



### REGISTRATION FORM

Online Registration under  
www.extremat.org

**Fax Reply**  
**+49 911 20671 744**

Name  
\_\_\_\_\_

First Name  
\_\_\_\_\_

Company / Institution  
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Street  
\_\_\_\_\_

Postal Code / Town  
\_\_\_\_\_

Country  
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eMail  
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Phone  
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Fax  
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- Student                       Company  
 ExtreMat Partner             Press

### Participation

- Tuesday, 26<sup>th</sup> June 2007  
Key Note Speech and Get-together
- Wednesday, 27<sup>th</sup> June 2007  
Workshop

\_\_\_\_\_  
Date, Signature



### Further Information

#### Registration Fee

Student / PhD	50,-€
ExtreMat Partner	100,- €
Company	300,- €

The registration fee includes seminar documents, organized dinner, lunch and refreshment, transportation from the hotel to Politecnico site and vice versa.

#### Registration Deadline

June 15<sup>th</sup>, 2007

Registration will be confirmed via eMail. You will be billed after registration is completed.

Cancellation received before June 15, 2007 are exempt from charges. For later cancellations and for non-attendance, the full amount will be incurred.

Substitution of participants is possible according to prior agreement.

#### Venue

Politecnico di Torino, Italy  
10126 Torino, Lingotto, via Nizza, 230

#### Organization

Bayern Innovativ GmbH  
Department BayTech  
Monika Hegner  
Gewerbemuseumsplatz 2  
90403 Nuremberg, Germany

Tel: +49 911 20671-360  
Fax: +49 911 20671-744  
hegner@bayern-innovativ.de  
www.baytech.de

For more information on the ExtreMat project and the Conference, hotels, journey and location please refer to the web site: **www.extremat.org**

# Space materials for high temperature applications

**Politecnico di Torino, Italy**  
**June, 26<sup>th</sup> and 27<sup>th</sup> 2007**



## Subject

The conference will address the topic exploitation of ceramic materials (long fibres and particle reinforced composites, ceramic laminates and surface coatings) in the protection systems of space vehicles. Furthermore the issue of testing these ceramic materials in terms of microstructure, properties and performance under simulated operating conditions refurbishment of thermal protection systems will be raised.



## Objective

The workshop is aimed at providing an overview on space materials for high temperature applications. To this purpose the state of the art will be presented by material producers, researchers and end users, in particular with reference to thermal protection systems of re-entry vehicles. Utilization of specific techniques and facilities for testing materials under conditions simulating the space extreme environment will be discussed.

The event will offer the opportunity of debating about the more recent advancements of space materials and the prospects for the future.



## Target audience

Scientists, engineers and technicians interested in the properties and aspects related to space materials for high temperature applications.



## Program

**Tuesday, June 26th 2007**

**8.00 pm Key Note Speech**

**Vision for Space Exploration: Moon, Mars, and Beyond**

Dr. Mrityunjay Singh, NASA Ohio Aerospace Institute, USA

afterwards Italian Get-together

**Wednesday, June 27th 2007**

**08.45 am Welcome address**

Prof. Dr. Paolo Spinelli, Politecnico di Torino

**09.00 am Session 1: requirement for space materials**

**Space applications and reference extreme environment**

Dr. Franco Fossati, Thales Alenia Space Italia, Italy

**CMC for Thermal Protection Systems and Hot Structures in Space Vehicles: Requirements, Testing, and Current Concepts**

Ralf Knoche, EADS Astrium GmbH, Germany

**Coffee break**

**11.00 am Session 2: Material processing**

**High temperature ceramic matrix composites and coatings for aerospace applications**

Dr. Alberto Ortona, ICIMSI Research Institute, Switzerland

**SiC multilayer for thermal protection of space re-entry vehicles**

Prof. Dr. Claudio Badini, Politecnico di Torino, Italy

**UHTC ceramics and composites: processing-microstructure and properties**

Dr. Alida Bellosi, National Research Council, Italy

**01.00 pm Lunch**

**02.15 pm Session 3: testing and material refurbishment**

**Ground testing of re-entry materials: Methods, Challenges, and Significance for Application**

Dr. Volker Liedtke, Austrian Research Centers GmbH, Austria

**Characterization of protection materials and compounds for high temperature and high heat flux applications**

Dr. Jochen Linke, Forschungszentrum Jülich, Germany

**In Space Repair and Refurbishment of TPS Structures**

Dr. Mrityunjay Singh, NASA Ohio Aerospace Institute, USA

**05.00 pm End**

This conference is organized by the ExtreMat Consortium as a training activity within the framework of the Integrated European Project "ExtreMat" (Contract NMP-CT-2004-500253) with financial support by the European Community.

The department BayTech, of the Bayern Innovativ GmbH is responsible for the execution and organization of the conference.

