Dr Catalin Iulian Pruncu

Research staff

School of Mechanical Engineering

Contact details

Telephone +44 (0) 7745133158 (tel:+44 7745133158)

Email c.i.pruncu@bham.ac.uk (mailto:c.i.pruncu@bham.ac.uk)

Mechanical Engineering
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK

About

Catalin is a Ktp Associate in Mechanical Engineering with expertise in Tribology, Fatigue and Fracture Mechanics, Finite Element Method (FEM), and Acoustic Emissions technique.

Qualifications

- Ph.D in Design Mechanics and Biomechanics, Politecnico di Bari, Italy, 2013
- MSc in Mechanics & Materials Engineering, University Paul Verlaine Metz, France, 2009
- BSc in Mechanical Engineering, University Vasile Alecsandri, Bacau, Romania, 2008

Research

Research activity

- Tribological effect of ball valve assembly for Nuclear, Marine industry
- Tribological behaviour of aluminium both experimental tests and theoretical/numerical modeling such as Scanning Electron Microscopy (SEM), Finite Element Method (FEM)
- Assessment of crack initiation/propagation phenomena in innovative materials such as titanium alloys and bi-material compounds
- Research devoted to analysis the protective coating layers applied, against corrosion damage phenomena.
- Reviewer for Journal of Mechanics Engineering and Automation, from December 2012
- Organizer of New Trends in Fatigue and Fracture (NT2F12), Brasov, Romania, 2012
- Fellowship from University of Brescia, Italy for the summer school “Computational Multiscale Fracture Mechanics”, 2012
- Member on Scientific Committee of 5th International Conference on Computational Mechanics and Virtual Engineering (COMEC 2013), Brasov, Romania, 24-25 October 2013
- Member on Scientific Committee of 4rd International Conference Advanced Composite Materials Engineering (COMAT), Brasov, Romania, 18-20 October 2012

Publications

Journal Article

C. Casavola, V. Giordano, C. Pappalettere, **C.I. Pruncu**, 2013, Influence of geometric shape of specimen in fatigue life characterization on welded joint in titanium alloy. Structural Integrity and Life, 13 (1), pp 45-50

Z. Azari, C. Casavola, C. Pappalettere, **C.I. Pruncu**, 2012, Numerical simulation in coated materials: model of crack propagation bi-material. Structural Integrity and Life, 12 (2), pp 125-129

C.I. Pruncu, October 2012, A short review of recent research on the mechanics of fracture and failure in composite materials. 4th International Conference Advanced Composite Materials Engineering (COMAT), Brasov (Romania). Lux Libris Publishing House: Vol. I, pp. 31-37. ISBN: 978-973-131-164-7.

C. Casavola, L. Lamberti, **C.I. Pruncu**, 2012, Weight minimization of truss structures with Big Bang-Big Crunch. In: Proceedings of the 4th International Conference Advanced Composite Materials Engineering (COMAT), Brasov (Romania), Lux Libris Publishing House: Vol. II, pp. 334-351. ISBN: 978-973-131-164-7.

© University of Birmingham 2015