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Zagreb, 4. ožujka 2008.

P o z i v

Pozivamo Vas na predavanje

"Numerical and experimental analysis of trabecular bone structures"

koje će održati ***Prof. Ing. Francesca Cosmi, PhD,*** *Università degli Studi di Trieste*

u ***četvrtak 20. ožujka 2008. u 18,00 sati,***

na ***Fakultetu strojarstva i brodogradnje, Zagreb, Ivana Lučića 5, predavaonica F.***

Više o predavanju može se naći na web-stranici: www.csm.hr.

PREDSJEDNIK DRUŠTVA

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Francesca Cosmi is Associate Professor at University of Trieste, Italy, where she teaches "Mechanical Machine Design", "Reliability and Safety of Mechanical Constructions" and "Mechanical Bioengineering.

After graduating in Mechanical Engineering and obtaining her PhD in Applied Mechanics at the Technical University of Milan, she conducted research activities in Italy at the Dept. of Mechanics of Technical University of Milan and abroad at the University of California at Berkeley, at the Advanced Teleoperation Laboratory of Jet Propulsion Laboratory, NASA/California Institute of Technology, Pasadena, at the Mechanical Engineering Laboratory, Tsukuba, Japan and at the Federal University of Rio de Janeiro, Brazil.

She is the author of an international patent, "Method to identify the mechanical properties of a material", and co-author with dr. Diego Dreossi of an Italian patent. She has published approximately 80 papers in referred journals and conference proceedings. She is a member of the Council of presidency of the Italian Group on Fracture IGF and a member of the Scientific Committee of Danubia-Adria Society.

Her research activities are currently directed to the development of experimental techniques and numerical methods that can be employed to model materials with a complex structure, from trabecular bone to industrial materials such as sintered alloys and short fiber reinforced composites, with a particular reference to fatigue damage assessment.

Trieste, February 27th, 2008

Numerical and experimental analysis of trabecular bone structures

Outline of the lecture:

- Video presentation of Treiste and its University
- Brief introduction of a numerical model, based on the Cell Method, for the static analysis of complex microstructures
- Application to the 3D reconstructions of trabecular bone from micro-tomography with synchrotron radiation
- Experimental validation of the model, by means of replicas of the examined microstructures by rapid prototyping and mechanical tests
- Application of the model for the analysis of bones grown in microgravity conditions