

WORKSHOP

ADDITIVE MANUFACTURING. VIBRATIONS. OPTIMISATION.

September 15-17, 2021

Online



Day 1: Additive Manufacturing

15 Sept 2021, Wednesday

Time (UK)	Time (DK)	
09:00-09:20	10:00-10:20	Welcome Address Prof Atul Bhaskar , <i>University of Southampton</i>
09:20-10:00 (Keynote)	10:20-11:00 (Keynote)	Additive manufacturing interests at the University of Southampton Dr Andrew Hamilton , <i>University of Southampton</i>
10:00-10:40	11:00-11:40	Experimental mechanics and materials characterization facilities at University of Southampton Prof Philippa Reed , <i>University of Southampton</i>
10:40-11:00	11:40-12:00	Coffee break
11:00-11:40	12:00-12:40	Fatigue evaluations of additive manufactured materials in novel heat exchanger design Khandokar Abu Talha , <i>University of Southampton</i>
11:40-12:40	12:40-13:40	Lunch Break
12:40-13:20	13:40-14:20	Effect of heat treatment on fatigue crack growth in multiple- material additive manufacturing (MMAM) Marie-Salome Duval Chaneauc , <i>University of Southampton</i>
13:20-14:00	14:20-15:00	High temperature fatigue crack growth behaviour in additively manufactured Inconel 718 Diego Martinez , <i>University of Southampton</i>
14:00-14:20	15:00-15:20	Coffee break
14:20-15:00	15:20-16:00	Investigation of microstructural heterogeneity from laser powder bed fusion process variation and laser re-scanning Anqi Liang , <i>University of Southampton</i>
15:00-15:40	16:00-16:40	The effects of processing parameters on roughness of AM 316L Stainless steel Christopher Ogunlesi , <i>University of Southampton</i>

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Day 2: Vibrations

16 Sept 2021, Thursday

<i>Time (UK)</i>	<i>Time (DK)</i>	
09:00-09:10	10:00-10:10	Introduction to Day 2 Kevin Jose , <i>University of Southampton</i>
09:10-09:50 (<u>Keynote</u>)	10:10-10:50 (<u>Keynote</u>)	Waves and finite elements Prof Dimitrios Chronopoulos , <i>KU Leuven</i>
09:50-10:30 (<u>Keynote</u>)	10:50-11:30 (<u>Keynote</u>)	Long-term variations in structural dynamics: tracking and compensation with a damage diagnostics perspective Prof Luis David Avendaño-Valencia , <i>University of Southern Denmark</i>
10:30-10:50	11:30-11:50	Coffee break
10:50-11:30	11:50-12:30	Digital twin Dr Claus Ibsen , <i>Vestas aircoil</i>
11:30-12:30	12:30-13:30	Lunch Break
12:30-13:10	13:30-14:10	Continuum model and effective medium approaches to dynamics of tube-fin assemblies Kevin Jose , <i>University of Southampton</i>
13:10-13:50	14:10-14:50	Vibration testing in an industrial setting: from experimental to operational modal analysis Milena Bavaresco , <i>University of Southampton</i>
13:50-15:10	14:50-16:10	Break
15:10-15:50	16:10-16:50	Structural life estimation using frequency response analysis Kevin Jose & Khandokar Abu Talha , <i>University of Southampton</i>

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Day 3: Optimisation

17 Sept 2021, Friday

<i>Time (UK)</i>	<i>Time (DK)</i>	
09:00-09:10	10:00-10:10	Introduction to Day 3 Atul Singh , <i>University of Southampton</i>
09:10-10:00 (<u>Keynote</u>)	10:10-11:00 (<u>Keynote</u>)	Topology optimisation of fluid-thermal systems: heat sinks and heat exchangers Dr Joe Alexandersen , <i>University of Southern Denmark</i>
10:00-10:10	11:00-11:10	Coffee Break
10:10-11:00	11:10-12:00	Leveraging multiple fidelities within design optimisation Dr David Toal , <i>University of Southampton</i>
11:00-12:30	12:00-13:30	Lunch Break
12:30-13:10	13:30-14:10	Shape transference for surface detail reconstruction. Honorio Salmeron Valdivieso , <i>University of Southampton</i>
13:10-13:50	14:10-14:50	Multi-objective optimisation of tubes in Heat exchangers Atul Singh , <i>University of Southampton</i>
13:50-14:00	14:50-15:00	Coffee Break
14:00-14:40	15:00-15:40	Aerofoil shape parameterisation via an adversarial auto-encoder Tom Bamford , <i>University of Southampton</i>