### SCAD 2013

**Day I - 20 February 2013**

**14h00** Opening SCAD 2013  
D. Vanderschueren, UGent, Belgium

**14h15** Plenary session

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>14h15</td>
<td>Plenary session</td>
<td>R. Maki, Volvo Construction Equipment, Sweden</td>
</tr>
<tr>
<td>15h00</td>
<td>Coffee Break</td>
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</tbody>
</table>

**15h30** Fatigue in offshore conditions  

<table>
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<tr>
<td>15h30</td>
<td>The Oil and Gas Industry Approach to Fatigue Philosophy Throughout the Twentieth and Twenty-first Century</td>
<td>R. Dimitriu, Heerema, the Netherlands</td>
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<tr>
<td>15h45</td>
<td>Influence of cryogenic treatments in aluminium alloys</td>
<td>J. Sanz López, Fundación CIDAUT, Spain</td>
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</tbody>
</table>

**16h00** Tribology of advanced materials & Challenges in wear monitoring  

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<td>16h00</td>
<td>Importance of solid-liquid interface in tribology-based design</td>
<td>M. Kalin, University of Ljubljana, Slovenia</td>
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<td>16h15</td>
<td>A study on correlating microstructural features with abrasion resistance of a high strength low alloy steel</td>
<td>X. Xu, Delft University of Technology, the Netherlands</td>
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<td>A comparative study of fatigue testing machines with application to OCTG and their threaded connections</td>
<td>J. Sukumaran, UGent, Belgium</td>
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<td>16h30</td>
<td>Stress concentration factors for welded tubular joints of offshore windmill support structures</td>
<td>P. Thibaux, Metal Structures Centre, Belgium</td>
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<td>16h45</td>
<td>Increase of the load carrying capacity of aluminum 2024-T3 by means of a NiP-CrC-DLC coating</td>
<td>M. H. Staia, Universidad Central de Venezuela</td>
</tr>
<tr>
<td>17h00</td>
<td>Methodology for characterizing brake friction material on high temperatures</td>
<td>Y. Perez Delgado, UGent, Belgium</td>
</tr>
</tbody>
</table>

**17h30** Coffee Break

**18h00** Social Program

**19h00** Conference Dinner

### Abstracts

- **Fatigue in offshore conditions**
  - The Oil and Gas Industry Approach to Fatigue Philosophy Throughout the Twentieth and Twenty-first Century (R. Dimitriu, Heerema, the Netherlands)
  - Influence of cryogenic treatments in aluminium alloys (J. Sanz López, Fundación CIDAUT, Spain)

- **Tribology of advanced materials & Challenges in wear monitoring**
  - Importance of solid-liquid interface in tribology-based design (M. Kalin, University of Ljubljana, Slovenia)
  - A study on correlating microstructural features with abrasion resistance of a high strength low alloy steel (X. Xu, Delft University of Technology, the Netherlands)
  - A comparative study of fatigue testing machines with application to OCTG and their threaded connections (J. Sukumaran, UGent, Belgium)
  - Stress concentration factors for welded tubular joints of offshore windmill support structures (P. Thibaux, Metal Structures Centre, Belgium)
  - Increase of the load carrying capacity of aluminum 2024-T3 by means of a NiP-CrC-DLC coating (M. H. Staia, Universidad Central de Venezuela)
  - Methodology for characterizing brake friction material on high temperatures (Y. Perez Delgado, UGent, Belgium)

- **Surface treatments for increasing fatigue strength of gear materials** (E.S. Puchi-Cabrera, Université de Lille 1, France)

- **Foundation structures for offshore wind turbines - Some experiences and future challenges** (P.B. Haugsoen, INSA de Lyon, France)

- **Coffee Break**

- **Conference Dinner**
<table>
<thead>
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<th>Institution</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>09h00</td>
<td>Defect assessment in fatigue</td>
<td>N. Gubeljak</td>
<td>University of Maribor, Slovenia</td>
<td>Determination of calibration function for fatigue crack propagation by measurement of surface deformation</td>
</tr>
<tr>
<td>09h15</td>
<td></td>
<td>C.H.P. Wassink</td>
<td>Applus RTD, the Netherlands</td>
<td>New possibilities for weld assessment using inverse wavefield extrapolation</td>
</tr>
<tr>
<td>09h30</td>
<td></td>
<td>T. Kuwayama</td>
<td>Nippon Steel &amp; Sumitomo Metal Corporation</td>
<td>Application of subloading-overstress friction surface model to finite element analysis</td>
</tr>
<tr>
<td>09h45</td>
<td></td>
<td>F. Van den Abeele</td>
<td>Fugro GeoConsulting Belgium, Belgium</td>
<td>Fatigue analysis of free spanning pipelines subjected to vortex induced vibrations</td>
</tr>
<tr>
<td>10h00</td>
<td>Coffee Break + Poster Session</td>
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<tr>
<td>10h45</td>
<td>Tribology in extreme conditions</td>
<td>S. Jacobson</td>
<td></td>
<td>Tribology is just another word for extreme conditions</td>
</tr>
<tr>
<td>11h15</td>
<td></td>
<td>E. Bemporad</td>
<td>University of Rome, Italy</td>
<td>Wear mechanisms and in-service surface modifications of a stellite 6B Co-Cr alloy</td>
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<tr>
<td>11h30</td>
<td></td>
<td>S. Cappa</td>
<td>KULeuven, Belgium</td>
<td>Radial error motion of porous gas bearings: theoretical modelling and experimental validation</td>
</tr>
<tr>
<td>11h45</td>
<td></td>
<td>I. Cracaoanu</td>
<td>Philips Innovation Services, the Netherlands</td>
<td>Air bearings in high precision systems</td>
</tr>
<tr>
<td>12h00</td>
<td>Tribology in the low countries (1)</td>
<td>D.J. Schipper</td>
<td>University of Twente, the Netherlands</td>
<td>Strieber and traction curves for elliptical contacts: isothermal friction mode</td>
</tr>
<tr>
<td>12h15</td>
<td></td>
<td>M. De Rooij</td>
<td>University of Twente, the Netherlands</td>
<td>Predicting galling behaviour in deep drawing processes</td>
</tr>
<tr>
<td>12h30</td>
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<td>V. Rodriguez</td>
<td>UGent, Belgium</td>
<td>Tribological behaviour of the low and high viscosity PEEK against steel using different contact pressures</td>
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<td>12h45</td>
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<td>Y. Perez Delgado</td>
<td>UGent, Belgium</td>
<td>Friction and wear response of tib2-b4c ceramics</td>
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<tr>
<td>13h00</td>
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<td>P. Lugt</td>
<td>SKF, the Netherlands</td>
<td>On the Grease Lubrication Mechanisms in Rolling Bearings</td>
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<tr>
<td>13h15</td>
<td>Lunch</td>
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14h00 I. Cra Rao, Philips Innovation Services, the Netherlands  
Tribology in Brainport Eindhoven Region - solution to achieve innovative products

14h15 M. Woldman, University of Twente, the Netherlands  
Single asperity abrasive wear and the influence of abrasive body dimensions

14h30 D. Karupannasamy, University of Twente, the Netherlands  
Modelling roughness effects on friction in deep drawing processes

14h45 A. Rodriguez, University of Twente, the Netherlands  
Friction in tactile contact with polymers

15h00 J. Sukumaran, UGent, Belgium  
Transfer layer dynamicity in roll-slip of polymer metal pairs

15h15 A. Winogrodska, University of Twente, the Netherlands  
Surface changes during wear of ceramics investigated by confocal and Raman spectroscopy

15h30 Coffee Break

16h00 Workshop: Self lubricating composite bearings

16h00 P. De Baets, UGent, Belgium  
Welcome

16h05 P. Bakker, Trelleborg, UK  
Polymer composites in sliding bearing applications. Contributions to sustainable construction and future

16h20 S. de Jong, Asec, the Netherlands  
Practical applications of self lubricating composite

16h35 G. Worm, BBS, the Netherlands  
Lubrication, maintenance and failure of self-lubricating bearings

16h50 A. Ramalho, University of Coimbra, Portugal  
Tribotesting: from the laboratory measurements to field application

17h20 Questions and debate

18h00 Network reception

Poster Session

D. Belgado Rosado  
Developments in mechanical and metallurgical properties of high strength line pipe steels over the last three decades

S. Hertelé  
Combined numerical-experimental framework for strain based design and flaw assessment of girth welds

T. Galle  
Effect of load flank angle modifications on the structural integrity of buttress threaded connections

T. Galle  
Numerical evaluation of geometric changes to buttress threaded connections using various criteria

M. Safaei  
Evolution of anisotropy of sheet metals during plastic deformation

J. Van Wittenberghoeve  
Reduced-thickness CVN testing to represent slant failure of pipelines

A. Goda  
Examination of product development and globalization of Hungarian cob cracker producer industry on international and national market

E. Pinter  
Stress optimization process of bevel gearbox housing with six axes
T. Yue
  Numerical modelling of fretting wear

M. Sadeghi
  A review of FE on crack initiation in fretting fatigue

J. De Pauw
  Design of a fretting fatigue test rig with compliant springs

T. Nguyen
  Tribological behaviors of polymer bearing under dry and water lubrication

Z. Szakal
  Measure the modulus of elasticity with different method

K. Van Minnebruggen
  Parametric finite element model for spiral welded pipes sections loaded in tension

B. Sobhani Aragh
  Thermal analysis of two-dimensional temperature-dependent functionally graded open cylindrical shells

Y. Santana
  Dry sliding wear of DLC-CrC coating on 316L stainless steel alloy

J. La Barbera-Sosa
  Fatigue behavior of a SAE 4340 steel coated with nanostructured powders of WC-12%Co deposited by HVOF thermal spraying

C. Villalobos-Gutiérrez
  Fatigue behavior of a SAE 4340 steel coated with WC-12%Co, reinforced with carbon nanotubes, deposited by HVOF thermal spraying

M. Verstraete
  Considerations in selecting laboratory scale test specimens

Thermal analysis of two-dimensional temperature-dependent functionally graded open cylindrical shells

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