

2005



universités  
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d'été 2005



PiM  
programme incitatif pour la mobilité  
internationale des étudiants

**19/09/05**

**Session A:  
RAPID  
MANUFACTURING /  
RAPID TOOLING**

- 9.00 Accueil  
10.00 Ouverture officielle par B. Laget, Directeur de l'ENISE  
10.30 Introduction by Dr. B. Verquin (CETIM, France).  
11.00 Dr. B. Le Razer (PEP, France),  
11.30 Coffee break.  
11.45 Mr. P. Teulet (PHENIX SYSTEMS, France), *Design and performance of PHENIX equipment.*  
12.15 Prof. N. Tolochko (Vitebsk State University, Belarus), *Selective laser sintering of single-component metal powders: regularities and mechanisms.*  
12.45 Lunch  
14.00 Dr. M. Schäfer (Siemens, D)  
14.30 Dr. I. Shishkovsky (P.N. Lebedev Physical Institute of RAS, Samara, Russia) *SLS research in Samara branch of Physics Institute.*  
15.00 Dr. P. Aubry (CLFA/CEA),  
15.30 Dr. I. Shishkovsky (P.N. Lebedev Physical Institute of RAS, Samara, Russia) *Implant synthesis via SLS process on the base of nitinol (NiTi) of titanium powders.*  
16.00 I. Yadroutsev (ENISE/ Vitebsk State University), *Experiments on PHENIX-100 machine : advances and limitations.*  
16.30 Coffee break.  
16.45 S. Celotto (UK, Cambridge – cold spray).  
17.15 V. Noblet (TRUMPF).  
17.45-18.15. Round table.

**20/09/05**

**Session B:  
ITER  
FIRST WALL  
PROBLEMATICS.**

- Session chaired by Dr. Grosman, Head of Plasma Wall Integration Division, CEA/Cadarach, France.  
9.30 Introduction by Dr. Grosman (CEA/Cadarach, France).  
9.45 Dr. Grosman (CEA/Cadarach, France), *Problematics of Plasma – Wall Interaction.*  
10.30 *Problems of First Wall Engineering (CEA/Cadarach)*  
11.00 Coffee break.  
11.10 Prof. G. Gladush (TRINITI, Troitsk, Russia), *TRINITI activities related to the First Wall.*  
11.30 Dr. Nikolay Litnovsky (Efremov Institute, St-Petersburg, Russia), *Activities of the Centre "SINTEZ" related to the First Wall.*  
12.00 Prof. V. Kumaev (Moscow Physical Engineering Institute, Moscow, Russia), *Possible activities of MEPHI related to the First Wall.*  
12.30 Lunch.  
14.00 Academician S. Zhdanok (Luikov Institute of Heat and Mass Transfer, Minsk, Belarus), *Possible application of plasma hall accelerator for "ITER" materials testing*  
14.30 Prof. I. Smurov (ENISE, France), *Possible activities of ENISE related to the First Wall. Cooperation with Efremov Institute, TRINITI, MEPHI, Luikov Institute.*  
15.00 Session conclusion by Dr. Grosman (CEA/Cadarach, France).  
15.30 – 17.00: Round table on eventual cooperation on the First Wall problems.

**21/09/05**

**Session C:  
SURFACE  
ENGINEERING**

- 9.00 Visite de la plate-forme de l'ENISE  
10.00 Prof. S. Kaloshkin (Moscow Institute of Steel and Alloys, Moscow, Russia) *Synthesis and Application of New Functionally Graded Materials and Coatings*  
10.30 Prof. B. Chichkov (Laser Zentrum Hannover e.V., Germany), *Femtosecond laser technologies at the LZH*  
11.00 Coffee break.  
11.15 Prof. H. Zahouani, LTDS, *Multifunctional wear resistant surfaces,*  
11.45 ENSMSE – applications biomédicales,  
12.15 Lunch.  
Afternoon session "Multifunctional surfaces" chaired by Prof. B. Chichkov (Laser Zentrum Hannover e.V., Germany).  
14.00 HEF, France, *Industrial multifunctional surfaces by PVD.*  
14.30 Prof. N. Smurov (Institute of Machine Science, Russian Academy of Sciences, Moscow, Russia) *Nanostructured wear resistant coatings*  
15.00 Coffee break.  
15.15 Dr. M. Ignatiev, (Baikov Institute of Metallurgy, Russian Academy of Sciences, Moscow, Russia) *Inorganic fullerenes-like materials and their potential tribological applications*  
15.45 Prof. G. Gladush (TRINITI, Troitsk, Russia) : *Physical simulation of laser cutting of metals*  
16.15 Prof. E. Audouard (Univ. St-Etienne, France), *Surface engineering by femtosecond laser pulses.*  
16.45 Session conclusion by Prof. B. Chichkov (Laser Zentrum Hannover e.V., Germany).  
17.15-18.15. Round table.

**22/09/05**

**Session C:  
SURFACE  
ENGINEERING**

- Morning session : "Thermal Spraying Applications" chaired by Praxair France.  
9.15 Introduction by Praxair, France).  
9.45 Advanced Coating (Liege, Belgium).  
10.30 Coffee break.  
10.40 Flame Spray (Italy).  
11.10 Maurice DUCOS - Cold Spray  
11.40 I. SMUROV-ENISE, *Multifunctional coatings by thermal spraying processes,*  
12.10 Session conclusion by Praxair  
12.30 Lunch.

**Session D:  
POWDER  
METALLURGY**

- Afternoon session chaired by Luc Federzoni, CEA Grenoble  
14.00 Sebastien Launcois, CEA Grenoble  
14.30 S. Bourdin, CETIM, applications industrielles du procédé de Compactage à grande vitesse  
15.00 Coffee break.  
15.15 H. Senillou, Eurotungstene  
16.45 Prof. N. Tolochko (Vitebsk State University, Belarus), *New approaches to semisolid casting of metals and composites*  
17.15 Session conclusion by Luc Federzoni  
17.45. Round table.

**23/09/05**

**Session E:  
PROCESS  
DIAGNOSTIC &  
SIMULATION**

- 9.30 Morning session "Diagnostics" chaired by Dr. M. Ignatiev  
9.15 Introduction by Dr. Ignatiev  
9.30 B. Kessler, PRECITEC/D  
10.15 Dr Ph Bertrand ENISE, *Multiwavelength pyrometry*  
11.00 Coffee break.  
11.15 RENAULT/ENISE  
11.45 SCHNEIDER/ENISE  
12.15 Session conclusion by Dr. M. Ignatiev.  
12.30 Lunch  
  
Afternoon session "Simulation" chaired by Prof. V. Mazhukin  
  
14.00 Prof. V. Mazhukin (IMM RAS)  
14.45 Dr H. Hamdi (ENISE)  
15.30 Coffee break.  
15.45 Prof. Troyan, (Moscow Physical Engineering Institute, Moscow, Russia) *Metal Nanoclusters : Deposition Techniques, Morphology, Electronic Structure and Potential Applications.*  
16.30 Dr. M. Pushkin (Moscow Physical Engineering Institute, Moscow, Russia) *Observation of metal-nonmetal transition in metal nanoclusters*  
17.00 Session conclusion by Prof. V. Mazhukin  
17.15 - 18.00. Round table.

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