



3<sup>rd</sup> Vienna International Conference on

# Nano-Technology

March 18-20, 2009  
Vienna, Austria

## Program

### Conference Chairman

Prof. Dr.-Ing.

**W. J. BARTZ**

Tribology and Lubrication Engineering  
Germany

### Co- Chairmen

Dr.-Ing.

**R. KEUPER**

Technical Academy Esslingen  
Germany

Prof. Dipl.-Ing. Dr.

**F. FRANEK**

The Austrian Tribology Society  
Austria

### Scientific Committee Chairman

Prof. Dr.

**M. SCHERGE**

Fraunhofer-Institut für Werkstoffmechanik  
Germany

in cooperation with



angefragt

Federal Ministry  
for Transport,  
Innovation and Technology

Wien ist anders.

Mechanical aspects of nano technology stretch from increased strength of construction materials over the controlled reduction of the shear resistance of tribological applications to the conditioning of surfaces in either adhesive or anti-adhesive way. Nano-effects can be induced by the introduction of nanoparticles into conventional materials such as metals or polymers. Here technological questions like particle dispersion or aggregation have to be answered. Additionally nano-effects are achievable by material conversion due to high stresses or thermal treatment.

The conference targets fundamental as well as technological issues of nano-effects with emphasis on mechanical properties. Contributions are asked to address the following fundamental topics:

- **Metal matrix conversion, grain size effects**
- **Nano particle-polymer interaction**
- **Mechanically-induced chemical reactions**

In addition, technological aspects are faced in the following fields of

**ADHESION, BIO-SYSTEMS, ENVIRONMENTAL-HEALTH-SAFETY;  
FRICTION CONTROL, LUBRICATION, MATERIALS DESIGN,  
NANOIMPRINT LITHOGRAPHY, SENSORICS,  
TESTING, ZERO-WEAR SYSTEMS**

#### **Conference Chairmen**

W.J. BARTZ, Tribology and Lubrication Engineering, Germany  
F. FRANEK, Vienna University of Technology, The Austrian Tribology Society, Austria  
R. KEUPER, Technical Academy Esslingen, Germany

#### **Scientific and Organisation Committee**

M. SCHERGE (Chairman), Fraunhofer Institute for Mechanics of Materials, Germany  
K. ADACHI, Tohoku University, Japan  
Y. ANDO, National Institute of Advanced Industrial Science and Technology, Japan  
B. BHUSHAN, The Ohio State University, USA  
H. DETTER, Vienna University of Technology, Austria  
A. GAZSÓ, Austrian Academy of Sciences, A  
I.C. GEBESHUBER, Vienna University of Technology, Austria,  
Universiti Kebangsaan Malaysia, Malaysia  
F. HAUPERT, University of Kaiserslautern, Germany  
S. HSU, George Washington University, USA  
Z. RYMUZA, Warsaw University of Technology, Poland  
R. SCHÖFTNER, Profactor GmbH, Austria  
N. SPENCER, Swiss Federal Institute of Technology Zurich, Switzerland

#### **Conference Language**

English

#### **Conference Venue**

Tech Gate Vienna,  
1220 Vienna, Donau-City-Str. 1

## **TriboCorrosion '09**

### **2<sup>nd</sup> International Symposium on TriboCorrosion**

March 17 – 18, 2009, AC<sup>2</sup>T research GmbH, 2700 Wiener Neustadt, Viktor Kaplan-Strasse 2  
Detailed information please find on page 13

## **VIENNANO '09**

### **3<sup>rd</sup> Vienna International Conference on Nano Technology**

March 18, 2009, AC<sup>2</sup>T research GmbH, 2700 Wiener Neustadt, Viktor Kaplan-Strasse 2  
March 19-20, 2009, Tech Gate Vienna, 1220 Vienna, Donau-City-Strasse 1

**March 18th**

**Wednesday**

**Morning / Vienna**

10:00

**Registration at conference venue Tech Gate Vienna**

12:30

**Bus transfer to AC<sup>2</sup>T research GmbH, Wiener Neustadt**

**March 18th**

**Wednesday**

**Afternoon / Wiener Neustadt**

13:45

#### **OPENING ADDRESS**

**F. FRANEK**, The Austrian Tribology Society, A

#### **WELCOME ADDRESS**

**J.MESENHOLL**, Technical Academy Esslingen, D

Session:

#### **Plenary Session 1**

Chair:

**W. Bartz**, Tribology and Lubrication Engineering, D

14:00

#### **Nano-Tribochemistry: corrosion or enhancements of lubrication?**

S. HSU, George Washington University, USA

14:45

#### **Electrochemical and tribological properties of MuBiNaFs**

D. SHTANSKY, State Technology University, RUS

#### **15:15 Coffee Break**

Session:

#### **Plenary Session 2**

Chair:

**A. Pauschitz**, AC<sup>2</sup>T research GmbH, A

15:35

#### **Nanomedicine and biomimetics: life sciences meet engineering & physics**

I. C. GEBESHUBER, Vienna University of Technology, A

16:05

#### **Influence of the surface characteristics of Ti oxide films on the tribocorrosion behaviour**

L. ROCHA, Universidade do Minho, PT

16:35

#### **Nanoscale design of adaptive tribological coatings for gold-yttrium and gold-nickel based nanocomposites**

J. KRIM, North Carolina State University, USA

17:05

#### **CLOSING ADDRESS TriboCorr '09**

**M. STACK**, University of Strathclyde, UK

**17:35**

**Lab Tours AC<sup>2</sup>T research GmbH**

**18:30**

**Evening Reception**

20:00

**Bus transfer back to Vienna (Tech Gate Vienna)**

March 19th	Thursday	Afternoon	Room 1
Session: <b>Lubrication / Lubricants 1</b>			
Chair: <b>K. Topolovec Miklozic</b> , Powertrib Ltd, UK			
14:30	<b>Affect of selected CHO ester-type compounds on lubricity of ULS base diesel as estimated by surface tension and atomic force microscopy measurements</b> C. KAJDAS, Institute for Fuels & Renewable Energy Warsaw, PL		
14:50	<b>Influence of substrate properties on the life of solid lubricated rolling contacts</b> T. KÜMMERLE, Technische Universität Darmstadt, D		
15:10	<b>Tribologic behaviour of nanoparticles from selected metals, suspended in rapeseed and mineral oils</b> J. PADGURSKAS, Lithuanian University of Agriculture, LT		
15:30	<b>Dynamics of momentum transfer in elasto-hydrodynamic lubricating oil film</b> H. WASHIZU, Toyota Central R&E Labs.,Inc., J		
15:50	<b>The Reynolds equation solving for the constant central thickness hydro-dynamic mechanical face seals</b> N. POPA, Pitesti University, RO		

**16:10 Break**

March 19th	Thursday	Afternoon	Room 1
Session: <b>Lubrication / Lubricants 2</b>			
Chair: <b>J. Krim</b> , North Carolina State University, USA			
16:40	<b>Effect of base oil polarity on micro and nano friction behaviour of base oil +ZDDP solutions</b> A. BOGUS-TOMALA, Vienna University of Technology, A		
17:00	<b>Experimental analysis of nanoparticles-based lubricant additives on friction reduction</b> F. ABATE, University of Salerno, I		
17:20	<b>Ionic liquids as novel media for the preparation and dispersion of small nanoparticles</b> T. SCHUBERT, IoLiTec Ionic Liquids Technologies GmbH & Co KG, D		
17:40	<b>Particle size and stability analysis in turbid suspensions and emulsions with Photon Cross Correlation Spectroscopy PCCS</b> W. LÄMMLER, Sympatec GmbH, D		
<b>20:00</b>	<b>Reception by the Mayor of the City of Vienna (Vienna City Hall)</b>		

<b>March 19th</b>	<b>Thursday</b>	<b>Afternoon</b>	<b>Room 2</b>
<b>Session:</b>		<b>Testing 1</b>	
<b>Chair:</b>		<b>N. Myshkin</b> , Metal-Polymer Research Institute, RUS	
14:30	<b>nVCT - wear measurement at nanometer scale</b> M. JECH, AC <sup>2</sup> T research GmbH, A		
14:50	<b>The NanoLab: automatic nanoanalytical system inside of Scanning Electron or Focussed Ion Beam Microscopes</b> B. PLITZKO, Klocke Nanotechnik, D		
15:10	<b>Evaluation of thin oxide layers by a microscratching technique</b> T. VAN DER DONCK, Katholieke Universiteit Leuven, B		
15:30	<b>HarmoniX microscopy: A new scanning probe microscopy technique for high resolution mapping of material properties</b> U. VOLZ, Veeco Instruments GmbH, D		
15:50	<b>In-process temperature measurement during grinding</b> A. WILKENS, IWT Foundation Institute for Material Science, D		

**16:10 Break**

<b>March 19th</b>	<b>Thursday</b>	<b>Afternoon</b>	<b>Room 2</b>
<b>Session:</b>		<b>Testing 2</b>	
<b>Chair:</b>		<b>M. Jech</b> , AC <sup>2</sup> T research GmbH, A	
16:40	<b>Nanoindentation response of nanocrystalline diamond film</b> M. ROY, Defence Metallurgical Research Laboratory, IND		
17:00	<b>Testing and reliability issues in nanomechanics</b> B. MICHEL, Fraunhofer Institute IZM Berlin, D		
17:20	<b>Application of nanoscale measurement principles at microscale: adhesion and indentation experiments on viscoelastic materials</b> D. DREES, CEO Falex Tribology NV, B		
17:40	<b>Study of influence of friction in imperfect conical indentation for elastoplastic material</b> W. GUO, University of Liege, B		
18:00	<b>Micro and nanogram wear of polymer composites as revealed by mass-spectrometry</b> A. POZDNYAKOV, Institute of Problems in Mechanical Engineering, RUS		

**20:00 Reception by the Mayor of the City of Vienna(Vienna City Hall)**

<b>March 19th</b>	<b>Thursday</b>	<b>Afternoon</b>	<b>Room 3</b>
<b>Session:</b>		<b>Sensorics / Micro Aspects</b>	
<b>Chair:</b>		<b>B. Bhushan</b> , The Ohio State University, USA	
14:30	<b>Developments at surface characterization by optical means</b> J. BÖHM, AC <sup>2</sup> T research GmbH, A		
14:50	<b>Magnetic nanoparticles and XMR-technology: a combined tool for single molecule detection</b> A. HÜTTEN, Universität Bielefeld, D		
15:10	<b>Analysis of area and stick/slip region of real contact using white light interferometry</b> M. EGUCHI, Tokyo University of Agriculture and Technology, J		
15:30	<b>Coupling between propagating and evanescent models in freestanding nanomembrane-based plasmon sensors using surface sculpting</b> Z. JAKSIC, IHTM Institute of Chemistry, Technology and Metallurgy, SRB		
15:50	<b>Synthesis of nanoparticles using flow principles</b> A. WOOTSCH, ComErgen Inc., H		

**16:10 Break**

March 19th	Thursday	Morning	Room 1
08:00	<b>Registration</b>		
09:00	<b>OPENING ADDRESS</b> <b>W.J. BARTZ</b> , Tribology and Lubrication Engineering, D  <b>WELCOME ADDRESS</b> <b>S. SEIDLER</b> , Vienna University of Technology, A  <b>WELCOME ADDRESS</b> <b>K. GUGLER</b> , FFG, A		

March 19th	Thursday	Morning	Room 1
Session:	<b>Plenary Session 3</b>		
Chair:	<b>F. Franek</b> , The Austrian Tribology Society, A		
09:30	<b>Nanotribology, nanomechanics and materials characterization studies and applications to Bio/Nanotechnology and Biomimetics</b> B. BHUSHAN, The Ohio State University, USA		
10:00	<b>Novel design criteria for the synthesis of superhard and low-friction nano-composite coatings</b> A. ERDEMIR, Argonne National Laboratory, USA		
10:30	<b>Structure and mechanics of natural nanocomposites</b> P. FRATZL, Max Planck Institute of Colloids and Interfaces, D		
11:00	<b>Observing boundary lubricating additives at the nano-scale</b> K. TOPOLOVEC MIKLOZIC, Powertrib Ltd, UK		

**11:30 Break**

March 19th	Thursday	Morning	Room 1
Session:	<b>Plenary Session 4</b>		
Chair:	<b>C. Kajdas</b> , Institute for Fuels & Renewable Energy Warsaw, PL		
12:00	<b>Fullerene-like MoS<sub>2</sub> nanoparticles and their tribological behavior</b> R. TENNE, Weizmann Institute of Science, IL		
12:30	<b>Optimization of mechanical and tribological properties of polyetheretherketone (PEEK) and polyphenylenesulphide (PPS) nanocomposites</b> F. HAUPERT, University of Kaiserslautern, D		
13:00	<b>Nanotribology in Nanoimprint Lithography (NIL)</b> Z. RYMUZA, Warsaw University of Technology, PL		

**Lunch between 13:30-14:30**

March 19th	Thursday	Afternoon	Room 3
Session:		<b>Micro Aspects</b>	
Chair:		<b>Z. Rymuza</b> , Warsaw University of Technology, PL	
16:40	<b>The technology platforms MINAM - an instrument to strengthen Europeans position in micro- and nanomanufacturing</b> C. WÖGERER, Profactor GmbH, A		
17:00	<b>High resolution Kelvin force microscopy on semiconductor materials and organic monolayers</b> G. KADA, Agilent Technologies, A		
17:20	<b>Micro-Tribology friction measurements on nanotextured silicon</b> M. GEE, National Physical Laboratory, UK		
17:40	<b>Nano and micro indentation and scratch tests of coatings and thin films</b> N. GITIS, Center for Tribology, Inc., USA		
20:00		<b>Reception by the Mayor of the City of Vienna (Vienna City Hall)</b>	

March 19th	Thursday	Afternoon	Room 4
Session:		<b>Special Session NANOIMPRINT LITHOGRAPHY</b>	
		<b>R. Schöftner</b> , Profactor GmbH, A	
14:30	<b>Nanoimprint Lithography</b> M. MÜHLBERGER, Profactor GmbH, A		
14:50	<b>Mold-resist interface modeling and experimental studies of adhesion and friction on nano-scale for Nanoimprint Lithography (NIL)</b> D. JARZABEK, Warsaw University of Technology, PL		
15:10	<b>Submicrometer channel length OTFTs with ultra-thin organic gate dielectrics by Nanoimprint Lithography</b> C. AUNER, Joanneum Research GmbH, A		
15:30	<b>Soft UV-NIL is an enabling technology for industrial applications</b> G.KREINDL, EVGroup; E. Thallner GmbH, A		
15:50	<b>Self-aligned Imprint Lithography for the definition of top-gate field effect transistor structures</b> E. LAUSECKER, Princeton University, USA		
16:10	<b>Fabrication of negative index materials by Nanoimprint Lithography</b> I. BERGMAIR, Profactor GmbH, A		

Special Session organized by:



20:00		<b>Reception by the Mayor of the City of Vienna (Vienna City Hall)</b>	
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March 20th	Friday	Morning	Room 1
Session:		<b>Bio-Nano-Technology 1</b>	
Chair:		<b>I. C. Gebeshuber</b> , Vienna University of Technology, A	
09:00	<b>Liposomal nanoparticles for diagnosis and therapy</b> R. PRASSL, Austrian Academy of Sciences, A		
09:20	<b>Nanoparticles - from magic bullets to marketed products</b> F. GABOR, University of Vienna, A		
09:40	<b>Cell-surface interaction examining the biological-physical interface</b> L. NEUTSCH, University of Vienna, A		
10:00	<b>Ferromagnetic nanoparticles – from fundamentals to applications</b> M. GETZLAFF, Universität Düsseldorf, D		
10:20	<b>Development of novel recombinant agonists and antagonists of glycoprotein hormones using site-directed mutagenesis and gene transfer</b> F. FARES, Haifa University, IL		
10:40	<b>Use of nanoporous materials for trapping biolubricant oxidation molecules instead of the antioxidant additives</b> A. MARCAIDE, Fundación Tekniker, E		

11:00 Break

March 20th	Friday	Morning	Room 1
Session:		<b>Special Session</b> <b>ENVIRONMENTAL, HEALTH AND SAFETY ASPECTS</b>	
Chair:		<b>A. Gazsó</b> , Austrian Academy of Sciences, A	
11:30	<b>Risk governance of nanotechnologies in Austria – The project “NanoTrust”</b> U. FIEDELER, Austrian Academy of Sciences, Institute of Technology Assessment, A		
11:50	<b>Worker safety and nanoparticles</b> R. PIRINGER, AUVA, A		
12:10	<b>Health effects of nanomaterials – the European Center of Nanotoxicology</b> F. SINNER, BioNanoNet Forschungsgesellschaft GmbH, A		
12:30	<b>Nanoparticles in the aquatic environmental</b> F. VON DER KAMMER, University of Vienna – Dept. of Environmental Geosciences, A		
12:50	<b>The role of insurance in the risk governance of Nanotechnologies</b> A. JÄGER, University of Stuttgart - Interdisciplinary Research Unit on Risk, Sustainable Technology Development and Governance, D		

Special Session organized by:



Lunch between 12:00-14:00 available

March 20th	Friday	Morning	Room 2
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Session:	<b>Nanopatterned Surfaces</b>		
Chair:	<b>G. Stein</b> , Freudenberg Dichtungs- und Schwingungstechnik GmbH & Co. KG., D		

- 09:00 **Fabrication of nano-patterned surfaces and its applications**  
Y. ANDO, National Institute of Advanced Industrial Science and Technology, J
- 09:20 **Tribological properties of nano-patterned surface**  
K. MIYAKE, National Institute of Advanced Industrial Science and Technology, J
- 09:40 **Nanotribology: Diamond like carbon nanocoatings-orientants and their influence on oils lube ability**  
V. LEVCHENKO, Lomonosov Moscow State University, RUS
- 10:00 **Micro and nano properties of duplex hard coatings synthesized by PVD and IBAD with Nitrogen ion implantation**  
B. SKORIC, University of Novi Sad, SRB
- 10:20 **Tribology of laser-smoothed non-metallic surfaces**  
S. KLIEN, V-Research GmbH, A

**10:40 Break**

March 20th	Friday	Morning	Room 2
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Session:	<b>Friction Control 1</b>		
Chair:	<b>A. Erdemir</b> , Argonne National Laboratory, USA		

- 11:10 **The effect of adhesion on sliding friction at nanoscale**  
N. MYSHKIN, Metal-Polymer Research Institute, RUS
- 11:30 **Tribolayer formation and its analytical characterisation in boundary lubricated steel-paper contacts**  
J. BRENNER, AC<sup>2</sup>T research GmbH, A
- 11:50 **Low-friction coatings on elastomers**  
J. MENEVE, VITO Flemish Institute for Technological Research, B
- 12:10 **Friction control during automotive braking – experimental observations and simulation at the nanometer scale**  
W. ÖSTERLE, BAM, D
- 12:30 **Tribological performance for a low friction tappet**  
N. BYUNGCHUL, Energy Technology Research Center Katech, KR

**Lunch between 12:00-14:00 available**

<b>March 20th</b>	<b>Friday</b>	<b>Morning</b>	<b>Room 3</b>
Session:		<b>Material Design 1</b>	
Chair:		<b>F. Hauptert</b> , University of Kaiserslautern, D	
09:00	<b>Manufacturing of nanoparticle reinforced polyetheretherketone (PEEK) for extremely loaded applications processed by optimized twin screw extrusion</b> R. WALTER, IVW GmbH (Technical University Kaiserslautern), D		
09:20	<b>Highly electrical conductive CNT-SiO<sub>2</sub> nanocomposite prepared by sol-gel and densified by spark-plasma sintering</b> M. Jung de Andrade, Université Paul Sabatier, F		
09:40	<b>Thermal and electrical properties of carbon nanotube reinforced cyanate ester polymer</b> V. CALARD, Austrian Research Centers GmbH - ARC, A		
10:00	<b>Tribologically transformed structure: over the engineer's aspect</b> G. JUHASZ, Budapest University of Technology and Economics, H		
10:20	<b>Influence of the chemical and geometrical structure of nanofillers on the preparation and properties of nanocomposites made of cast-polyamide 6</b> G. ENGELMANN, Fraunhofer Institut / Angewandte Polymerforschung, D		

**10:40 Break**

<b>March 20th</b>	<b>Friday</b>	<b>Morning</b>	<b>Room 3</b>
Session:		<b>Material Design 2</b>	
Chair:		<b>C. Kajdas</b> , Institute for Fuels & Renewable Energy Warsaw, PL	
11:10	<b>Reinforcement of diene rubber by nanoscale silica and organoclay</b> J. FRITZSCHE, Deutsches Institut für Kautschuktechnologie e.V., D		
11:30	<b>Nanometer-scale mechanical properties of extremely thin diamondlike carbon films</b> S. MIYAKE, Nippon Institute of Technology, J		
11:50	<b>Quantitative assessments of interface strengths and fracture for nanotowers containing specific materials interfaces</b> A. KAUFMANN, Paul Scherrer Institute, CH		

**Lunch between 12:00-14:00 available**

March 20th	Friday	Afternoon	Room 1
Session:	<b>Bio-Nano-Technology 2</b>		
Chair:	<b>I. C. Gebeshuber</b> , Vienna University of Technology, A		
14:00	<b>Effects of micro- and nanostructure of plant surfaces on adhesion of insect attachment pads</b> F. BORODICH, Cardiff University, UK		
14:20	<b>Providing adhesion for a miniature mobile intra-abdominal device based on biomimetic principles</b> T. LISKIEWICZ, University of Leeds, UK		
14:40	<b>Assessment of the thermal-induced wear mechanisms of sheet nacre by using Scanning Thermal Microscopy</b> P. STEMPFLE, ENIT - École Nationale d'Ingenieurs de Tarbes, F		
15:00	<b>Microfluidic simulation of a colonial diatom chain reveals oscillatory movement</b> J. SRAJER, Vienna University of Technology, A		
15:20	<b>Panel Discussion: Future of Bio-Nano-Technology</b> F. BORODICH, F. GABOR, I. C. GEBESHUBER, R. PRASSL Experts in the field outline their personal view on the future of bio- and nano-technology. There is ample time provided for subsequent discussion of these views and further input from the audience.		
<b>16:00</b>	<b>End of Conference - Farewell Party</b>		

March 20th	Friday	Afternoon	Room 2
Session:	<b>Friction Control 2</b>		
Chair:	<b>J. Brenner</b> , AC <sup>2</sup> T research GmbH, A		
14:00	<b>In-situ microtribology with high local resolution on SiO<sub>x</sub> coated polyethylene</b> W. WEINHOLD, Innowep GmbH, D		
14:20	<b>Nanostructured plasma coatings for friction reduction in textiles</b> D. HEGEMANN, Empa Swiss Federal Laboratories for Materials Testing and Research Advanced Fibres, CH		
14:40	<b>Comparative nanoindentation analysis of cylinder liners from tribological model experiments and from internal combustion engines</b> C. TOMASTIK, AC <sup>2</sup> T research GmbH, A		
15:00	<b>Some nano-scale aspects of polymer-ceramic friction pair investigation</b> M. KALBARCZYK, National Research Institute, PL		
15:20	<b>Tribological properties of nanocrystalline diamond surfaces</b> A. SCHNEIDER, AC <sup>2</sup> T research GmbH, A		
15:40	<b>Thermal calculation of boundary layers in the nano range</b> V. KOLESNIKOV, Rostov State University of Transport Communication, RUS		
<b>16:00</b>	<b>End of Conference - Farewell Party</b>		

<b>March 20th</b>	<b>Friday</b>	<b>Afternoon</b>	<b>Room 3</b>
<b>Session:</b>		<b>Material Design 3</b>	
<b>Chair:</b>		<b>Y. Ando</b> , National Institute of Advanced Industrial Science and Technology, J	
14:00	<b>Nano-composite coatings for tribological applications</b> M. SALES, Austrian Research Centers GmbH - ARC, A		
14:20	<b>The impact of the nanotechnology in the existing and new building</b> F. SCALISI, University of Palermo, I		
14:40	<b>Manufacturing strategies for silicon nitride rolling elements regarding product quality, sustainability and cost efficiency</b> A. FRANZKOWIAK, Vienna University of Technology, A		
15:00	<b>Effect of nanosized additives on sintering process and properties of cobalt and iron based alloys</b> A. ZAITSEV, State Technological University " Moscow Institute of Steel and Alloys", RUS		
15:20	<b>Promising dispersion hardening ceramic materials produced by SHS</b> V. KURBATKINA, Educational Center of SHS of State Technological University "Moscow Institute of Steel and Alloys", RUS		
<b>15:40</b>	<b>End of Conference - Farewell Party</b>		

## **Poster Session at the Viennano '09**

Selected POSTER PRESENTATIONS will be exhibited at the conference  
from March 19 - 20, 2009  
at the Tech Gate Vienna, 1220 Vienna, Donau-City-Strasse 1  
Accepted poster presentations please find on the conference homepage!

## **Exhibition at the Viennano '09**

Take the unique opportunity to present your company as well as your newest products on the  
Viennano '09 Exhibition

Exhibition will take place from March 19 - 20, 2009  
at the Tech Gate Vienna, 1220 Vienna, Donau-City-Strasse 1

Costs:

**EUR 1.050,- / excl. VAT**  
including booth (appr. 2,5 m<sup>2</sup>), table,  
your logo shown in the proceedings (book and CD-ROM)  
your logo and link on the conference homepage and

**free admission to the conference for 1 person**

Detailed information please find on the conference homepage!

# **TriboCorrosion '09**

## **2<sup>nd</sup> International Symposium on TriboCorrosion**

**March 17 –18, 2009**  
**AC<sup>2</sup>T research GmbH, Wr. Neustadt, Austria**

Tribocorrosion essentially deals with the degradation due to interaction between tribological and corrosive mechanisms. A large number of engineering components are subjected to synergism between Tribology (e.g., abrasive wear, erosive wear, sliding wear) and corrosion (oxidation, aqueous corrosion etc). In such conditions, the wastage rates may be significantly greater than the sum of the processes acting separately and there is now considerable research directed at modelling and simulating experimentally such interactions. These effects are observed in many diverse industries ranging from the offshore mineral processing and healthcare industries and in processes which include oil and gas production, dentistry and artificial joint replacement. In the past decade, the significant number of research outputs from many groups in the world has enhanced the scientific understanding of the tribocorrosion process as well as identifying the breadth of possible applications of materials exposed to such conditions.

The aim of this symposium is to address various problems of TriboCorrosion with specific focus on

**High Temperature Tribology, Vacuum Tribology,  
Cryo-Tribology, Bio-Tribology  
Tribology in Corrosive Fluid, Nano-TriboCorrosion**

### **Conference Fees:**

#### *Participants:*

Registration by January 31, 2009	EUR	<b>400,-</b>	no VAT
Registration after January 31, 2009	EUR	450,-	no VAT
Speakers/Chairmen/Poster by December 15, 2008	EUR	<b>300,-</b>	no VAT

#### *TriboCorr '09 / Viennano '09:*

Common Ticket for both conferences by January 31, 2009	EUR	<b>900,-</b>	no VAT
Common Ticket for both conferences after January 31, 2009	EUR	950,-	no VAT

#### **Conference Office:**

The Austrian Tribology Society,  
Floragasse 7/2, Austria  
E-Mail: [tribocorr@ac2t.at](mailto:tribocorr@ac2t.at)

organized by



**[www.tribocorr.net](http://www.tribocorr.net)**

## About Vienna

Vienna, the capital of Austria with his 1,7 Mio. inhabitants is located in the heart of Europe.

With the Bureau of the United Nations in Vienna the city is one of the four official residences of the United Nations.

The city with its historical and cultural highlights as well as the Viennese hospitality enthuse millions of tourists every year.

A couple of centuries Vienna was the residence of the Habsburg dynasty and since that time Vienna has a great diversity of magnificent historical buildings, churches and parks.

*Schoenbrunn*, the summer residence of the former monarchs is now one of the highlights of Vienna with a beautiful palace, great gardens and wonderful surroundings. More than 5 million Viennese as well as tourists visit *Schoenbrunn* every year.

1996 *Schoenbrunn Palace* became UNESCO World Cultural Heritage as one of the most important cultural monuments in Austria.

The *Viennese St. Stephen´s Cathedrale*, most famous gothic building of Austria and the seat of the Archbishop of Vienna will be visited by every Viennese tourist.

With the *Giant Ferris Wheel*, one of the city's trademarks, with its famous technical structure people have a unique view across the *Prater* and across Vienna.

Vienna is also called as the capital city of music because of its numerously celebrated classic musicians like *Beethoven*, *Mozart*, or *Mahler*. Also culture and art, like fine arts, theatres or the Vienna Opera have a very long tradition.

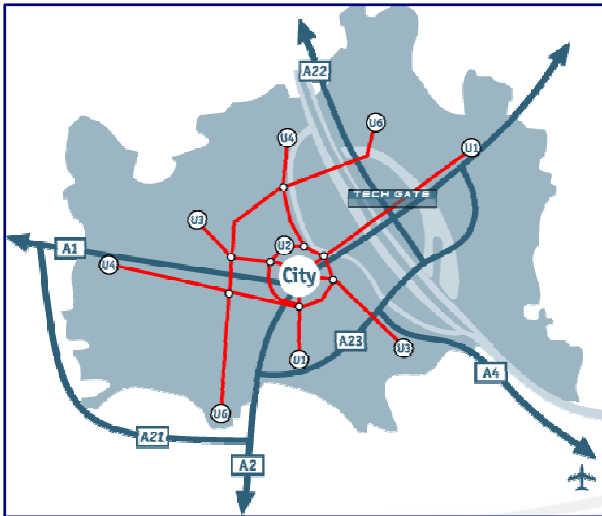
The *Wiener Schnitzel* and the *Sachertorte* are typical Vienna specialities and will be celebrated all over the world. Viennese cafes and restaurants are famous for their cosiness and excellent kitchen.

The conference venue is situated directly next to one of the many recreation areas in Vienna. The *Donauinsel* and the *Alte Donau* invite to long walks, bicycle tours and pleasant evenings in typical Viennese taverns.

Sponsored by



# Venue

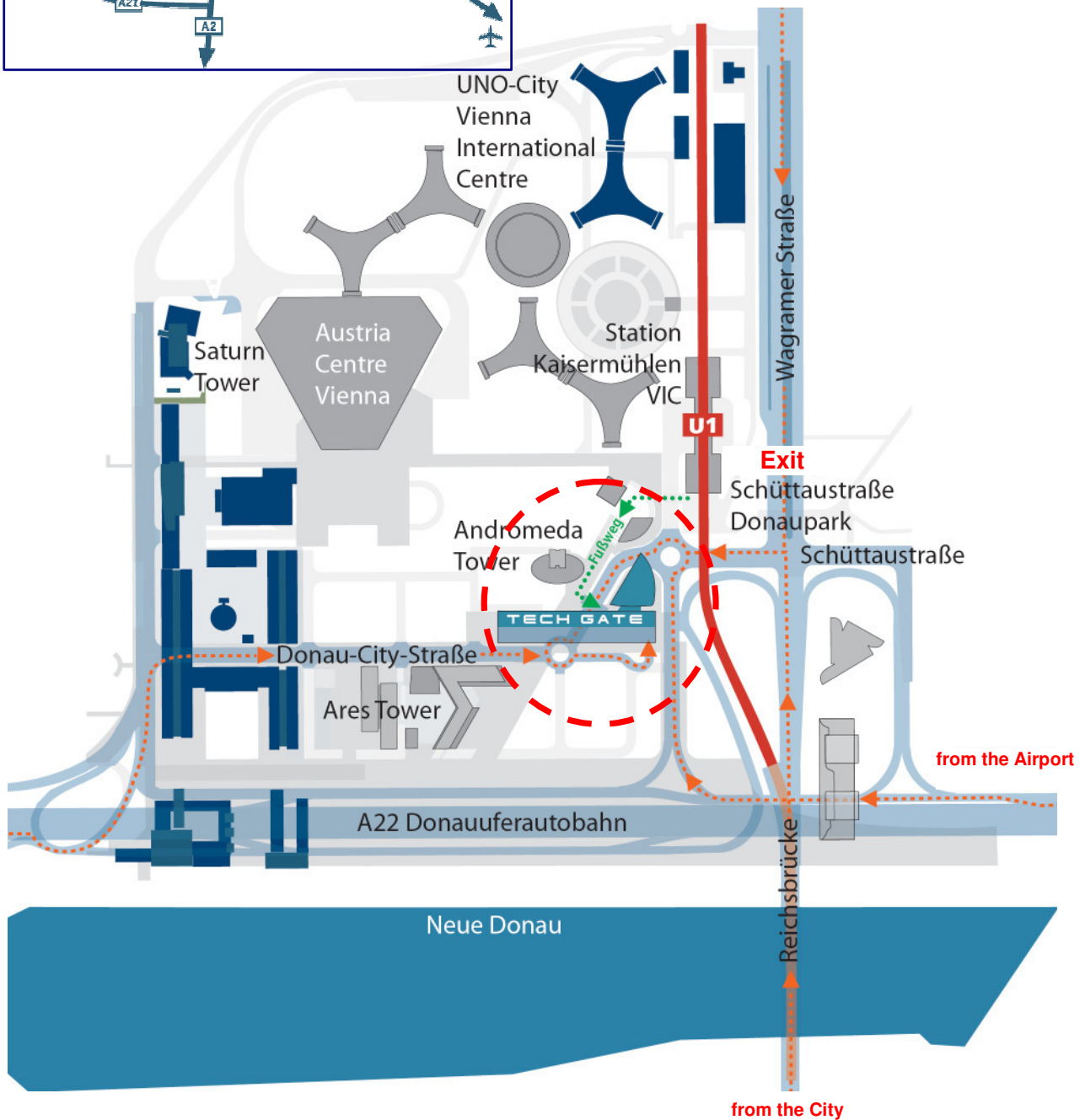


## Tech Gate Vienna

Donau-City-Strasse 1

A-1220 Vienna

**U1 Station Kaisermühlen VIC  
(Exit Schüttaustraße Donaupark)**



## Registration time:

March 18, 2009: 8.00 to 10.00, Tech Gate Vienna  
 March 19 – March 20, 2009: 8.00 to 16.00, Tech Gate Vienna

## Conference Fees:

### Participants:

Registration by January 31, 2009	EUR	<b>700,-</b>	no VAT
Registration after January 31, 2009	EUR	750,-	no VAT
Speakers/Chairmen/Poster by December 15, 2008	EUR	<b>300,-</b>	no VAT
Speakers/Chairmen/Poster after December 15, 2008	EUR	350,-	no VAT
Accompanying person (receptions)	EUR	<b>35,-</b>	excl. VAT

### Exhibition:

Exhibition Fee for one booth incl. free admission for one person at the conference	EUR	<b>1.050,-</b>	no VAT
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### TriboCorr '09 / Viennano '09:

Common Ticket for both conferences by January 31, 2009	EUR	<b>900,-</b>	no VAT
Common Ticket for both conferences after January 31, 2009	EUR	950,-	no VAT

The conference fee will include attendance of the conference, tea/coffee/soft-drinks during breaks, short lunch, proceedings (book and CD-ROM), trip to AC<sup>2</sup>T research GmbH (Austrian Center of Competence for Tribology) on Wednesday, March 18, 2009, receptions (welcome reception, City of Vienna reception, farewell party).

## Please pay your conference fee to following bank account:

Bank Austria  
 Bank ID: 12000, Account no.: 09646606500  
 IBAN: AT15 1100 0096 4660 6500, BIC (Swift-Code): BKAUATWW

Please note that participants are responsible for ALL credit card/banking charges.  
 Payment should be only in EURO (€).

## Conference Office:

The Austrian Tribology Society (Österreichische Tribologische Gesellschaft – ÖTG)	Telephone:	+43 (0)1 505 34 00
Floragasse 7/2; 1040 Vienna, Austria	Telefax:	+43 (0)1 505 34 00
Contact person: Mrs. Martina NUHSBAUMER	Mobile Phone:	+43 (0)676 845 162 300
	E-Mail:	oetg@ccc.at

## Conference Homepage / Online-Registration:

# [www.oetg.at/viennano09](http://www.oetg.at/viennano09)

Subject to changes without notice!