Name
Marco Alfano

Role
Researcher

Short CV

Marco Alfano is an Assistant Professor at University of Calabria (UNICAL), Italy. He received his PhD degree in Materials and Structures from UNICAL in 2006. Prior to his appointment as an Assistant Professor, he also served as Research Fellow at KAUST (KSA) from 2010 to 2011, as Fulbright Scholar at University of Illinois (USA) in 2009 and as Post-Doc Fellow at UNICAL from 2007 to 2008. His recent research has been mainly carried out in the broad area of mechanics of materials as well as adhesion science and technology with both experimental and computational emphases. He serves as Editorial Board member in several international journals. He also held visiting positions in multiple international institutions across Europe, Middle East and the USA.

Teaching activity

Instructor, Mechanics of Materials, BSc in Management Engineering
Instructor, Finite Element Procedures for the Analysis of Solids and Structures, MSc in Mechanical Engineering

Selected Publications:

1. C. Lamuta, A. Cupolillo, A. Politano, Z. S. Aliev, M. B. Babanly, E. V. Chulkov, M. Alfano, L. Pagnotta, Nanoindentation of single-crystal Bi2Te3 topological insulators grown with the Bridgman-Stockbarger method. Physica Status Solidi B: Basic Solid State Physics, in press.
2. E. Hernandez, M. Alfano, G. Lubineau, U. Buttner, Improving adhesion of CuZn40/epoxy joints by pulsed laser surface pre-treatment. International Journal of Adhesion and Adhesives, 64, pp. 23-32, 2016.
3. G. Rotella, M. Alfano, I. Jansen, T. Schiefer, Enhancement of static strength and long term durability of steel/epoxy joints through a fiber laser surface pre-treatment. International Journal of Adhesion and Adhesives, 63, pp.87–95, 2015.
4. A. Shaghaghi Moghaddam, M. Alfano. Finite element analysis of 3D cracks in FGMs under thermal loading. Engineering Fracture Mechanics, 146, pp.172-184, 2015.
5. B. Blaysat, J.P.M. Hoefnagels, G. Lubineau, M. Alfano, M.G.D. Geers, Interface debonding characterization by image correlation integrated with double cantilever beam kinematics, International Journal of Solids and Structures, 2015(55), pp. 79-91.

Researcher Lines:

- Mechanical characterization of advanced materials (e.g. ceramics, metals, polymers) under static, fatigue and impact loading
- Surface preparation strategies (e.g. plasma, pulsed laser ablation)
- Tribology (e.g. micro- and nano-indentation)
- Joining technologies (e.g. adhesive bonding)
- Computational fracture mechanics (e.g. cohesive zone models)
- Parametric identification using iterative techniques (e.g. genetic algorithms) and full field measurements (e.g. digital image correlation)