

# ***China-UK Seminar on Sustainable Energy & New Power-Train System Technologies***

**23-24 March 2013**

**Beijing Institute of Technology (BIT) in China**

**Organised by** BIT, Newcastle University (NU), Chinese Society for  
Internal Combustion Engine (CSICE)

**Venues:** Lecture Hall of BIT Library (Zhongguancun Campus), Meeting  
Room No.2 of the BIT Intl Edu Exchange Hotel

*5, Zhongguancun South Avenue; 66, West Road off North 3rd Ring Road, Haidian, Beijing,  
China.*



**Newcastle  
University**



**Hosted by** Department of Thermal Energy and Power Engineering  
& Fundamental Science on Vehicular Power System Lab.

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China-UK Research Engagement) from UK (<http://research.ncl.ac.uk/globalsecure/>)

## Programme of Events

### Saturday 23<sup>rd</sup> March 2013

8:40 – 8:55 a.m.	<b>Registration</b>
9:00 – 10:00 a.m.	<b>Opening Ceremony</b> Presentation by Prof. Fengchun Sun (Chair, BIT) Presentation by Prof. Tony Roskilly (Co-Chair, NU) Presentation by CSICE (Chinese Society for Internal Combustion Engine) Presentation by SAFEA (State Administration of Foreign Experts)
10:00 – 11:30 a.m.	<b>Keynote Speech</b> Prof. Tony Roskilly (NU): ‘Sustainable Energy’ Prof. Chunde Yao (TU): ‘Application of methanol to HD diesel engines in china’ Prof. Fushui Liu (BIT): ‘The way to zero-carbon emission-Hydrogen internal combustion engine’ Questions & Answers
11:30 – 13:00 a.m.	<b>Lunch</b>
13:00 – 15:00 p.m.	<b>Session 1 (Continued): ‘Trigeneration, CO<sup>2</sup> capture and low grade heat driven cogeneration’</b> <ul style="list-style-type: none"> <li>• Dr Yaodong Wang (NU) &amp; Prof. Jingcheng Huang (Guangxi University): ‘Trigeneration with integrated energy storage &amp; biofuel use’</li> <li>• Prof. Mingshan Wei (BIT): ‘Exhaust waste heat recovery from vehicle engines using organic Rankine cycles’</li> <li>• Dr Lidija Siller (NU): ‘CO<sup>2</sup> capture &amp; H<sub>2</sub> production’</li> <li>• Dr Yaodong Wang (NU) &amp; Dr Liwei Wang (SJTU): ‘Low grade heat driven cogeneration of power &amp; cooling’</li> </ul> Questions & Answers
15:00 – 15:20 p.m.	<b>Coffee</b>
15:20 – 17:50 p.m.	<b>Session 2 (Continued): ‘Renewable energy systems and emission control for marine and road transport’</b> <ul style="list-style-type: none"> <li>• Dr Ignazio Maria Viola (NU): ‘Advanced aero &amp; hydrodynamics for sail-assisted ship propulsion’</li> <li>• Dr Guohong Tian (NU): ‘Integration of renewable energy systems &amp; power optimisation for ships’</li> <li>• Prof. Hongfei Zheng (BIT): ‘Investigation on several innovative solar concentrators’</li> <li>• Dr Michael Woodward (NU) &amp; Dr Alan Murphy (NU): ‘Advanced hydrodynamics, simulation and operation for improved marine efficiency’</li> <li>• Dr Lijun Hao (BIT): ‘PEMS Application in mobile sources emission testing’</li> </ul> Questions & Answers
17:50 – 18:00 p.m.	<b>Round-Up</b>
18:20 p.m. onwards	<b>Banquet</b>

## Programme of Events

### Sunday 24<sup>th</sup> March 2013

8:30 – 10:00 a.m.	<b><u>Session 3: 'Combustion, control and turbocharging of Internal Combustion Engine (ICE)'</u></b> <ul style="list-style-type: none"> <li>• Dr Xu He (BIT) &amp; Thomas Bohl (NU): 'Visualization Technology Applied in Engine Diagnostics'</li> <li>• Dr Ying Huang(BIT): 'Torsional Vibration Active Control of a Diesel Engine Based on Adjustment of the Fuel Injection Vector'</li> <li>• Dr Xin Shi(BIT): 'Numerical investigation of shock wave induced high cycle fatigue failure of variable geometry turbine'</li> </ul> <p>Questions &amp; Answers</p>
10:00 – 10:20 a.m.	<b>Coffee</b>
10:20 – 12:00 p.m.	<b><u>Session 4: 'Structure of ICE and new concept power system'</u></b> <ul style="list-style-type: none"> <li>• Dr Jinxiang Liu (BIT): 'Research on High Temperature Low Cycle Fatigue of Cast Aluminum Piston Alloy'</li> <li>• Dr Zhenfeng Zhao (BIT) &amp; Dr Guohong Tian (NU): 'Research on design method of hydraulic free-piston engines'</li> <li>• Dr Huihua Feng (BIT): 'Research on FPELG Simulation &amp; Experiment'</li> </ul> <p>Questions &amp; Answers</p>
12:00 – 13:00 p.m.	<b>Lunch</b>
13:00 – 14:00 p.m.	<b><u>Session 5: 'Thermal energy management&amp; optimal management of water resources'</u></b> <ul style="list-style-type: none"> <li>• Dr Yaodong Wang (NU) &amp; Prof Haisheng Chen (IET): 'Thermal energy management in processing industries'</li> <li>• Dr Qihua Liang (NU): 'Optimal management of water resources and flood risk for hydropower generation'</li> </ul> <p>Questions &amp; Answers</p>
14:00 – 15:00 p.m.	<b><u>Session 6: 'Energy Reduction'</u></b> <ul style="list-style-type: none"> <li>• Professor David Graham (NU) &amp;Prof. Xie Bing (ECNU): 'Energy reduction in waste treatment'</li> <li>• Dr Anil Namdeo (NU) &amp;Prof. Pengjun Zhao (Peking): 'Energy reduction in road transport'</li> </ul> <p>Questions &amp; Answers</p>
15:00 – 15:20 p.m.	<b>Coffee</b>
15:20 – 16:20 p.m.	<b><u>Session 7 (Continued): 'Energy Reduction'</u></b> <ul style="list-style-type: none"> <li>• Prof. Simin Davoudi (NU), Prof. Zhendong Huang (Wuhan University) &amp; Prof. Pengjun Zhao (Peking University): 'Energy reduction in domestic buildings through retrofitting'</li> <li>• Dr Thomas Ploetz (NU): (<a href="#">SKYPE Presentation</a>) 'Energy reduction through Promoting Sustainable Living'</li> </ul>
16:20 – 17:00 p.m.	<b>Round-up</b>
17:00 p.m. onwards	<b>Food/Drinks/Dinner</b>