## 7<sup>th</sup> EDF/LMS Poitiers Workshop FUTUROSCOPE - October 2, 2008 **"Operational Limits of Bearings: Improving of Performance** through Modelling and Experimentation"

Program	
8h00-8h40	Registration
8h40-9h00	General Introduction by EDF/LMS – presentation of the program
9h00-9h40	Keynote sessionA) <u>"Actual and modeled behavior of hydrodynamic bearings in thermal engines"</u> J-L. Ligier, Manager of Research and Development, Powertrain Division, Renault, France.
9h40-9h50	Questions
9h50-10h00	Presentation of the posters
10h00-10h30	Coffee Break - POSTER Session
10h30-11h00	Technical session 1: Engine bearings         B) <u>"Steady-state EHL analysis of the journal bearings and comparisons of the results with experimental work"</u> M. Pal, I. Kerr, M. Fooks, Daido Metal, UK, M. Priest, University of Leeds, UK, Y. Okamoto, Daido Metal, Japan.
11h00-11h30	C) <u>"Wear prediction models in automotive bearings"</u> <b>A Fatu D. Bonneau</b> , University of Poitiers, France
11h30-12h00	<b>D</b> ) <u>"Non Newtonian effects on the dynamic behaviour of connecting-rod bearings in both gasoline</u>
	and Diesel engines" M. Lahmar, Guelma University, Algeria, B. Bou-Saïd, INSA de Lyon, France.
12h10-13h45	Lunch
14h00-14h30	Technical session 2: Thrust bearings         E) <u>"Thrust bearing behavior in scroll compressor"</u> D. Gross, P. Ginies, Danfoss, France.
14n30-15n00	F) <u>"Improving Performance of Large Thrust Bearings Through Modeling and Experimentation"</u> L. Dabrowski, P. Pajaczkowski, G. Rotta, M. Wasilczuk, Wodtke M, Gdansk University of Technology, Poland.
15h00-15h30	<ul> <li>G) <u>"Extending performance limits of tilt pad thrust bearings: a full scale study"</u></li> <li>S.B. Glavatskih, Lulea University of Technology, Sweden.</li> </ul>
15h30-16h15	Coffee Break - Discussions - POSTER Session
	Technical session 3: Journal bearings
16h15-16h45	<ul> <li>H) <u>"Low frequency shaft vibration tests and analyses"</u></li> <li>S. DeCamillo, Kingsbury Inc., USA,</li> <li>C.H. Cloud, J.M. Byrne, M. He, BRG Machinery Consulting, USA.</li> </ul>
16h45-17h15	<ol> <li><u>"Hydrodynamic journal bearing for highest load capacity for the power generation: I. Theoretical analysis"</u></li> <li>M. Medhioub, John Crane Bearing Technology GmbH, Germany, B. Lüneburg, Siemens Power Generation, Germany, E. Schüler, Ruhr-Universität Bochum, Germany.</li> </ol>
17h15-17h45	<ul> <li>J) <u>"Computer analysis of hydrodynamic journal bearing with self-aligning spherical support"</u></li> <li>A. Olszewski, M. Wodtke, Gdansk University of Technology, Poland.</li> </ul>
17h45-18h15	<ul> <li>K) <u>"Reliability improvement of rotor supports by combining rolling-element bearings and fluid-film bearings</u>" <u>B.N. Polyakov, L.A. Savin, Orel State Technical University</u>, Russia, A.O. Pugachev, Technical University of Munich, Germany.</li> </ul>
18h15-18h30	Assessment - Discussion
18h30	Cocktail

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Program	
	Poster session
	<ul> <li>L) "Evaluation of stiffness and damping coefficients of 4-axial groove water lubricated bearing with contaminants, using perturbation technique"</li> <li>S. Sampath, B.R. Pai, B.S. Shenoy, Manipal Institute of Technology, India.</li> </ul>
	<ul> <li>M) <u>"Dynamically loaded low friction bearings based on wall slip boundary condition"</u></li> <li>A. Fatu, M. Hajjam, D. Bonneau, University of Poitiers, France.</li> </ul>
	<ul> <li>N) <u>"Squeezing a liquid film between two parallel plates: adherence or wall slip?"</u></li> <li>M-H. Meurisse, M. Querry, J. Malafosse, INSA de Lyon, France.</li> </ul>
10h00-10h30 & 15h30-16h15	<ul> <li>O) <u>"Modeling Transient States of Large Hydrodynamic Thrust Bearings"</u></li> <li>P. Pajaczkowski, M. Wasilczuk, Gdansk University of Technology, Poland,</li> <li>A. Schubert, Alstom Hydro, Switzerland.</li> </ul>
	<ul> <li>P) "Predicting performance of thrust bearings with use of contemporary models" M. Wodtke, M. Wasilczuk, Gdansk University of Technology, Poland, M. Fillon, University of Poitiers, France.</li> </ul>
	<ul> <li>(1) "Modelling the elastic strains of foil bearing bush"</li> <li>J. Kicinski, G. Zywica, S. Banaszek, Polish Academy of Sciences, Poland.</li> </ul>
	<ul> <li>R) <u>"Modeling the Dynamics of Ball Bearings with Flexible, Through-Fractured Cages"</u></li> <li>N. Weinzapfel , F. Sadeghi, Purdue University, USA.</li> </ul>

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