<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11am - 12.15pm</td>
<td><strong>Registration and Refreshments</strong>&lt;br&gt;Registration desk by Conference Room</td>
<td>The Conference Room</td>
</tr>
<tr>
<td>12.30pm - 1.30pm</td>
<td><strong>Lunch</strong>&lt;br&gt;The Restaurant</td>
<td></td>
</tr>
<tr>
<td>1.30pm - 1.45pm</td>
<td><strong>Opening Welcome</strong>&lt;br&gt;PVC Professor Chris Rudd&lt;br&gt;The Conference Room</td>
<td></td>
</tr>
<tr>
<td>1.45pm - 2pm</td>
<td><strong>Surface Integrity Research at The University of Nottingham</strong>&lt;br&gt;D. Axinte, A. Clare, P. Kinnell&lt;br&gt;The Conference Room</td>
<td></td>
</tr>
<tr>
<td>2pm - 3.15pm</td>
<td><strong>Keynote Presentations</strong>&lt;br&gt;Chair: D. Axinte, The University of Nottingham&lt;br&gt;The Conference Room</td>
<td></td>
</tr>
<tr>
<td>3.15pm - 3.45pm</td>
<td><strong>Refreshment Break</strong>&lt;br&gt;West Atrium</td>
<td></td>
</tr>
</tbody>
</table>

**Characterising the integrity of machined surfaces in a powder nickel alloy used in aircraft engines**<br>Dr Mark Hardy, Rolls-Royce plc

**Process Signatures - a new approach for the description of surface layer property changes caused by manufacturing processes**<br>Professor Ekkard Brinksmeier, University of Bremen, Germany

**Recent progress in surface integrity assessment of machined surfaces**<br>Dr Rachid M'Saoubi, SECO Tools, Sweden
Parallel Presentation Sessions
3.45pm - 5.15pm

1. Surface Produced by Conventional Processing Methods
   The Conference Room
   Session Chair: E. Brinksmeier
   University of Bremen, Germany

   1. Surface Produced by Conventional Processing Methods
      Room 5
      Session Chair: M. Kunieda
      University of Tokyo, Japan

   2. Surface Produced by Non-Conventional Processing Methods

   Low damage drilling of CFRP/titanium compound materials for fastening
   O. Pecat and E. Brinksmeier
   Development of a metrology workestation for full-aperture and sub-aperture stitching measurements
   C.W. King and M. Bibby

   Influence of the macro-topography of grinding wheels on the cooling efficiency and the surface integrity
   B. Kirsch and J.C. Aurich
   Surface-roughness improvement in ultrasonically assisted turning
   V.V. Silberschmidt, S. M. A. Mahdy, M.A. Gioula, A. Naseer, A. Maurott and A. Roy
   Computed tomography as a tool for examining surface integrity in drilled holes in CFRP composites
   L. Piyd, T. Beno and S. Carmignato

   The effect of machined topography on fatigue life of a nickel based superalloy
   D.T. Arib, Y.G. Li, K.H.K. Chan, L. Blunt and M.R. Bache
   Influence of surface integrity on the tribological performance of cold forging tools
   K. Andreas and M. Merklein
   Verification and application of a new 3D finite element approach to model the residual stress depth profile after autofrettage and consecutive reaming
   H. Brümel, N. Lyubenova, M. Müller, J.E. Hoffman and D. Bähre

   The effect of machining processes can have on the fatigue life and surface integrity of critical helicopter components
   D.P. Davies, S.L. Jenkins and S.J Legg
   Surface properties in ultrasonic vibration assisted turning of particle reinforced aluminium matrix composites
   A. Nestler and A. Schubert
   Numerical and experimental analysis of residual stresses generated in the machining of Ti6Al4V titanium alloy
   P. Neakony, W. Grzesik, P. Laakowski and J. Siernawski

   The effect of cutting speed and feed rate on hole surface integrity in single-shot drilling of metallic-composite stacks
   C.L. Kuo, S.L. Soo, D. Aspinwall and W. Thomas
   Surface integrity evolution from main cut to finish trim cut in W-EDM of shape memory alloy
   J.F. Liu, L. Li and Y.B. Guo
   Variable length scale surface finish assessment of machined grade 4 titanium alloy
   P. Wooding and R.F. Laubscher

   3. Investigative Methods and Simulation Techniques for Surface Integrity
      Room 1
      Session Chair: J. Outino
      Arts et Métiers ParisTech, France

   Low damage drilling of CFRP/titanium compound materials for fastening
   O. Pecat and E. Brinksmeier
   Development of a metrology workestation for full-aperture and sub-aperture stitching measurements
   C.W. King and M. Bibby

   Influence of the macro-topography of grinding wheels on the cooling efficiency and the surface integrity
   B. Kirsch and J.C. Aurich
   Surface-roughness improvement in ultrasonically assisted turning
   V.V. Silberschmidt, S. M. A. Mahdy, M.A. Gioula, A. Naseer, A. Maurott and A. Roy
   Computed tomography as a tool for examining surface integrity in drilled holes in CFRP composites
   L. Piyd, T. Beno and S. Carmignato

   The effect of machined topography on fatigue life of a nickel based superalloy
   D.T. Arib, Y.G. Li, K.H.K. Chan, L. Blunt and M.R. Bache
   Influence of surface integrity on the tribological performance of cold forging tools
   K. Andreas and M. Merklein
   Verification and application of a new 3D finite element approach to model the residual stress depth profile after autofrettage and consecutive reaming
   H. Brümel, N. Lyubenova, M. Müller, J.E. Hoffman and D. Bähre

   The effect of machining processes can have on the fatigue life and surface integrity of critical helicopter components
   D.P. Davies, S.L. Jenkins and S.J Legg
   Surface properties in ultrasonic vibration assisted turning of particle reinforced aluminium matrix composites
   A. Nestler and A. Schubert
   Numerical and experimental analysis of residual stresses generated in the machining of Ti6Al4V titanium alloy
   P. Neakony, W. Grzesik, P. Laakowski and J. Siernawski

   The effect of cutting speed and feed rate on hole surface integrity in single-shot drilling of metallic-composite stacks
   C.L. Kuo, S.L. Soo, D. Aspinwall and W. Thomas
   Surface integrity evolution from main cut to finish trim cut in W-EDM of shape memory alloy
   J.F. Liu, L. Li and Y.B. Guo
   Variable length scale surface finish assessment of machined grade 4 titanium alloy
   P. Wooding and R.F. Laubscher

Free Time
5.15pm - 6pm

Magical Mystery Bus Tour
Reception
6pm - 8pm

Conference BBQ
with Robin Hood and Maid Marian
Central Atrium
8pm
Thursday 29 May 2014

Registration and Refreshments
West Atrium
8.30am - 9am

Parallel Presentation Sessions

1. Surface Produced by Conventional Processing Methods
   The Conference Room
   Session Chair: D. Axinte
   Karlsruher Institut für Technologie, Germany

   2. Surfaces Produced by Non-Conventional Processing Methods
      Room 5
      Session Chair: T. Ozel
      State University of New Jersey, USA

   3. Investigative Methods and Simulation Techniques for Surface Integrity
      Room 1
      Session Chair: P. Arrazola
      Mondragon University, Spain

   Surface integrity aspects of milling large hardened gears
   B. Karpuschewski, M. Toefke, M. Beutner and W. Spintig

   1. Surface Produced by Conventional Processing Methods
      The Conference Room
      Session Chair: D. Axinte
      Karlsruher Institut für Technologie, Germany

   2. Surfaces Produced by Non-Conventional Processing Methods
      Room 5
      Session Chair: A. Clare
      The University of Nottingham, UK

   3. Investigative Methods and Simulation Techniques for Surface Integrity
      Room 1
      Session Chair: T. Ozel
      State University of New Jersey, USA

   Biodegradation control of magnesium-calcium biomaterial via adjusting surface integrity by synergistic cutting-burnishing
   M. Salahshoor and Y.B. Guo

   Tool wear monitoring and hole surface quality during CRFP drilling
   C. Ramirez, G. Poulachon, F. Rossi and R. M’Saoubi

   Influence of the minimum chip thickness on the obtained surface roughness during turning operations
   F. Schultheiss, S. Hägglund, V. Bushlya, J. Zhou and J.E. Ståhl

   Powder metallurgical components: Improvement of surface integrity by deep rolling and case hardening
   P. Nusskern, J. Hoffmeister and V. Schulze

   Influence of additives in metalworking fluids on the wear resistance of steels
   A.G. Huesmann-Cordes, D. Meyer, E. Brinksmeier and J. Schulz

   Surface quality after broaching with variable cutting thickness
   F. Zanger, N. Boev and V. Schulze

   Influence of post-machining thermal treatment on the corrosion behaviour of copper
   S. Blasey-Breton and V. Vignal

   Analysis of subsurface microstructure and residual stresses in machined Inconel 718 with PCBN and Al2O3-SiCw tools

   Taguchi DOE analysis of surface integrity for high pressure jet assisted machining of inconel 718
   L. Yünlü, O. Çolak and C. Kurbanoğlu

   Comparison of surface textures generated in hard turning and grinding operations
   W. Grzesik, K. Zak and P. Kiszka

   Surface integrity of AISI 4150 (50CrMo4) steel treated with different types of cooling lubrication
   V. García Navas, D. Fernández, A. Sánda, C. Sary, S. Suzon and T. Fernández de Mendiola

   Numerical simulation of material strength deterioration due to pitting corrosion
   A. Kolos, S. Sikrathust and K. salonita

   Surface integrity of AISI 4150 (50CrMo4) steel treated with different types of cooling lubrication
   V. García Navas, D. Fernández, A. Sánda, C. Sary, S. Suzon and T. Fernández de Mendiola

   Analysis of subsurface microstructure and residual stresses in machined Inconel 718 with PCBN and Al2O3-SiCw tools

   Taguchi DOE analysis of surface integrity for high pressure jet assisted machining of inconel 718
   L. Yünlü, O. Çolak and C. Kurbanoğlu

   Damage-free and atomically-flat finishing of single crystal SiC by combination of oxidation and soft abrasive polishing
   H. Dong, K. Endo and K. Yamamura

   The prediction of machined surface hardness using a new physics-based material model
   R. Liu, M. Salahshoor, S.N. Melkote and T. Marusich

   Evolution of residual stresses induced by machining in a Nickell-based alloy under static loading at room temperature
   A. Mayerberg, P.J. Arrazola, J.A. Esnaola, J. Ruiz-Hervias and P. Muñoz

   Metallographic components: Improvement of surface integrity by deep rolling and case hardening
   P. Nusskern, J. Hoffmeister and V. Schulze

   Influence of the cutting edge preparation on the surface integrity after dry drilling
   F.M. Bordin and R.P. Zeilmann

   Powder metallurgical components: Improvement of surface integrity by deep rolling and case hardening
   P. Nusskern, J. Hoffmeister and V. Schulze

   Influence of additives in metalworking fluids on the wear resistance of steels
   A.G. Huesmann-Cordes, D. Meyer, E. Brinksmeier and J. Schulz

   Surface quality after broaching with variable cutting thickness
   F. Zanger, N. Boev and V. Schulze

   Influence of post-machining thermal treatment on the corrosion behaviour of copper
   S. Blasey-Breton and V. Vignal

   Analysis of subsurface microstructure and residual stresses in machined Inconel 718 with PCBN and Al2O3-SiCw tools

   Taguchi DOE analysis of surface integrity for high pressure jet assisted machining of inconel 718
   L. Yünlü, O. Çolak and C. Kurbanoğlu

   Damage-free and atomically-flat finishing of single crystal SiC by combination of oxidation and soft abrasive polishing
   H. Dong, K. Endo and K. Yamamura

   The prediction of machined surface hardness using a new physics-based material model
   R. Liu, M. Salahshoor, S.N. Melkote and T. Marusich

   Evolution of residual stresses induced by machining in a Nickell-based alloy under static loading at room temperature
   A. Mayerberg, P.J. Arrazola, J.A. Esnaola, J. Ruiz-Hervias and P. Muñoz

   Metallographic components: Improvement of surface integrity by deep rolling and case hardening
   P. Nusskern, J. Hoffmeister and V. Schulze

   Influence of additives in metalworking fluids on the wear resistance of steels
   A.G. Huesmann-Cordes, D. Meyer, E. Brinksmeier and J. Schulz

   Surface quality after broaching with variable cutting thickness
   F. Zanger, N. Boev and V. Schulze

   Influence of post-machining thermal treatment on the corrosion behaviour of copper
   S. Blasey-Breton and V. Vignal

   Analysis of subsurface microstructure and residual stresses in machined Inconel 718 with PCBN and Al2O3-SiCw tools

   Taguchi DOE analysis of surface integrity for high pressure jet assisted machining of inconel 718
   L. Yünlü, O. Çolak and C. Kurbanoğlu
Parallel Presentation Sessions
1.30pm - 3.30pm

6. Surface Produced by Conventional Processing Methods
The Conference Room
Session Chair: S. Devadula
Royal Institute of Technology, Sweden

6. Surface Produced by Conventional Processing Methods
Room 5
Session Chair: S. Leung
University of Birmingham, UK

6. Investigative Methods and Simulation Techniques for Surface Integrity
Room 1
Session Chair: D. Umbrello
University of Calabria, Italy

Surface integrity in dry milling of 304L steel: A parametric study
A. Maurotto, D. Tsivoulas and M.G. Burke

Effect of temperature on the subsurface microstructure and mechanical properties of AA 7075-T6 in machining
O. Fergani, Y. Shao and S.Y. Liang

Influence of clamping systems during drilling carbon fiber reinforced plastics
S. Kiritz, M. Gerenstemeyer, F. Zanger and V. Schulze

Effect of cutting speed and feed rate on the surface integrity in dry turning of CoCrMo alloy
A. Bondin, S. Bruschi and A. Ghiotti

Surface integrity of fluid jet polished tungsten carbide
A. Beauchamp, Y. Namba, W. Messelink, D. Walker, P. Charton and R. Freeman

The impact of plain waterjet machining on the surface integrity of aluminium 7475S
F. Boult, L.F. Loo and P. K. Kimmel

Surface quality analysis of titanium and nickel-based alloys using picosecond laser
C. Kong and J. Wang

Surface integrity of fluid jet polished tungsten carbide
A. Beauchamp, Y. Namba, W. Messelink, D. Walker, P. Charton and R. Freeman

Finite element simulation of residual stresses in cryogenic machining of AZ31B Mg alloy
Z. Pu, D. Umbrello, D.W. Dlorn Jr and J.S. Jawahir

Effect of constitutive modelling during finite element analysis of machining-induced residual stresses in Ti6Al4V
G. Styger, R. F. Laubscher and G. A. Oosthuizen

Modelling and energy efficiency of abrasive flow machining on tooling industry case study
J. Kenda, F. Pulavec and J. Kopac

Numerical simulation of surface modification in dry and cryogenic machining of AA7075 alloy
G. Rotella and D. Umbrello

Explication of topographical/chemical analysis of polycrystalline diamond pulsed laser ablated surfaces
M. Pacella, D. Aznike and P. Butler-Smith

The effect of cutting speed and feed rate on the surface integrity in dry turning of CoCrMo alloy
A. Bondin, S. Bruschi and A. Ghiotti

Application of vibropeening on aero-engine component
G. Feldmann, C.C. Wong, W. Wei and T. Haubold

At the Conference Room
3.30pm - 4pm

Industrial led Presentations

The industrial perspective on the importance of surface integrity: invited talks from Rolls-Royce, Zeeko, Bruker
The Conference Room
4pm - 6pm

Free time
6pm-7pm

Gala Dinner
The Restaurant
7pm

Whisky Tasting
9.30pm

Refreshment Break
West Atrium
3.30pm - 4pm

Industrial led Presentations

The industrial perspective on the importance of surface integrity: invited talks from Rolls-Royce, Zeeko, Bruker
The Conference Room
4pm - 6pm

Free time
6pm-7pm

Gala Dinner
The Restaurant
7pm

Whisky Tasting
9.30pm
Friday 30 May 2014

Registration and Refreshments
West Atrium
8.30am - 9am

Parallel Presentation Sessions
9am - 10.30am

1. Surface Produced by Conventional Processing Methods
The Conference Room
Session Chair: Y. Guo
University of Alabama, USA

2. Surface Produced by Conventional Processing Methods
Room 5
Session Chair: P. Kinnell
The University of Nottingham, UK

3. Surfaces Produced by Non-Conventional Processing Methods
Room 1
Session Chair: C. Kong
University of Birmingham, UK

Experimental analysis of the surface integrity of single-crystal calcium fluoride caused by ultra-precision turning
S. Azami, K. Hiroshi, T. Tanabe, J. Yan and Y. Kakumura

Grinding effects on surface integrity and mechanical strength of WC-Co cemented carbides
J. Yang, M. Olden, M. Johansson-Joesaar and L. Lannes

On surface grind hardening induced residual stresses
K. Salomits

Surface integrity characteristics of NiTi shape memory alloys resulting from dry and cryogenic machining
Y. Kaymak, H.E. Karaca and I.S. Jawahir

Surface integrity in hard machining of 300M steel: effect of cutting-edge geometry on machining induced residual stresses
P. Vanea, C.S. Rakurty and A.K. Balaji

Multi-scale curvature analysis and correlations with the fatigue limit on steel surfaces after milling

Results of surface integrity and fatigue study of wire-EDM compared to broaching and grinding for demanding jet engine components made of inconel T78
D. Weling

Residual stresses in milled Ti-6Al-4V
T. Groves, J. Köhler and B. Denken

Selective surface texturing using electrolyte jet machining
T. Kawana, S. Kato, M. Kunieda, J. Murray and A. Clare

Deep cold rolling of features on aero-engine components
C.C. Wong, A. Hartawan and W.K. Too

Empirical modeling of residual stress profile in machining nickel-based superalloys using the sinusoidal decay function
D. Ulutan, Y.M. Arisoy, T. Özel and L. Mears

Surface integrity analysis of plain waterjet milled advanced engineering composite materials
D.S. Sinnai and D.A. Aice

Influence of lay-up configuration and feed rate on surface integrity when drilling carbon fibre reinforced plastic (CFRP) composites

Surface integrity analysis of plain waterjet milled advanced engineering composite materials
D.S. Sinnai and D.A. Aice

Travel to Rolls-Royce Reception
1pm