About IRDF

The International R&D Forum (IRDF) was first held in 2004 as a platform for scientists and technologists from both industry and academia to network and exchange ideas on the latest developments in oil, gas and petrochemical technologies. After two successful fora, PETRONAS and Universiti Teknologi PETRONAS (UTP) are proud to announce the 3rd International R&D Forum (IRDF2009), which will be held in Malaysia from 25 - 27 May, 2009.

This year’s theme,

“LEVERAGING INNOVATION FOR SUSTAINABILITY”

emphasises the industry’s need to leverage on innovation in order to sustain further development and growth into the next century.

About the Organisers

Petroleum Nasional Berhad (PETRONAS)

PETRONAS is Malaysia’s very own integrated petroleum multinational corporation. With a strong ranking on the FORTUNE Global 500® and a presence in more than 30 countries around the world, the PETRONAS Group has over 30 years of solid experience in oil and gas operations. Our business activities range from upstream oil and gas exploration and production to downstream oil refining; marketing and distribution of petroleum products; trading; gas processing and liquefaction; gas transmission pipeline operations; marketing of liquefied natural gas; petrochemical manufacturing and marketing; shipping; and property investment.

PETRONAS first ventured into the international arena at the turn of the 1990s, in line with its business integration, value-adding and globalisation strategy. Today, over 76.6 percent of the Group’s revenue is derived from its international operations and exports. For the financial year ended 31 March 2007, PETRONAS recorded a revenue of US$1.10 billion and net profit of US$12.0 billion.*

As a responsible corporate citizen, PETRONAS is committed to managing our petroleum resources and operations responsibly by balancing commercial, environmental and social objectives to ensure sustainable development for the benefit of the people and local community in the host countries wherever we operate.

www.petronas.com

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*As at Financial Year End 31 March 2007 (US$1=RM3.61)
Universiti Tekonologi PETRONAS (UTP)
UTP is a private university established in January 1997 under the Malaysian Private Universities Act (1996). The university is a wholly-owned subsidiary of PETRONAS, the national oil company of Malaysia. Its campus is located on a 400-hectare site at Bandar Seri Iskander, Perak, Malaysia and currently hosts students from all over the world. UTP offers a wide range of engineering and technology programmes at foundation, undergraduate and postgraduate levels. The programmes are designed with high industry-relevance to provide a dynamic learning environment. Although focused on engineering and technology, the academic programmes are also designed to produce well-rounded graduates – graduates with high technical competence and desirable qualities such as critical thinking, creativity, capacity for lifelong learning, business acumen and communication skill, among others.

Venue
IRDF2009 will be held at the Putrajaya Marriott JOI Resort, Putrajaya, Malaysia.

Who Should Attend
- Researchers and academicians from universities
- Researchers, managers and senior managers responsible for technology management and development in the oil, gas and petrochemical industries
- Policymakers and senior researchers from government agencies and research institutes

Participation Benefits
IRDF2009 will comprise both oral and poster presentations organised into concurrent (parallel) sessions during the two days. Where relevant, there will be panel discussions on topical issues. The sessions are expected to fall into the following broad categories:

01 Exploration & Production
02 Process & Refining
03 Alternative Energy & Renewables

Keynote Speaker
- Tun Dr Mahathir B Mohamad
  Chancellor of Universiti Teknologi PETRONAS (UTP)
Your Investment

The fee for a participant is inclusive of forum materials, meals and refreshments during the forum.*

<table>
<thead>
<tr>
<th>Category</th>
<th>Price per pax (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Practitioners</td>
<td>1500.00</td>
</tr>
<tr>
<td>Academia and Government Agencies</td>
<td>750.00</td>
</tr>
<tr>
<td>Students</td>
<td>375.00</td>
</tr>
<tr>
<td>Group Package – three or more participants</td>
<td>1200.00</td>
</tr>
</tbody>
</table>

*This fee does not include accommodation costs, which shall be borne separately by participants.

Programme

Several renowned prominent speakers such as Mr Willem Schultz (Chief Scientist Reservoir Engineering, Shell EP) and Mr Alex McEachern (Power Standards) have been lined-up for the programme. Speakers from leading universities and organisations including Queen’s University of Belfast (Northern Ireland); Delft University of Technology (The Netherlands); Schlumberger, BASF Corporation, and the Commonwealth Scientific and Industrial Research Organisation will also be there to share their latest industry practices and technology innovations with the participants.

Monday, 25 May 2009

1000 – 1600 hours  Registration: Speakers/Delegates
1200 – 1900 hours  Technical Tour – Forest Research Institute Malaysia
1000 – 1800 hours  Exhibition & Poster Display

Tuesday, 26 May 2009

0900 – 1000 hours  Opening Ceremony/Keynote Address
1045 – 1245 hours  Exploration & Production – Enhanced Oil Recovery
                  Process & Refining – Technology Advancement
                  Alternative Energy & Renewables – Biofuel
1400 – 1430 hours  Plenary Session 1 – Power Quality – Impact on Global Warming
                  – Mr Alex McEachern (Power Standards)
1430 – 1545 hours  Exploration & Production – Facilities Engineering
                  Process & Refining – Novel Process
                  Alternative Energy & Renewables – Alternative Energy
1615 – 1800 hours  Exploration & Production – Facilities Engineering (cont.)
                  Process & Refining – Novel Process (cont.)
                  Alternative Energy & Renewables – Alternative Energy (cont.)
1000 – 1800 hours  Exhibition & Poster Display
1930 – 2230 hours  IRDF2009 Gala Dinner
Wednesday, 27 May 2009
0900 – 0930 hours  Plenary Session 2
  – Technology Development in Chemical Enhanced Oil Recovery
  – Mr Willem Schulte (Chief Scientist Reservoir Engineering, Shell EP)
0930 – 1000 hours  Group Plenary Session
1030 – 1230 hours  Exploration & Production – Subsurface
  Process & Refining – Process Enhancement
  Alternative Energy & Renewables – Environment
1400 – 1545 hours  Exploration & Production – Oilfield Application
  Process & Refining – Product Development
  Alternative Energy & Renewables – Unconventional Hydrocarbon
1545 – 1630 hours  Panel Session
1630 – 1700 hours  Closing Ceremony
1000 – 1800 hours  Exhibition & Poster Display

Technical Papers

Exploration & Production – Enhanced Oil Recovery
a) Innovation and Challenges of Horizontal Well-Placement and Downhole Flow-Control in Thin-Oil Reservoir Development
  Gordon Goh (Schlumberger)
b) EOR in Malaysia: The New Frontier
  Dr Nasir Darman (Petroleum Management Unit, PETRONAS)
c) TBC
  YBhg Datuk Professor Dr Abu Azam (Universiti Teknologi Malaysia)

Exploration & Production – Facilities Engineering
a) Pressure Drop Investigation of Annular Deposition Test Section
  Dr Hussain Al-Kayiem (Universiti Teknologi PETRONAS)
b) Effective Perforating and Gravel Placement: Key to Low Skin, Sand-Free Production in Gravel Packs
  Shahryar Saebi (Schlumberger)

Exploration & Production – Subsurface
a) Multiphysics: A game changing technology for subsurface characterisation and understanding
  Dr Michael Benedict Clennell (CSIRO)
b) Global Perspective and Challenges in Carbonates: The Roles of Research in Making Successful Ventures
  M Yamin Ali (PETRONAS Research Sdn Bhd)
c) Palaeozoic hydrocarbon plays in and around Peninsular Malaysia: any chance of exploration success?
  Professor Dr Bernard Pierson (Shell Chair, Universiti Teknologi PETRONAS)

Exploration & Production – Oilfield Application
a) Achieving Ideal Operational Performance with Water-Based Mud Systems
  Stuart Peter Thompson Smith (PETRONAS Carigali Sdn Bhd)
b) Advanced Composites in the Offshore Industry – Past Experience and Future Opportunities
  Professor Murray Scott (Composites CRC)
c) A Dynamic Pore Network Model for the Prediction of Multiphase Flow Properties from Nuclear Magnetic Resonance Imaging
   Professor Birol M R Demiral (Schlumberger Chair, Universiti Teknologi PETRONAS)

Process & Refining – Technology Advancement
a) Enhancing Access Control and Security using Biometric Systems
   Professor Dr Marzuki Khalid (Universiti Teknologi Malaysia)

b) High Efficiency Tray - Application & Experience
   Zainab Kayat (Group Technology Solutions, R&T Division, PETRONAS) & Adam A Rahman
   (PETRONAS Gas Berhad)

Process & Refining – Novel Process
a) Modeling using ASPEN HYSYS Reveals the Behaviors of Selected Solvents in the Extraction of Naphthenic Acids in Crude Oils
   Eric Obiora Okeke, Nigerian National Petroleum Corporation (NNPC)

b) Modelling of CCR Naphtha Reactor
   Professor Duvvuri Subbarao (Universiti Teknologi PETRONAS)

c) SINOPEC’S Clean Fuel Production Technologies
   Guo Rong (SINOPEC)

   Khor Cheng Seong (Universiti Teknologi PETRONAS)

e) Selective Non-Conventional Technology in Processing Opportunity Crude Oils
   Dr Sa’adian Mat (PETRONAS Research Sdn Bhd)

Process & Refining – Process Enhancement
a) Building Knowledge from Plant Operating Data for Process Improvement Applications
   Dr M Ramasamy (Universiti Teknologi PETRONAS)

b) Refining Catalysis Process
   Alex Santana (Avantium)

c) "PSRT Crude Distillation Capacity Maximisation Through Innovative Technology Application"
   Azamuddin Jameran (PETRONAS Penapisan (Melaka) Sdn Bhd)

Process & Refining – Product Development
a) The Interaction of 1st and 2nd Generation Biofuels on Current and Future Engine Technology
   Gary Knight (Ricardo)

b) Biodegradable Lubricants, their impact on Eco-compatibility and European Legislation
   Dr Pietro Carlo Salino (PETRONAS Lubricant International)

c) Nano-particles – An Emerging Technology in Providing Tribological Performance in Lubricants
   Dr Choo Jian Wen (PETRONAS Research Sdn Bhd)

Alternative Energy & Renewables – Biofuel
a) Ionic Liquid Cracking of Biomass: Beyond Cellulose to Biorefineries
   Robin D Rogers (Queen’s University of Belfast)

b) Current Lignocellulosic Ethanol Technologies and Future Perspective
   Mustaffa M Sugungun, Nigerian National Petroleum Corporation (NNPC)

c) Chemicals and Fuels from Biomass – Recent Advances
   Reinhold Mann (Oakridge National Laboratory, Battelle)
Alternative Energy & Renewables – Alternative Energy
a) Heated Water as a New Form of Renewable Fuel using a Novel High Efficiency Heat Engine
   Ir Azmi Osman (PETRONAS Research Sdn Bhd)
b) Studies on The Fabrication and Characterization of Solid Oxide Fuel Cell
   Dr Saikat Maitra (Universiti Teknologi PETRONAS)
c) Integrated production bio based synthetic ester from plant oils
   Associate Professor Dr Robiah Yunus (Universiti Pertanian Malaysia)
d) Dye Solar Cells – a credible solar cell technology to complement traditional fuels
   Gordon Thompson (Dyesol Limited)
e) Activities for Designing a Future Sustainable Society in Yakushima
   Dr Yoshimitsu Uemura (Mitsubishi)

Alternative Energy & Renewables – Environment
a) Rooting System of Plants Grown in Petrosludge – A Preliminary Screening
   Professor Mushrifah Idris (Universiti Kebangsaan Malaysia) & Siti Hanizah Djasman
   (PETRONAS Research Sdn Bhd)
b) The Improvement of the Lightning Protection System on Gas Pipelines in Sumatera
   Dr. Reynaldo Zoro (Institute of Technology Bandung) & M Faudzi B M Yasir
   (Group Technology Solutions, R&T Div., PETRONAS)
c) Environmental Compliance Monitoring in Oil and Gas Exploration and Production: A Tool for
   Environmental Sustainability in the Niger Delta Region of Nigeria
   Dr Stephena C. Amanchukwu, Nigerian National Petroleum Corporation, (NNPC)

Alternative Energy & Renewables – Unconventional Hydrocarbon
a) A New Method for the Statistical Evaluation of Hydrate Formation in Natural Gases
   Dr Karen Kozieleski (CSIRO)
b) Methane Hydrates R&D Activities in JOGMEC – Overview and Status
   Kenichi Yokoi, Japan Oil, Gas and Metals National Corporation, (JOGMEC)
c) Production Assurance Considerations related to Inorganic Scales and Hydrates in Deepwater Gas
   Condensate Development
   Afzal Memon (Schlumberger)

Hotels/Accommodation*

Putrajaya Marriott IOI Resort
- Deluxe Single – RM282.00++ per room per night with 1 breakfast
- Deluxe Twin – RM314.00++ 2 per room per night with 2 breakfasts

Reservations: T +603-89498888

Palm Garden Hotel IOI Resort
- Helicona – RM235.00++ per room per night with 2 breakfasts
- Orchid – RM275.00++ per room per night with 2 breakfasts
- Anthurium Suite – RM365.00++ per room per night with 2 breakfasts

Reservations: T +603-8943233
Pullman Putrajaya Lakeside

- Superior Room – RM260.00++ per room per night without breakfast
- Deluxe Room – RM290.00++ per room per night without breakfast
- Deluxe Balcony – RM320.00++ per room per night without breakfast

Reservations: T +603-86900000

*Kindly make your accommodation arrangements directly with the respective hotels

Technical Tour
- Forest Research Institute Malaysia (FRIM)

FRIM is one of the leading institutions in tropical forestry research, both within the country and abroad. In 2004, FRIM became a statutory body governed under the Ministry of Natural Resources and Environment. The 469 hectare institution is located 16 km northwest of Kuala Lumpur, surrounded by the Bukit Lagong Forest Reserve. FRIM promotes sustainable management and optimal use of forest resources by generating knowledge and technology through research, development and application. The institute also offers a wide range of facilities for research, including six field research stations in areas of different forest types in various parts of the country. The tour is available at a cost of RM60 per participant.

IRDF2009 Gala Dinner

Join us for an exciting evening at the IRDF2009 Gala Dinner. While enjoying the scrumptious spread, you will be entertained by a delightful cultural show and live orchestral performance. We encourage you to take advantage of this excellent networking opportunity to socialise with fellow participants in a fun and casual environment.

Methods of Payment:

Payment can be made by Telegraphic Transfer/Bank Draft payable to IRDF2009. The account details are as follows:

Name of Bank : CIMB Bank
Address : No.22 Jalan Pejabat Pos
31000 Batu Gajah
Perak Darul Ridzuan, Malaysia

Account No. : 00900003448057
Account Name : International R&D Forum on Oil Gas and Petrochemical
Swift Code No. : bcbmmykl

If payment is made by Telegraphic Transfer, a copy of the Telegraphic Transfer Instructions must be faxed to us. Telegraphic Transfer Instructions must include the following details:

Company Name with full address
Name(s) of participant(s)

If payment is made by Bank Draft, please indicate the name(s) of participant(s) on the back of the Bank Draft.
Cancellation

The organiser will send the confirmation of participation upon receipt of your Registration Form. A refund minus 10% service charge will be made for cancellations received in writing before the confirmation date. No refunds will be made for cancellations received after confirmation. If you are unable to attend, a substitute delegate is welcome at no extra charge. Please provide the name and title of your substitute at least two days prior to the event.

Registration Details

Please complete this Registration Form and return it to us before 15 May 2009.

- Individual
- Group

Dr./Mr./Ms.:

Company:

Address:

Tel: __________________ Fax: __________________ Email: __________________

Bankdraft/Cheque No: ___________________________________________________

Bank: __________________ Amount: __________________

Please photocopy this registration form for additional participants.

Contact Details

For all enquiries regarding this forum, please refer to:

The Secretariat
International R&D Forum 2009
PETRONAS Research Sdn Bhd
Lot 3288 & 3289, Off Jalan Ayer Itam
Kawasan Institusi Bangi, 43000 Kajang
Selangor, MALAYSIA

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