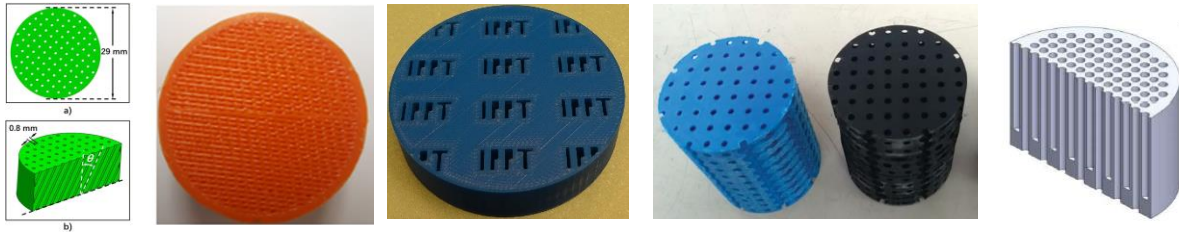


3D printing of porous sound absorbers



Wednesday 22nd April 2020

9 a.m. to 1 p.m.

Increasingly, Additive Manufacturing is seen as a route to manufacturing porous structures with targeted and tailored sound absorbing properties. Nevertheless, several problems have been encountered when using 3D printing for this purpose. This provides the motivation for the workshop which will review and discuss examples and experiences in 3D printing of porous sound absorbers, fundamental definitions of microstructural parameters, analytical and numerical models for acoustical properties, designs based on enhancing tortuosity and compressibility and multi-functional possibilities. The workshop provides an opportunity to discuss the way forward and the potential for joint funding proposals. There are six invited presentations, but the speakers are asked to confine their presentations to 20 minutes to leave time for discussion after their presentation.

Programme

9:00-9:10	Welcome and Introduction	Keith Attenborough	Open University, UK
9:10-9:40	Microstructure parameters influencing acoustical performance	Camille Perrot	University of Paris East, France
9:40-10:10	3D printing examples and experiences	Tomasz Zieliński	Institute of Fundamental Technological Research, Polish Academy of Sciences, Poland
10:10-10:40	Pancake absorbers	Philippe Leclaire	University of Burgundy, France
10:40-11:00 Virtual coffee break			
11:00-11:30	Compensating for defects and optimal grading	Théo Cavalieri and Jean Boulvert	LAUM, Le Mans and Safran Aircraft Engines, France
11:30-12:00	Simple microstructures for sound absorbers	Keith Attenborough	The Open University, UK
12:00-12:30	Towards multi-functionality	Andrew Kennedy	University of Lancaster, UK
12:30-1:00	Final discussion and close		