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**ROBERTA SBURLATI, PhD**

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**Recent Research Topics**

Analytical Modeling and Finite Element Analysis. Mechanics of Advanced and Conventional Composites. Functionally Graded Materials (FGM) and Material Tailoring. Mechanical Properties in Particulate Composites. Innovative materials for pipe in deepwater and ultra-deepwater. Collaborations: University of Technology, Luleå, Sweden; Centre for Micro- and Nanomechanics, University of Aberdeen, Scotland UK; McGill University, Canada.

**Curriculum**

Roberta Sburlati is Philosophical Doctor in Structural Engineering from 1986 and Associate Professor in Mechanics of Solids and Structures (Scienza delle Costruzioni ICAR/08) at the Department of Civil, Environmental and Architectural Engineering of the University of Genoa from 2001. She teaches Advanced Structural Mechanics (Scienza delle Costruzioni 2) and Computational Structural Mechanics Courses to Civil Engineering and Mechanical Engineering students. Roberta Sburlati is a member of the Council of PhD in Structural and Geotechnical Engineering in the PhD School of Mechanics of Fluids and Solids; member of the Materials Mechanics Group of the Italian Association of Theoretical and Applied Mechanics (AIMETA). She was at the Department of Materials Science and Mineral Engineering of the University of California in Berkeley (USA) and at the Department of Aerospace and Mechanical Engineering of the University of Arizona in Tucson as Visiting Scientist (USA). From 1994 is responsible of national and international research projects (University, Miur, CNR, PRIN, Royal Society Projects).

**Teaching Activity**

Meccanica dei Solidi e delle Strutture (6 CFU) - Corso di Laurea Triennale in Ingegneria Meccanica (Genova); Meccanica dei Solidi (5 CFU) - Corso di Laurea Magistrale in Ingegneria Civile e Ambientale (Genova); Structural Mechanics (5 CFU) - Corso di Laurea Magistrale in Yacht Design (Spezia).

**Some publications**

Abdalla, H.M.A., D. Boussaa, D., Sburlati, R., Casagrande D. (2023) On the best volume fractions for functionally graded axisymmetric bodies – A pseudo-spectral approach, *Composite Structures*, 311, 116784, Elsevier.

Jafarinezhad, M., Sburlati, R., Cianci, R. (2023) Static and free vibration analysis of functionally grade annular plates using stress-driven non local theory, *European Journal of Mechanics-A/Solids*, 104955, Elsevier.

Sburlati, R., Cianci, R. (2020) Shear modulus prediction of a particulate composite reinforced with hollow spheres surrounded by a graded interphase, *Composite Structures*, 250, 112528, Elsevier.

Sburlati, R., Kashtalyan, M. (2019) Graded Insulation to Improve High Pressure Resistance in Deepwater Flowlines: a Closed Form Analytical Elastic Solution, *New Achievements in Continuum Mechanics and Thermodynamics, Advanced Structured Materials* 108, 29, 433-446, Springer.

Sburlati, R., Cianci, R. and Kashtalyan, M. (2018) Hashin's bounds for elastic properties of particle-reinforced composites with graded interphase, *International Journal of Solids and Structures*, 138, 224-235.

Sburlati, R., Kashtalyan, M. and Cianci, R. (2017) Effect of graded interphase on the coefficient of thermal expansion for composites with spherical inclusions, *International Journal of Solids and Structures*, 110-111, 80-88.

Sburlati, R., Kashtalyan, M. (2016) Elasticity analysis of sandwich pipes with functionally graded interlayers, *European Journal of Mechanics-A/Solids*, 59, 232-241.

Atashipour, S.A., Sburlati, R. (2016) Electro-elastic analysis of a coated spherical piezoceramic sensor, *Composite Structures*, 156, 399-409, Elsevier Ltd., Exeter, U.K.

Sburlati, R., Atashipour, S.R., Atashipour, S.A. (2015) Exact elastic analysis of a doubly coated thick circular plate using functionally graded interlayers, *Archive of Applied Mechanics*, 85, 1779-1792.