

MECHANICAL & INDUSTRIAL ENGINEERING COLLOQUIUM: ME 794 001

Wednesday, September 19, 2012

1:00 – 2:25 PM

221 MEC

**“NON-DESTRUCTIVE DIAGNOSTICS AT THE PARMA UNIVERSITY:
AN OVERVIEW OF THE CURRENT RESEARCH”**

Dr. Luca Collini

*Department of Industrial Engineering,
University of Parma, Italy*

ABSTRACT

"Damage identification and health monitoring based on measure of vibrations are new trends in the structural diagnostics methods. These techniques are particularly attractive when dealing with ancient buildings and cultural heritages, since these goods need preservation and planning of maintenance/restoration via non-destructive, contact-less approaches. Here it is presented the modal testing analysis applied to the determination of detachments in ancient fresco paintings, and in the estimation of the axial load in structural reinforcement tie-rods. The methods were ad-hoc developed and implemented in the NDT&Contact-Less Measurement Laboratory at the Parma University, Italy. Results of the research demonstrated their utility, and are very encouraging for future studies and applications."

BIOGRAPHY

Luca Collini since 2005 is researcher in "Mechanical design and construction of machines" at the Department of Industrial Engineering, University of Parma, Italy.

As a lecturer of the Faculty of Engineering of Parma University, Dr. Eng. Collini teaches courses in the construction of machinery, technical drawing, and product design and development for mechanical and management engineering students. At the present he is involved in the Socrates/Erasmus European Community program for the international mobility of students.

Author of over 80 journal papers and contributions of national and international conference, his research activity embraces the mechanical behavior of materials, in particular fatigue and fatigue crack resistance of metals, the advanced design methods in mechanics, and the structural integrity assessment techniques based on vibration analysis.

For More Information Contact: Dr. R. Sodhi (973) 596-3362, sodhi@njit.edu