



---

#### SPECIAL SESSIONS

---

##### Special Session 1

[FLOW SYSTEMS, DESIGN AND OPTIMIZATION \(SS1\)](#) <<< [click here](#)

Organisers:

**Prof. Antonio F. Miguel**

University of Evora,  
Portugal

**Prof. Luiz Rocha**

Federal University of Rio Grande do Sul,  
Brazil

---

##### Special Session 2

[DIFFUSION PROCESSES AND REACTIONS IN ENGINEERING ALLOYS \(SS2\)](#) <<< [click here](#)

Organisers:

**Prof. Helmut Mehrer**

Universitat Munster,  
Germany

**Prof. Graeme Murch**

University of Newcastle,  
Australia

**Prof. Irina Belova**

University of Newcastle,  
Australia

---

##### Special Session 3

[GRAIN BOUNDARIES AND INTERFACES: STRUCTURE, THERMODYNAMICS AND DIFFUSION PROPERTIES \(SS3\)](#) <<< [click here](#)

Organisers:

**Prof. Vladimir V. Popov**

Russian Academy of Sciences,  
Russia

**Prof. Boris B. Straumal**

Russian Academy of Sciences,  
Russia

---

##### Special Session 4

[ALTERNATIVE ENERGIES\(SS4\)](#) <<< [click here](#)

Organisers:

**Dr. Germán Ferreira**

University of Zaragoza,  
Spain

---

##### Special Session 5

[CARBON AND OXIDE NANOSTRUCTURES \(SS5\)](#) <<< [click here](#)

Organisers:

**Prof. Noorhana Yahya**

Universiti PETRONAS,  
Malaysia

**Prof. Gregory Kozlowski**

Wright State University,  
USA

**Dr. Krzysztof Koziol**

University of Cambridge,  
UK

---

##### Special Session 7

[HEAT AND MASS TRANSFER IN POROUS MEDIA \(SS7\)](#) <<< [click here](#)

Organisers:

**Prof. Joao Delgado**

University of Porto,  
Portugal

---

##### Special Session 9

[NANO/BIO MATERIALS SYNTHESIS, CHARACTERIZATION, MODELING AND APPLICATIONS \(SS9\)](#) <<< [click here](#)

Organisers:

**Prof. A. Shokuhfar**

K.N.Toosi University of Technology,  
Iran

---

##### Special Session 10

[HYDROGEN-RELATED KINETICS IN MATERIALS \(SS10\)](#) <<< [click here](#)

Organisers:

**Prof. Yuh Fukai**

Institute of Industrial Science,  
The University of Tokyo,  
Japan

**Prof. Markus Wilde**

Institute of Industrial Science,  
The University of Tokyo,  
Japan

---

##### Special Session 11

[MICROSCOPY, MICROANALYSIS AND THEIR APPLICATION ON MATERIALS \(SS11\)](#) <<< [click here](#)

Organisers:

**Prof. Keesam Shin**

Changwon National University  
Republic of Korea



Special Session 1  
**FLOW SYSTEMS, DESIGN AND OPTIMIZATION (SS1)**

### FLOW SYSTEMS, DESIGN AND OPTIMIZATION (SSI)

Advances in the understanding of fluid flow processes and design generation continue to be crucial in achieving improved performance and efficiency in a broad range of systems.

This special session welcomes contributions on any aspect of fluid flow, heat transfer, fluid-structure interaction and on the design of flow systems.

Papers reporting theoretical, experimental and computation research results on above topics are solicited.

Publication:  
 Journal of Mechanical Engineering (Selected Papers)  
 Impact Factor 0.466 / webpage <http://en.sv-jme.eu/>



Organisers:



**Prof. Antonio F. Miguel**  
 University of Evora,  
 PORTUGAL  
[afm@uevora.pt](mailto:afm@uevora.pt)



**Prof. Luiz Rocha**  
 Federal University of Rio Grande do Sul,  
 BRAZIL

*Invited Speakers:*



'SLUDGE FLOW AND DRYING CHARACTERISTICS IN PADDLE DRYERS'  
**Dr. Houlei Zhang**  
 Nanjing University of Science and Technology  
 China



'CHANGE IN DIFFUSION PATTERNS ALONG DESIGN EVOLUTION'  
**Dr. Marcelo Errera**  
 Universidade Federal do Paraná  
 Brasil