Z. Suhail, J. Ashfaq, I. Channa, M. Sadia, A. Chandio, B. Sharammari, **T. Pervez** and F. Al-Jahwari, (2024). Synthesis and evaluation of self-healing polyvinyl alchol-tannic acid membrane for skin bio-applications, Journal of Applied Polymer Sciences, https://doi.org/10.1002/app.56458.
6. S.Z. Qamar, **T. Pervez**, F. Al-Jahwari, (2023). Integrity assessment of high-performance PVC pipes for thermal wells, Polymers 15(17), 3593, https://doi.org/10.3390/polym15173593.
7. I. Al Muscati, F. Al Jahwari, **T. Pervez**, and M. Dorduncu, (2023). Molecular dynamics investigation for mechanical and failure behaviors of carbon nanotube-reinforced functionally graded aluminum–copper nanocomposites; Mechanics of Advanced Materials and Structures, pp. 1-14, https://doi.org/10.1080/15376494.2023.2273009.
8. I. Al Muscati, F. Al Jahwari, and **T. Pervez**, (2023). Effect of CNTs volume fraction on the mechanical properties of CNT reinforced Al/Cu alloy nanocomposite using molecular dynamics simulation; Elsevier Materials Today Proceedings, 2023.
9. M.M.A. Nassar, K.I. Alzebdeh, N. Al Hinai and **T. Pervez**, (2022). A new multistep chemical treatment method for high performance natural fibers extraction. Journal of Natural Fibers, 2023, Vol. 20, No. 1, 215092. https://doi.org/10.1080/15440478.2022.2150922.

10. R. Khan, **T. Pervez**, A.K. Alfozan and S. Mohsin, (2022). Numerical Modeling and simulations of twinning induced plasticity using crystal plasticity finite element method, Crystals 2022, 12(7), 930; https://doi.org/10.3390/cryst12070930.
11. M. Akhtar, S.Z. Qamar, M. Mehdi, **T. Pervez**, M. Al-Kharusi, (2022) Novel method for determination of polymer-solvent interaction parameter using mechanical properties, Arabian Journal for Sci. and Eng., Vol. 47(9), 11887-11897, https://doi.org/10.1007/s13369-022-06691-y.
12. M.M.A. Nassar, K.I. Alzebdeh, **T. Pervez**, N. Al-Hinai and A. Munam, (2021). Progress and Challenges in sustainability, Compatibility and Production of Eco-Composites: A State-of-art Review, Journal of Applied Polymer Science, 138:e51284 https://doi.org/10.1002/app.51284.
13. **T. Pervez**, S.Z. Qamar, M. Akhtar, M. Al Kharusi, (2021). Design and Construction of Test Facility for Evaluation of Swell Packers in Cased and Open Holes. Journal of Petroleum Exploration and Production Technology; 11, 4063–4073 (2021). https://doi.org/10.1007/s13202-021-01277-0.

Selected Conference Publications

1. M. Kabir, **T. Pervez**, F.K. Al-Jahwari and S.Z. Qamar, (2024). Homogenization of Different Material Groups at High Filler Fractions Using a New Weighted Approach, Proc. of Int. Mech. Eng. Cong. & Exp. (IMECE2024), IMECE2024-145207, Portland, Oregon, USA, 15-21 November 2024. (**Scopus indexed**)
2. S. Al-Mufargi, F.K. Al-Jahwari, **T. Pervez**, and M.S. Al-Kharusi, (2024). Processing and Structure-Property Relation of Polypropylene/nanosilica nanocomposite porous structures with solid-state foaming for damping applications, Proc. Int. Mech. Eng. Cong. & Exp., IMECE2024-144804, Portland, Oregon, USA, 15-21 November 2024. (**Scopus indexed**)
3. M. Kabir, **T. Pervez**, F.S. Al-Jahwari and S.Z. Qamar, (2023). Weighted Mori-Tanaka Approach for Homogenization of Particulate Composites at High Filler Fractions, In: Proceedings of the ASME 2023 International Mechanical Engineering Congress & Exposition (IMECE2023), IMECE2023-112951, New Orleans, Louisiana, USA, 29 October-02 November 2023. (**Scopus indexed**)
4. M. Kabir, **T. Pervez**, F.S. Al-Jahwari and S.Z. Qamar, (2023). Modeling of Human Femoral Bone Idealized as Functionally Graded and Laminated Composite Structure, In: Proceedings of the ASME 2023 International Mechanical Engineering Congress & Exposition (IMECE2023), IMECE2023-112920, New Orleans, Louisiana, USA, 29 October-02 November 2023. (**Scopus indexed**)
5. N. Alrasheedi, R. Khan, **T. Pervez**, S.Z. Qamar, M. Akhtar, M. Arsalan, (2023). Numerical modeling of strain rate effects on the post expansion properties of expandable tubular, ASME 2023 Pressure Vessels & Piping Conference, 16-21 July, Atlanta, GA, USA. (**Scopus indexed**)
6. S.Z. Qamar, M. Akhtar, **T. Pervez** and M. Al-Kharusi, (2023). Indirect Estimation of Swelling in Elastomer Packers, 3rd Annual Meeting of the Mediterranean Geosciences Union (MedGU 2023), 27-30-Nov, Istanbul, Turkey.
7. O.S. Al-Abri, **T. Pervez**, S.Z. Qamar and F. Al Jahwari (2022). Macroscale Simulation of Tensile Test of Expandable Tubular Steel Using Crystal Plasticity FEM 2022 Canadian Society of Mechanical Engineers International Congress, 5-8 June 2022, Edmonton, Canada. (**Scopus indexed**)

Book Chapters

1. T. Pervez, F.K.S Al-Jahwari and M.S.M. Al-Kharusi, (2025). Environmental Consideration and Sustainability – Thin Films and Environmental Impact- Sustainable Coating Technologies – Green Engineering Approach, in Thin Flims and Coatings- Engineering Applications, A.D. Chandio and I.A. Channa (eds), eBook ISBN 978-981-96-0005-2, Springer 2025.
2. R. Khan, **T. Pervez**, S.Z. Qamar, N.A. Al-Rasheedia NA and O.S. Al-Abri, (2024). Twinning and transformation induced plasticity in advanced steels: A thermodynamic modeling approach, in Saleem Hashmi (ed), Comprehensive Materials Processing, 2nd edition, Reference Module in Materials Science and Materials Engineering, Elsevier, 2024, ISBN 9780128035818, https://doi.org/10.1016/B978-0-323-96020-5.00225-9.

3. O.S. Al-Abri, **T. Pervez** and S.Z. Qamar, (2024). Classification and Mechanisms of Steel Transformation" in Saleem Hashmi (ed), Comprehensive Materials Processing, 2nd edition, Reference Module in Materials Science and Materials Engineering, Elsevier, 2024,
4. S.Z. Qamar, M. Al-Maharbi and **T. Pervez**, (2024). Thermal Material Enhancement of Metalformimg Die Steel, in Saleem Hashmi (ed), Comprehensive Materials Processing, 2nd edition, Reference Module in Materials Science and Materials Engineering, Elsevier, 2024, ISBN 9780128035818, https://doi.org/10.1016/B978-0-323-96020-5.00290-9
5. S.Z. Qamar, M. Akhtar and **T. Pervez**, (2021). Swelling Elastomers in Petroleum Drilling and Development — Applications, Performance Analysis, and Material Modeling. London: IntechOpen; 2021; https://www.intechopen.com/books/10159.

Selected Service Activities

- Chair Technical Committee, 2nd Unmanned Vehicle Systems Conference, Muscat (2024)
- Advisor, Department Academic Programs Modernization Committee (DAPMC) (2024-2025)
- Advisor, Department Accreditation and Quality Assurance Committee, 2020 - present
- Member, Department Strategic Planning Committee, (2021-present)
- Member, University Academic Promotion Review Committee, (2021-present)
- Co-Chair, ME PG Program Modernization Committee, MIED, CoE, (2022-2023)
- Chair, ME UG Program Modernization Committee, MIED, CoE, (2021-2022)
- Chair, College of Engineering Curriculum Revision Committee (2017-2019)
- External Examiner, Dhofar Uni., Sohar Uni.; NUST Oman