Objectives

This workshop aims at disseminating recent research on shape memory alloys (SMAs) in the triple perspective of: processing (heat treating, laser welding and other joining technologies), characterization (structural, thermal and mechanical) and its industrial applications in biomedical aeronautics, automotive and civil engineering.

The goal is to bring together researchers in SMAs and discuss experimental aspects of processing and joining these materials, contributing to strength the scientific community involved with this kind of materials.

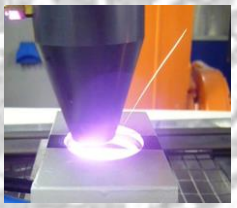
Moreover, the workshop aims to disseminate results from a R&D Project funded by the Fundação para a Ciência e Tecnologia (FCT) "Joining micro to small scale systems in shape memory alloys using last generation infrared lasers – MICROBOND, PTDC/EME-TME/100990/2008"

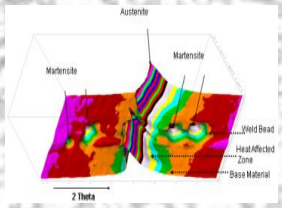
The workshop targets researchers and professionals oriented for innovative applications in engineering.

FCT
FACULDADE DE CIÊNCIAS E TECNOLOGIA
UNIVERSIDADE NOVA DE LISBOA

Processing, Characterization and Applications of Shape Memory Alloys

Workshop





Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa

June, 14, 2013

More information:
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EUROPEAN FEDERATION FOR WELDING, JOINING AND CUTTING EWF
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CENIMAT CENTRO DE INVESTIGAÇÃO DE MATERIAIS i3N INSTITUTO DE NANOESTRUTURAS, NANOMODELAÇÃO E NANOFABRICAÇÃO
idmec IST engenharia mecânica
– UNIDEMI – R&D Unit in Mechanical and Industrial Engineering

Programme - Morning	
10.00 10.15	Opening session Fernando Santana – Director of FCT-UNL Rosa Miranda – Scientific Responsible for Microbond Project
10.15 10.45	Characterization Techniques of NiTi Francisco Braz Fernandes – CENIMAT/FCT-UNL
10.45 11.00	Coffee break
11.00 11.30	Laser Processing: welding and shot peening Jose Luís Ocaña – Centro Laser de Madrid, Universidad Politécnica de Madrid
11.30 12.00	Fentosecond laser applications in NiTi Luísa Coutinho – IDMEC/IST
12.00 12.30	Dissimilar laser welding of NiTi to Ti and stainless steels Rosa Miranda – UNIDEMI/FCT-UNL
12.30 13.00	Reactive and diffusion joining Maria Teresa Vieira – CEMUC/FCT-UC
13.00 14.30	Lunch (free)

Programme - Afternoon	
13.00 14.30	Poster session
14.30 15.00	Heat treating of SMAs Francisco Braz Fernandes – CENIMAT/FCT-UNL
15.00 15.30	Diffusion bonding SMA with cold rolled Ni/Ti multilayer Manuel Vieira – CEMUC/FEUP
15.30 16.30	<u>Applications</u> Vibrations control in civil engineering using shape memory alloys Filipe Santos, UNIC/FCT-UNL Wires and brackets used in orthodontics Rafaella Magalhães, Médica-dentista na Clínica Spa da boca
16.30 16.45	Closing remarks Rosa Miranda – UNIDEMI/FCT-UNL Francisco Braz Fernandes – CENIMAT/FCT-UNL

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