



Dr Hussein Kommur Mohmoud Dalfi

أ.م.د. حسين كمر محمود شناوه الدلفي

PROFILE

Hussein Dalfi is a lecturer of Material Engineering at Mechanical Department/ College of Engineering / Wasit's University. He obtained his PhD from School of Material, University of Manchester in 2018. Prior to joining Wasit University in 2006, he finished his B.Sc. and M.Sc. studying in Material Engineering from Babylon University in 1998 and 2002 respectively.

Hussein's research interests are mainly focussed on toughening of polymer composites by using hybridisation and fibre architecture, aiming to gain a sound scientific understanding of their influence on the damage tolerance of composite laminates, whilst also creating advanced polymer composites with controllable morphologies and properties for a variety of applications including healthcare, energy and general engineering. To achieve these aims, his research takes a holistic approach, such as yarns-level hybridisation, weaving different types of fabrics (i.e. 2D and 3D) functionalisation by using quasi- and dynamics testing, manufacturing processing, characterisation damage failures occurred from testing by using optical microscopy and SEM investigation. His current research activities cover the following topics:

- Manufacturing textile preforms (i.e. UD, 2D and 3D preforms).
- Investigation behaviour of textile preforms
- Producing textile composite materials using vacuum bagging process.
- Investigation mechanical properties of textile composite materials.
- Damage tolerance of textile composite laminates.
- Flexural and Residual flexural strength of composite material
- Characterisation and detection damage failures using destructive and non-destructive scanning tests.
- Tailoring performance of composite using balancing between in-plane properties and impact loading.

PUBLICATIONS (53)

1. **The effect of notches on the mechanical properties and damage failures of fibre-metal laminates: an experimental and numerical study**
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2. **Influence of hybridization and fibre architecture on the translaminar fracture toughness of woven composite laminates**
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3. **Experimental and numerical investigation of low-velocity impact response of bouligand carbon/epoxy composites**
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7. **Enhancement of mechanical, physical, and electrical performances of epoxy composites by inclusion nano-particles: A review**
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RESEARCH METRICS

h-index (Scopus)	0
h-index (GS)	2
Citations (Scopus)	0
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Documents (Scopus)	0
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15. **Effect of nanofillers on the Mechanical Performances and Self-healing of Composite laminates: Article Review**
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17. **Radial clearance influence on strain and stress distribution of the polygonal shape deep-drawing operation**
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18. **Out-of-plane compressive properties of a butterfly-shaped auxetic metamaterial**
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