



## EMERGING TRENDS IN APPLIED MATHEMATICS AND MECHANICS

### Mechanics of Fibre-reinforced Materials : Theory and Applications

Organized by

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This mini-symposium on the mechanics of fibre-reinforced materials (FRMs) is a follow up event to the EUROMECH Colloquium 551 which, under the same title, took place in September 2-5, 2013 at the University of Nottingham, and led to publication of a Special Issue of the Journal of Engineering Mathematics (JEM) in 2015, following publication of a previous Special Issue in 2010. Detailed historical accounts of the subject of FRM mechanics can be found in the prefaces of these JEM special issues, which also provide comprehensive observations on the current trends and future directions of the subject.

Like its predecessor (EUROMECH Colloquium 551), this mini-symposium will focus on new developments in FRM mechanics, including theoretical, computational and experimental developments and their interplay with application areas in order to further promote the subject. FRM mechanics continues to serve the purpose for which it was originally developed, namely the study and understanding of the behaviour of conventional structural and rubber-like materials as well as polymers reinforced by strong fibres. But, now, the theory is also applied extensively to the analysis of fibrous biological materials, where the fibre reinforcement is associated mainly with collagen fibres. Such new emerging applications require further development of the theory and its exploitation for a wide variety of materials, and this mini-symposium aims to provide a platform for advancing the subject beyond the current state-of-the-art