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CSM INSTRUMENTS Users' Meeting 2010

FINAL PROGRAM AND REGISTRATION DETAILS

**27th and 28th October 2010
Chexbres (Montreux), Switzerland**

We are pleased to announce registration for our annual Users' Meeting is now open for all CSM Instruments users. We are glad to welcome you for this unique event and hope you will join us!

This meeting is an ideal opportunity for you to connect with our team and openly share your experiences with our products. It will also be a chance for you to exchange and discuss your results to other CSM Instruments users.

This event is a wonderful opportunity to present your work achieved with our instruments. Please note that this event will be preceded by a Nanoindentation course assigned to all our Indentation Instruments users.

We are looking forward to meeting you very soon for this occasion.

//// Tuesday 26th October 2010

CSM Instrumented Indentation Course

Peseux, Switzerland (on CSM Instruments premises)

8:30 Welcome

9:00 **1. Theory on Instrumented Indentation Testing**

- > Introduction to contact mechanics
- > Instrumented Indentation Testing
 - Techniques
 - Calculations
 - Basic calculations
 - Viscoelastic calculations
 - Fracture toughness calculations
 - Applying corrections
 - Area function calibrations
 - Thermal drifts
 - Load frame corrections

- > Cautions and alternatives to assess right measurement of Instrumented Hardness and Young modulus
 - Surface preparation
 - Case of thin films
 - Case of materials exhibiting pile-up
 - Case of materials exhibiting creep

- > Principle of CSM Instruments

2. Practice and advice for testing samples in the laboratory

- > Mounting samples

- > Testing samples
 - Hard coatings
 - Metals
 - Polymers

- > Setting parameters
 - Advanced test
 - CMC test
 - Sinus test
 - Matrix

17:00 End of the Indentation Course

18:00 Transfer to Préalpina Hotel in Chexbres

//// Wednesday 27th October

08:30 – 09:00 Registration

09:00 – 09:15 Welcome to the CSM Users' Meeting 2010
Mr. Jacques Françoise, CEO of CSM Instruments

09:15 – 10:15 CSM Introduction of our new products
Mr. Philippe Kempe, CSM Sales Manager

10:15 – 10:30 Coffee Break

//// Morning Session > Chairman: Dr. Michael Olsson

10:30 – 11:30 Invited speaker:
**HARDNESS CARTOGRAPHY IN 3D AND DISLOCATION INTERACTION MECHANISMS:
APPLICATIONS OF NANOINDENTATION IN MICRO/NANO MECHANICS**
Dr. Christophe Tomas, Université de Poitiers (France)

11:30 – 12:00 **Reproducibility and Accuracy (trueness and precision) of Nanoindentation Test Results in light of the revision of ISO 14577**
Dr. Michael Griepentrog, Federal Institute for Materials Research and Testing - BAM, Berlin (Germany)

12:00 – 12:30 **Study of PVD coatings by Nanoindentation to develop a standard reference nanomaterial of elastic modulus**
Dr. M.I. Petrzhik, National University of Science & Technology "MISIS" Moscow (Russia)

12:30 - 14:00 Lunch in the "Préalpina Hotel"

//// Afternoon Session > Chairman: Dr. Jiri Nohava, CSM Instruments

14:00 - 14:20 **Mapping of hardness and elastic modulus along the interface of diffusion coatings**
Dr. Giovanni Bolelli, University of Modena and Reggio Emilia (Italy)

14:20 – 14:40 **Micro Hardness characterization of as-quenched glassy alloys**
Dr. Zoltán Pál, Budapest University of Technology and Economics Budapest (Hungary)

14:40 – 15:00 **Protective coatings for silicon and stainless steel surfaces**
Dr. G.K. Zhavnerko, Institute of Chemistry of New Materials of National Academy of Sciences of Belarus

15:00 – 15:20 **Performances of hybrid organic-inorganic coatings for wood flooring application**
Dr. Xabier Errotabehere, RESCOLL Centre Technologique, Pessac (France)

15:20 – 15:50 Coffee Break

15:50 – 16:10 **Physical Scratch Test**
Dr. Norbert Schwarzer, Siomec (Germany)

16:10 – 16:30 **Significance of indentation and scratch testing on thermally-sprayed coatings**
Dr. B. Bonferroni, University of Modena and Reggio Emilia (Italy)

16:30 – 16:50 **Roughness effect on the friction behaviour of polymer surface**
Dr. Anne Rubin, Institut Charles Sadron CNRS, Strasbourg (France)

16:50 – 17:10 **Viscoelastic Scratch behaviour of polymers containing hard and soft fillers**
Dr. Luca Andena, Politecnico di Milano (Italy)

17:45 – 19:00 Surprise Tour organized by CSM Instruments

19:00 – 22:00 Official Dinner

//// Thursday 28th October

09:00 – 10:00 New evolution of CSM products (Software and Hardware)
Mr. Bertrand Bellaton, CSM R&D Manager

10:00 – 10:30 **Coffee Break**

//// **Morning Session** > Chairman: Dr Christophe TROMAS

10:30 – 11:30 Invited speaker:
EVALUATION OF THE MECHANICAL AND TRIBOLOGICAL REPOSE OF VARIOUS TRIBO_MATERIALS USING INDENTATION; SCRATCH TESTING AND PIN_ON_DISK TESTING
Prof. Mikael Olsson, Dalarna University (Sweden)

11:30 – 11:50 **Mechanical and adhesive properties of hybrid sol-gel coatings**
Dr. Viviane Turq, CIRIMAT-UMR CNRS, Université Paul Sabatier, Toulouse (France)

11:50 – 12:10 **Test of tribological properties of hard nitride and oxynitride coatings produced by rotating cathodes arc- PVD**
Mr. Pascal Dessarzin, PLATIT AG (Switzerland)

12:10 – 12:30 **Friction and wear behaviours of Ti(C,O,N) dark decorative coatings**
Dr. D. Munteanu, Transilvania University Brasov (Romania)

12:30 – 14:00 **Lunch**

//// **Afternoon Session** > Chairman: Mr. Nicolas Conte (MSc)

14:00 – 14:20 **Ultra Nanoindentation measurements on malaria infected red blood cells**
Prof. C. Kothari, University of Mumbai (India)

14:20 – 14:40 **Nanoindenter tip optimization for soft materials**
Eng. Marc Farine, ETH Zürich (Switzerland)

14:40 – 15:00 **Mechanical properties of hard phases in Metal Matrix Composites and their influence on wear resistance**
Dr. Stephan Huth, Ruhr-Universität Bochum (Germany)

15:00 – 15:20 **Mechanical characterization of Fe-Al intermetallic coatings on the P92 steel by means of nanoindentation**
Dr. G. Alcalá, Universidad Complutense de Madrid (Spain)

15:20 – 15:50 **Coffee Break**

15:50 – 16:10 **On the Tribological characterization of polymeric and ceramic coatings**
Dr. Umberto Galiotti, Politecnico di Bari (Italy)

16:10 – 16:30 **Examination of polyurethane stent coating with Micro Combi Tester**
Dr. Péter Ozsváth, Budapest University of Technology and Economics (Hungary)

16:30 – 16:50 **Characterization of cohesion of selected HVOF coatings by scratch testing on cross-section**
Dr. Jiri Nohava, CSM Instruments, Peseux (Switzerland)

16:50 – 17:00 **Conclusions and round table**

//// CSM Users' Meeting 2010

Fill in this form in order to attend the CSM Nanoindentation course or/and the CSM Users' Meeting which will be held in Switzerland from the 26th to the 28th October 2010.

Name :

Institution :

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Email :

Phone # :

Address :

//// I would like to attend:

- | | | | |
|--------------------------|--|------------------------|---------|
| <input type="checkbox"/> | 26 th October | Nanoindentation course | 400 CHF |
| <input type="checkbox"/> | 27 th & 28 th Oct. | 2 days Meeting Package | 300 CHF |

or

- | | | | |
|--------------------------|--------------------------|------------------------|---------|
| <input type="checkbox"/> | 27 th October | Users' Meeting (day 1) | 180 CHF |
| <input type="checkbox"/> | 27 th October | Social Dinner | 50 CHF |
| <input type="checkbox"/> | 28 th October | Users' Meeting (day 2) | 180 CHF |

For speakers 100 CHF are to be deducted to the final price

Signature:

//// Information

> **Registration** Please send the complete registration form to:

CSM Instruments SA
Attn: Mr. Gregory FAVARO
Rue de la Gare 4, 2034 Peseux, (NE) Switzerland
Email : gregory.favaro@csm-instruments.com
Fax : +41 32 557 5610
Phone : +41 32 557 5622

> **Social dinner** A social dinner will take place in a traditional winery situated near the Geneva Lake. The menu will be fine traditional Swiss food.

> **Deadline** All registrations should be received no later than the 15th of October 2010.

> **Accommodations** CSM Instruments suggests you the following hotels to stay at in Chexbres:

> Suggestion 1: Préalpina Hotel Route de Chardonne 35, 1071 Chexbres info@prealpina.ch	☎ +41 21 946 09 09
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CHF 155.-

10 min. by car from Montreux train station.

1 km from Chexbres train station. - Free shuttles are available from Chexbres train station (ask the hotel reception).

> Suggestion 2 : Centre de Formation du Léman Chemin de la Fontaine 2, 1805 Jongny http://www.leman-formation.ch/jongny/default-fr.htm	☎ +41 21 923 03 03
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CHF 120.- to 140.-

15 min. by car from Montreux train station.

7 min. by car from Préalpina Hotel.

We strongly suggest that you book a room at the Préalpina Hotel as the seminar will take place at this same hotel.

Please contact the hotel directly to make reservations and **mention that you will be attending the CSM Instruments UM 2010.**

We recommend that you to book your accommodations as soon as possible due to the volume of tourism in this area.