

## Final Program

### Technical Program Overview

<b>Thursday, November 08, 2007</b>		
8.30–9.30	Late registration, World Trade Center Foyer	
9.30–10.00	<b>Welcome Ceremony, Opening Addresses</b> The New York Auditorium	
10.00–10.15	<i>Coffee break</i>	
10.15–12.15	<b>Plenary Session, Invited Lectures</b> The New York Auditorium	
12.15–12.30	<i>Conference Partner Presentation</i>	
12.30–13.15	<i>Posters &amp; Exhibition</i>	
13.15–14.30	<i>Lunch</i>	
	<b>NEW YORK Auditorium</b>	<b>SEOUL Room</b>
14.30–16.10	<b>Session 1.1</b> <b>Contact mechanics – I</b>	<b>Session 1.2</b> <b>Friction and wear of surfaces – I</b>
16.10–16.30	<i>Exhibition &amp; Coffee break</i>	
16.30–18.30	<b>Session 2.1</b> <b>Fundamentals of Lubrication – I</b>	<b>Session 2.2</b> <b>Lubricants</b>
19:00	<i>Conference Dinner</i>	

<b>Friday, November 09, 2007</b>		
	<b>NEW YORK Auditorium</b>	<b>SEOUL Room</b>
08.30–10.10	<b>Session 3.1</b> <b>Tribology of machine elements</b>	<b>Session 3.2</b> <b>Emerging technologies and industrial Tribology</b>
10.10–10.30	<i>Exhibition &amp; Coffee break</i>	
10.30–12.10	<b>Session 4.1</b> <b>Fundamentals of Lubrication – II</b>	<b>Session 4.2</b> <b>Tribology of materials</b>
12.10–13.10	<i>Posters &amp; Exhibition</i>	
13.10–14.30	<i>Lunch</i>	
14.30–16.10	<b>Session 5.1</b> <b>Contact mechanics – II</b>	<b>Session 5.2</b> <b>Friction and wear of surfaces – II</b>
16.10–16.30	<i>Exhibition &amp; Coffee break</i>	
16.30–18.30	<b>Session 6.1</b> <b>Micro and nanotribology</b>	<b>Session 6.2</b> <b>Biotribology</b>
18.30	<b>Closing Session</b>	

**Thursday, November 08, 2007**

08.30–9.30	Late registration, World Trade Center Foyer	
9.30–10.00	<b>Welcome Ceremony, Opening Addresses</b>	The New York Auditorium
	<b>Prof. dr. Emanuel Diaconescu</b> <i>President of the Romanian Tribology Association</i> <b>Prof. dr. Ecaterina Andronescu</b> <i>Rector of the University Politehnica of Bucharest</i> <b>Prof. dr. Angheluta Vadineanu</b> <i>Vice-President of National University Research Council</i>	
10.00–10.15	<i>Coffee break</i>	
10.15–12.15	<b>Plenary Session, Invited Lectures</b>	The New York Auditorium
	<i>Prof. Richard F. Salant, Georgia Institute of Technology</i> <b>ELASTOHYDRODYNAMIC MODEL OF RECIPROCATING HYDRAULIC SEALS</b> <i>Prof. Jean Frêne, University of Poitiers</i> <b>REGIMES OF LUBRICATION IN LUBRICATED CONTACTS</b> <i>Prof. Emanuel Diaconescu, University of Suceava</i> <b>A PHYSICAL APPROACH TO THE WALL EFFECT IN ELASTOHYDRODYNAMIC LUBRICATION</b> <i>Prof. Francis E. Kennedy, Thayer School of Engineering, Dartmouth College</i> <b>TRIBOLOGICAL CHARACTERISTICS OF POLYETHYLENE BEARINGS OF KNEE PROSTHESES</b>	
12.15–12.30	<i>Dr. Paolo BARIANI, CETR Tribology from Macro-down to Nano-scale</i>	
12.30–13.30	<i>Posters &amp; Exhibition</i>	
13.30–14.30	<i>Lunch</i>	

## Thursday, November 08, 2007

14.30–16.10 Session 1	
<p><b>Session 1.1</b> New York  <b>Contact mechanics – I</b>  <i>Chairmen: R.F. Salant and E. Diaconescu</i></p> <p><b>RO-013</b> An elastic layer compressed between two identical elastic paraboloids, by <i>E. Diaconescu</i>, M. Glovnea.</p> <p><b>RO-122</b> Leakage free lip seals: an experimental investigation, by T. Mollan, <i>K. Tønder</i>.</p> <p><b>RO-098</b> Numerical analysis of optimum front surface of a squared section punch, by <i>S. Spînu</i>, D. Gradinaru, M. Marchitan.</p> <p><b>RO-118</b> Stress intensity factors analysis on cracks in the Hertzian stresses field of teeth gears, by <i>L. Tudose</i>, C.O. Pop</p> <p><b>RO-066</b> Fatigue crack growth simulation in the Hertzian stresses field of teeth gears, by L. Tudose, <i>C.O. Popa</i>.</p>	<p><b>Session 1.2</b> Seoul  <b>Friction and wear of surfaces – I</b>  <i>Chairmen: S. Andersson and D.N. Olaru</i></p> <p><b>RO-053</b> Simulation of plastic deformation and wear of a rough surface rubbing against a smooth wear resistant surface, by <i>S. Andersson</i>, U. Olofsson</p> <p><b>RO-074</b> Evaluation of real contact area of lubricated rough surface under normal contact loading, by S. Kucharski, <i>G. Starzynski</i>, A. Bartoszewicz</p> <p><b>RO-020</b> Rolling friction evaluation in a contact between a steel ring and a nonmetallic ball, by <i>I. Musca</i></p> <p><b>RO-005</b> Experimental study on roughness parameters variation, during running – in period, for a cylinder-plane friction couple, by F. Petrescu, A. Davidescu, <i>M. Vlase</i></p> <p><b>RO-100</b> Strategy for identification of wear mode of engineering surfaces, by G. Meille, T.G. Mathia (presented by <i>A. Szuder</i>)</p>
16.10–16.30 <i>Exhibition &amp; Coffee break</i>	
16.30–18.30 Session 2	
<p><b>Session 2.1</b> New York  <b>Fundamentals of Lubrication – I</b>  <i>Chairmen: J. Frêne and T. Cicone</i></p> <p><b>RO-103</b> A thermohydrodynamic analysis of a three-wave journal bearing, by <i>N. Ene</i>, F. Dimofte</p> <p><b>RO-095</b> Seizure of a high-speed three-wave journal bearing, by <i>D.M. Buzescu</i>, M.D. Pascovici</p> <p><b>RO-001</b> The influence of a groove type defect on hydrodynamic performances of Rayleigh step bearings, by <i>A. Predescu</i>, M.D. Pascovici, T. Cicone</p> <p><b>RO-016</b> Analysis and experimental study about oil leakage from fluid bearing, by <i>N. Hishida</i>, M. Hashimoto, T. Hirayama, T. Matsuoka, H. Yabe</p> <p><b>RO-036</b> Behaviour of a hydrodynamic journal bearing : torque measurement, during start-up by <i>J. Bouyer</i>, M. Fillon</p> <p><b>RO-119</b> Influence of collar deformations on hydrodynamic thrust bearing performance, by <i>M. Wasilczuk</i>, M. Wodtke</p>	<p><b>Session 2.2</b> Seoul  <b>Lubricants</b>  <i>Chairmen: B. Bou-Saïd and N.N. Antonescu</i></p> <p><b>RO-097</b> Viscosity of amorphous molecular substances, by <i>E. Diaconescu</i>, V.F. Zegrean, O. M. Onciul</p> <p><b>RO-087</b> On the variation of the concentration of lubricating emulsions during and due to the lubricating processes, by <i>A.G. Pocola</i>, D. Pop</p> <p><b>RO-073</b> Lubricating greases for food processing industry, by <i>O. Florea</i>, M. Luca, M. Mocioi, C. Mateescu</p> <p><b>RO-061</b> Flammability test data in risk assessment, by <i>L. Deleanu</i>, D. Buzoianu, St. Craciunoiu, M. Rîpa, C. Spînu</p> <p><b>RO-091</b> Experiences in lubrication of non-natural gas fuelled stationary engines, by <i>F. Novotny-Farkas</i>, K. Baumann, T. Leimeter</p> <p><b>RO-112</b> Industrial gear oils from regenerable feed stocks, by C. Tanasescu, <i>D. Petre</i>, L. Bogatu, N.N. Antonescu</p>
19.00 <i>Conference Dinner</i>	

## Friday, November 09, 2007

08.30–10.10 Session 3

<p><b>Session 3.1</b> New York</p> <p><b>Tribology of machine elements</b> <i>Chairmen: V. Dulgheru and I. Musca</i></p> <p><b>RO-012</b> Thermal study of a periodic contact under braking conditions by <u>M. Siroux</u>, A-L. Bulthé, Y. Desplanques, B. Desmet, G. Degallaix</p> <p><b>RO-017</b> Some aspects about driving wheel/rail contact in steady state interaction, by <u>T. Mazilu</u></p> <p><b>RO-025</b> The reliability of the RLAC bore-hole pumps, by <u>A.C. Drumeanu</u>, N.N. Antonescu</p> <p><b>RO-029</b> The effect of cathodic protection upon erosion-corrosion wear, by <u>R.G. Rîpeanu</u>, I. Tudor, F. Dinu, V. Grigore</p> <p><b>RO-123</b> Power losses estimation in precessional gear, by I. Bostan, <u>V. Dulgheru</u>, I. Bodnariuc</p>	<p><b>Session 3.2</b> Seoul</p> <p><b>Emerging technologies and industrial Tribology</b> <i>Chairmen: R.Rukuiza and O. Florea</i></p> <p><b>RO-033</b> Surface modification of carbon steel by deposition of fluor-oligomeric films, by V. Vasauskas, J. Padgurskas, <u>R. Rukuiza</u></p> <p><b>RO-076</b> Modeling the process of hard coatings by high-speed flame spraying (HVOF), by <u>D. Petrescu</u>, N.N. Antonescu, M. Neacsu</p> <p><b>RO-071</b> The tool wear model through micro strain and micro cutting, by <u>C. Tache</u>, A. Tache</p> <p><b>RO-070</b> Thermal aspects regarding the drilling process, by A. Tache, <u>C. Tache</u></p> <p><b>RO-105</b> Abrasion in finishing processes, by <u>A. Szuder</u>, I.D. Marinescu, T.G. Mathia, G. Meille</p>
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10.10–10.30 Exhibition & Coffee break

10.30–12.10 Session 4

<p><b>Session 4.1</b> New York</p> <p><b>Fundamentals of Lubrication – II</b> <i>Chairmen: M. Fillon and F. Dimofte</i></p> <p><b>RO-104</b> New test facility for fluid film journal bearings, by <u>F. Dimofte</u>, N.M. Ene</p> <p><b>RO-078</b> Experimental determinations of a water meniscus between a steel ball and a glace surface, by <u>C. Stamate</u>, D.N. Oлару</p> <p><b>RO-068</b> A finite-element local mesh refinement model for treating mixed-lubrication in conrod bearings, by <u>A. Fatu</u>, I. Riche, D. Bonneau</p> <p><b>RO-021</b> Test rig for pressure measurements in an aerostatic bearing, by <u>I. Musca</u></p> <p><b>RO-034</b> <b>NOT PRESENTED</b> Elasto-hydrodynamic lubrication analysis of partial arc bearings using CFD &amp; FSI, by P. Bhat, S. Shenoy, B.R. Pai</p>	<p><b>Session 4.2</b> Seoul</p> <p><b>Tribology of materials</b> <i>Chairmen: M. Siroux and M. Rîpa</i></p> <p><b>RO-027</b> Influence of bearing materials on plain bearings performance in low viscosity base oil lubrication, by <u>T. Katafuchi</u>, M. Kasai, T. Miyaji</p> <p><b>RO-051</b> Wear behaviour of the Al 7175 alloy under different bulk stress states, by <u>M. Buciumeanu</u>, A.S. Miranda, F.S. Silva</p> <p><b>RO-109</b> Research regarding of composite materials under the influence of abrasive wear, by <u>C. Florea</u>, A. Florea, M. Chivu</p> <p><b>RO-058</b> The influence of the applied load on the friction coefficient of the sintered iron base bearings, by <u>C. Teisanu</u>, S. Gheorghe, A. Tudor, I. Ciupitu</p> <p><b>RO-011</b> <b>NOT PRESENTED</b> Wear behaviour of alumina and AISI 52100 steel against molybdenum boride coated AISI D2 steel, by U. Sen, H. Unal, A. Mimaroglu, S. Sen,</p>
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12.10–13.30 Posters & Exhibition

13.30–14.30 Lunch

14.30–16.10		Session 5	
<b>Session 5.1</b> <b>Contact mechanics – II</b> <i>Chairmen: G. Starzynski and P.L. Seiciu</i>	New York	<b>Session 5.2</b> <b>Friction and wear of surfaces – II</b> <i>Chairmen: L. Deleanu</i>	Seoul
<b>RO-094</b> Residual stresses effect on fatigue life of rolling contacts, by S. Cretu, <u>M. Benchea</u>		<b>RO-084</b> Friction in linear rolling systems for microactuators, by <u>D.N. Olaru</u> , Gh. Prisacaru, P. Lorenz.	
<b>RO-042</b> Experimental investigations of contact radius between a rubber ball and a flat, by F. Ciutac, <u>E. Diaconescu</u> , D. Pintilie		<b>RO-018</b> <b>NOT PRESENTED</b> Friction coefficient determination in several lubrication conditions, by I. Petre, C. Tache, D. Dumitru	
<b>RO-010</b> Influence of the sliding speed on the elasto-hydrodynamic regime, by <u>P.L. Seiciu</u>		<b>RO-102</b> High-speed hybrid angular contact ball bearings lubricated by Kerosene mist, by <u>V. Paleu</u>	
<b>RO-008</b> Contact model for a rough surface, by <u>S. Cananau</u>		<b>RO-082</b> Optimised structures for thin and thick plastic deformation, by <u>G.A. Mihalcea</u> , O. Grigore	
<b>RO-063</b> Upon fretting behaviour in a hertzian point contact, by <u>L. Irimescu</u> , F. Ciornei		<b>RO-007</b> Investigation of layers formed through selective transfer with atomic force microscopy, by <u>F. Ilie</u>	
16.10–16.30 <i>Exhibition &amp; Coffee break</i>			
16.30–18.30		Session 6	
<b>Session 6.1</b> <b>Micro and nanotribology</b> <i>Chairmen: M. Wasilczuk and M.D. Pascovici</i>	New York	<b>Session 6.2</b> <b>Biotribology</b> <i>Chairmen: F.E. Kennedy and A. Tudor</i>	Seoul
<b>RO-015</b> Study on reduction of nano-fluctuation of aerostatic bearing with surface restriction, by <u>T. Kitagawa</u> , T. Hirayama, T. Matsuoka, R. Mizuno, M. Kadotani, K. Sasaki, H. Yabe		<b>RO-014</b> Modeling a human hip joint lubrication subject to walking cycle, by A. Meziane, <u>B. Bou-Said</u> , J. Tichy	
<b>RO-019</b> An experimental study of surface textured thrust bearings in hydrostatic lubrication, by <u>J. Gibbs</u> , L. S. Stephens		<b>RO-028</b> Computational analysis of type I endoleaks in a stented abdominal aneurysm, by A. Amblard, H.W.-Le Berre, <u>B. Bou-Said</u> , M. Brunet	
<b>RO-030</b> Hydrodynamic effects of texture geometries on journal bearing surfaces, by N. Tala-ighil, P. Maspeyrot, <u>M. Fillon</u> , A. Bounif		<b>RO-006</b> The effect of Wiberg angle about the contact pressure distribution in the natural and artificial joint, by <u>A. Tudor</u> , C. Pârsu, S. Opris	
<b>RO-108</b> Theoretical and experimental analysis of a partially textured thrust bearing with square dimples, by <u>V.G. Marian</u> , M. Kilian, W. Scholz		<b>RO-069</b> Numerical and experimental investigations upon articular cartilage mechanical hysteresis, by <u>Gh. Frunza</u> , F. Ciornei	
<b>RO-114</b> The equivalent Rayleigh step bearing of a partially textured slider, by M.D. Pascovici, <u>T. Cicone</u> , M. Fillon, M.B. Dobrica		<b>RO-080</b> Characterizing the wear particles of intervertebral disc prosthesis and their biological response, by M. Cretan (Stamate), M. Gafitanu, <u>C. Stamate</u>	
<b>RO-116</b> Low friction properties of nano-structured C-Ni films prepared by thermionic vacuum arc method, by <u>C.P. Lungu</u> , A. Tudor, R. Brescia, A.M. Lungu, C.C. Surdu-Bob, P. Chiru, O. Pompilian, C. Porosnicu, T. Laurian, I. Mustata		<b>RO-089</b> <b>NOT PRESENTED</b> Mathematical model and artificial joint wear control, by L. Capitanu, J. Onisoru, A. Iarovici, C. Tiganesteanu, M. Dima	

<i>Posters</i>		Beijing & Viena
<b>RO-002</b>	<b>Methods for obtaining the frequency dependent Poisson's ratio for polymers – simulations</b> , by G. Stoica, A. Iordan, N. Crisan	
<b>RO-003</b>	<b>Experimental methods for obtaining the frequency dependent Poisson's ratio for polymers - improvements</b> , by G. Stoica, A. Iordan	
<b>RO-004</b>	<b>Experimental researches on tribological behaviour of some Timken couples during running-in period</b> , by F. Petrescu, A. Davidescu, M. Vlase	
<b>RO-009</b>	<b>Analysis of gear quality criteria and performance of curved facewidth spur gears</b> , by L. Andrei, G. Andrei, D. Walton, K. Dearn	
<b>RO-023</b>	<b>Dynamics of hip artificial joints wear</b> , by L. Capitanu, A. Iarovici, J. Onisoru, C. Tiganesteanu, M. Dima	
<b>RO-024</b>	<b>Synthetic lubricants utilization – state of art</b> , by A.C. Drumeanu	
<b>RO-031</b>	<b>Experimental study of increased functional resources in the D-110 engine crankshaft – connecting rod assembly by reworking of parts exposed to wear</b> , by M. Bayer, M. Olarica, G. Ipate	
<b>RO-035</b>	<b>Tribomodelling of the die – tubular material contact with applications for drilling tongs</b> , by I. Nae, N.N. Antonescu, M.G. Petrescu	
<b>RO-038</b>	<b>NOT PRESENTED</b> Repeatability study at the recording of friction damping of the oscillations of a pendulum on gas-static bearings, by S. Bobancu, R. Cozma, V. Cioc	
<b>RO-039</b>	<b>NOT PRESENTED</b> High accuracy tribometer class based on the inclined plane principle, by S. Bobancu, R. Cozma, V. Cioc	
<b>RO-040</b>	<b>NOT PRESENTED</b> Experimental research concerning hard shocks behaviour to the HD radial bearings with $L/D = 1$ , by M. Alexandrescu, E. Pay, R. Cotetiu, V. Nasui, N. Ungureanu	
<b>RO-045</b>	<b>NOT PRESENTED</b> Belts wear basics. Synchronous belts failure modes, by S-L. Butnariu	
<b>RO-046</b>	<b>Theoretical researches regarding mechanical face seal hydrodynamic lubrication</b> , by N. Popa, B. Nicolescu, C. Onescu	
<b>RO-050</b>	<b>Research regarding the wear behaviour of carbon steel obtained through iron powder sintering and carburizing</b> , by C. Ghermec, O. Ghermec	
<b>RO-059</b>	<b>The influence of the sintering atmospheres on the wear behaviour of the copper based alloys</b> , by S. Gheorghe, C. Teisanu, A. Merstallinger, I. Ciupitu	
<b>RO-062</b>	<b>Mechano chemical and tribological aspects of nano-sized ceria-zirconia mixed oxides</b> , by N.G. Kostova, A.A. Spojakina, E. Dutkova, P. Balaz, M. Kandeve, E. Assenova	
<b>RO-064</b>	<b>NOT PRESENTED</b> The behavior of the piston-cylinder tribosystems, by Gh. Postaru, A. Postaru, V. Ceban	
<b>RO-067</b>	<b>Nitrogen influence on indentation fracture toughness of stainless steel coatings</b> , by M. Thompson, L. Palaghian	
<b>RO-077</b>	<b>Experimental investigations concerning the mathematical model of hard deposits by high-speed flame spraying</b> , by D. Petrescu, N.N. Antonescu, M. Neacsu	
<b>RO-081</b>	<b>Tribological behavior in boundary lubrication</b> , by G. Mihalcea, T. Stanescu	
<b>RO-083</b>	<b>Friction torque and efficiency in ball – screw systems</b> , by G.V. Puiu, D.N. Oлару, V. Puiu	
<b>RO-085</b>	<b>Influence of combined surface waviness on HD finite length journal bearing performance</b> , by D. Antaluca, D.N. Oлару, D. Nelias	
<b>RO-086</b>	<b>Influence of fuel contamination on oils shear stability</b> , by S. Ciortan, M. Rîpa S. Chiculita	
<b>RO-090</b>	<b>Impact parameters in rolling contact lubrication</b> , by C. Bujoreanu	
<b>RO-092</b>	<b>New approach in oxidation stability testing of the gas turbine oils</b> , by L. Petraru, F. Novotny-Farkas, K. Baumann	
<b>RO-093</b>	<b>A three-dimensional elastic-plastic analysis of rolling contacts</b> , by M. Benchea, S. Cretu	
<b>RO-096</b>	<b>Adhesion in the microsystems</b> , by G. Ianus, D.N. Oлару, P. Lorenz	
<b>RO-101</b>	<b>Shear properties of molecular liquid near a mettalic wall</b> , by E. Diaconescu, V.F. Zegrean, O.M. Onciul	
<b>RO-110</b>	<b>Analysis of influence of gear hob geometric parameters on the tool life using genetic algorithm</b> , by I. Sovilj-Nikic, B. Sovilj, M. Brezocnik, S. Sovilj-Nikic, V. Pejic	
<b>RO-111</b>	<b>Hydraulic oils from regenerable feed stocks with a low environmental impact</b> , by L. Bogatu, I. Petre, A. Marin, C. Tanasescu, D. Petre, N.N. Antonescu, L. Mirci	
<b>RO-113</b>	<b>Global method using experimental data for characterizing the lubricants durability</b> , by A. Radulescu, I. Radulescu, C. Balan, F. Petrescu, N.A. Popescu Pogrión	
<b>RO-117</b>	<b>Hip joint contact pressure distribution prior and after triple osteotomy</b> , by T. Laurian, L. Marinca, A. Tudor, F. Pârvu	
<b>RO-124</b>	<b>Researches about the wear behaviour of the elaborated sintered steels based on Fe<sub>3</sub>C nanopowders</b> , by M. Ciobanu, M. Didu, St. Radu	