



**IASH 2009, the 11<sup>th</sup> International  
Conference on Stability,  
Handling and Use of Liquid Fuels**

**Prague, Czech Republic  
18-22 October 2009**

## **Conference Program**

**Theme: "Challenges for the Use of New Fuels for the 21<sup>st</sup> Century"**

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### **SPONSORS & EXHIBITORS**

**Fuel Quality Services, Inc.**

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**Air BP \*\*\* Energy Institute \*\*\* ExxonMobil Aviation \*\*\* GE Water & Process Technologies**

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**IASH Sustaining Members:** Air BP - ConocoPhillips - ExxonMobil Aviation - Fuel Quality Services, Inc.  
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**IASH Supporting Members:** Arabian Fuels Technology Center - Chevron Global Aviation - ECHA Microbiology  
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All Technical Session will be located in Congress Hall A&B  
Technical Posters located in Diana & Exhibitors located in Helena  
Registration in Congress Hall Foyer from 07.30 – 17.00 Daily  
Speaker Ready Room located in Petr/Hubert

Sunday 18<sup>th</sup> October 2009

- 10.00 – 12.00 Board of Directors Meeting in Petr/Hubert Room (Members & Invited Guests)  
14.00 – 17.00 Registration in Congress Hall Foyer – Continues throughout the week  
14.00 – 17.00 Set up Posters and Exhibits in the Helena I-III & Diana Rooms
- 19.00 – 21.30 **OPENING RECEPTION AT ZLATÀ PRAHA LOCATED ON THE ROOFTOP OF THE INTERCONTINENTAL  
SPONSORED BY EXXONMOBIL AVIATION AND PARKER HANNIFIN**

Monday 19<sup>th</sup> October 2009  
Congress Hall A&B

- 08.30 – 08.45 Welcome and Introduction by Robert E. Morris, Conference Chairman
- 08.45 – 09.15 **Keynote Address: *Alternative Fuels - Strategy and Results***  
***William E. Harrison III – Technical Advisor for Fuels & Energy for the Propulsion Directorate of the US Air Force Research Laboratory at Wright-Patterson Air Force Base***

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**09.15 Session 1. AVIATION FUELS**  
**Edwin Corporan, Session Chair**  
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- 09.20 – 09.45 **Reduction of Trace Bio-Components in Jet (UK) – *Alisdair Q. Clark***
- 09.45 – 10.10 **Using the Cetane ID 510 for the Prediction of Derived Cetane Numbers of Aviation Turbine Fuels (USA) – *Scott K. Berkous***
- 10.10 – 10.40 **BREAK - SPONSORED BY PAC**
- 10.40 – 11.05 **The Use of Jet Fuel in Diesel Powered Aircraft (USA) – *Roger G. Gaughan***
- 11.05 – 11.30 **Fuel Effects on Range Versus Payload for Modern Jet Aircraft (UK) – *Simon Blakey, C. W. Wilson, Mike Farmery and Robert Midgley***
- ~~11.30 – 11.55 **Storage Life of Specially Formulated High Octane Fuel Used in Unmanned Aerial Vehicle (INDIA)**  
– *S. Nandi, V.K. Sharma, A.A. Gupta, R.K. Malhotra and Anand Kumar* Withdrawn 10/15/09~~

12:00 – 13.30 **LUNCH IN RESTAURANT PRIMATOR**  
**SPONSORED BY UNIVERSITY OF DAYTON RESEARCH INSTITUTE**

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**13.30 Session 2. BIOFUELS**  
**Joanna Bauldreay, Session Chair**  
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- 13.35 – 14.00 **The Impact of FAME on the Distribution and Handling of Aviation Fuels (UK)**  
– *Anthony Kitson-Smith and Vic Hughes*

- 14.00 – 14.25 **Understanding the Low Temperature Properties of Biodiesel (UK)** – *Mark L. Brewer and Rick E. Malpas*
- 14.25 – 14.50 **Effect of FAME on Diesel Fuel Cold Flow Properties (ENGLAND)** – *Vincent J. Denecker and Dave Coultas*
- 14.50 – 15.15 **Refinery Hydrotreated Diesel Production by Organic Oils Hydroconversion (BRAZIL)**  
– *Nelmo F. Fernandes*
- 15.15 – 15.45 **BREAK - SPONSORED BY PAC**
- 15.45 – 16.10 **Effect of FAME on Susceptibility of Mercox-treated and Hyrdo-treated Jet A-1 to Microbiological Growth (UK)** – *Graham C. Hill*
- 16.10 – 16.35 **Hydrotreated Renewable Jet Fuels (USA)** – *Robert. J. Allen, John Graham, Linda Shafer and Zachary West*
- 16.35 – 17.00 **Applicability of Test Methods for Filter Plugging Tendency (Pumpability) for Evaluation of the Fossil Diesel and Biodiesel Fuels Blends (SLOVENIA)** – *M. Svoljšak Jerman, S. Cerjan Stefanović, M. Moder and A. Gregorc*
- 18.30 – 20.00 **POSTER RECEPTION IN HELENA & DIANA ROOMS**  
**SPONSORED BY US DEFENSE ENERGY SUPPORT CENTER**

**Tuesday 20<sup>th</sup> October 2009**  
**Congress Hall A&B**

- 08.30 – 08.40 Announcements
- 08.40 – 09.10 Keynote Address: Automotive Fuels in the Czech Republic – Production, Distribution, Quality and Quality Assessment Systems** – *Vladimir Matejovsky, Independent Advisor to The Institute of Fuels and Lubricants, Czech Republic*
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- 09.10 Session 3. ADDITIVES & ADDITIVE RELATED PROPERTIES**  
**Mike Sherratt, Session Chair**
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- 09.15 – 09.40 **Determination of Minimum Required FSII Use and Procurement Limits for USAF Aircraft (USA)**  
– *Matthew J. DeWitt, Steven Zabarnick, Steven Shaeffer, Theodore Williams, Zachary West, Linda Shafer, Richard Striebich, Scott Breitfield, Ryan Adams, Rhonda Cook, Charles L. Delaney and Donald Phelps*
- 09.40 - 10.05 **Hydrocarbon Liquid Fuels Thermal Stability, Antioxidant Influence and Behaviour (FRANCE)**  
– *Sterenn Gernigon, Mickaël Sicard, Frédéric Ser, Francois Bozon-Verduraz*
- 10.05 - 10.30 **BREAK – SPONSORED BY SUPREME FUELS TRADING FZE**
- 10.30 - 10.55 **Studies of the Compatibility of DIEGME and TRIEGME Icing Inhibitor Additives with Aircraft Tank Topcoat Material (USA)** – *Steven Zabarnick, Ryan Adams, Zachary West, Matthew J. DeWitt, Linda Shafer, Richard Striebich, Charles L. Delaney and Donald K. Phelps*
- 10.55 - 11.20 **Shelf Life Improvement of C 18:2 Rich Biodiesel with Baynox Antioxidants – An Evaluation of Equivalent Efficacy According to the EU Draft Direc. 2008/0016 (GERMANY)** – *Axel Ingendoh*

~~11.20 – 11.45 High Temperature Stabilizers for Chinese RP-3 Jet Fuels at 700K (CHINA) – Guozhu Liu, Yingjie Wang, Xiangwen Zhang, Guoqiang Xu and Zhentao Mi – Withdrawn 10/12~~

12.00 – 13.30 LUNCH IN RESTAURANT PRIMATOR - SPONSORED BY PRATT & WHITNEY

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**13.30 Session 4. FUEL FILTRATION & CLEANLINESS**  
**Vic Hughes, Session Chair**

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13.35 – 14.00 Filtration – An Attractive Route for Dirt Removal (UK) – Alisdair Q. Clark

14.00 – 14.25 New Techniques in Particle Counting Help Analyzing High Performance Liquid Filters (GERMANY)  
– Michael Schumacher

14.25 – 14.50 Condition Monitoring Sensor Evaluation and Test Protocol Development (USA) – Kathleen M. Kennedy and Paul P. Wells

14.50 – 15.15 Media Migration from Aviation Fuel Filter Monitors (USA) – Paul P. Wells

15.15 – 15.45 BREAK – SPONSORED BY SUPREME FUELS TRADING FZE

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**15.45 Session 5. CHALLENGES IN FUEL DISTRIBUTION & STORAGE**  
**Anthony Kitson-Smith, Session Chair**

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15.50 – 16.15 Logistical Challenges Associated with the Implementation of Alternative Fuels (USA) – Pamela Serino

16.15 – 16.40 Utilizing Colorimeter/Haze Analyzers for Online Quality Control and Interface Detection with Specialty Fuels (USA) – Kam Mohajer

16.40 – 17.05 Fit for Purpose Implications for Fuel Suppliers, Handlers and Users (USA) – George R. Wilson, III and Steven R. Westbrook

**Wednesday 21<sup>st</sup> October 2009**  
**Congress Hall A&B**

08.30 – 08.40 Announcements

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**08.40 Session 6. SYNTHETIC & ALTERNATIVE FUELS I**  
**Stan Seto, Session Chair**

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08.45 – 09.10 Superior Stability Performance of Fischer-Tropsch (FT) Kerosene (REP. OF SOUTH AFRICA)  
– Mariam Ajam and Carl L. Viljoen

09.10 – 09.35 Recent Progress in Synthetic Fuels Development for Aviation (UK/NETHERLANDS) – Joanna Bauldreay, Paul F. Bogers, Tim A. Snijders, Joris A. Melkert

09.35 – 10.00 Evaluation of Synthetic Diesels for US Navy Shipboard Applications (USA) – Philip H. Chang and Richard A. Kamin

10.00 – 10.25 Initial Evaluation of Chemical, Thermal Stability and Emissions Characteristics of Jet Fuels from Alternative Sources (USA) – Edwin Corporan, James T. Edwards, Linda Shafer, Matthew .J. DeWitt, Christopher Klingshirm, Steven Zabarnick, Zach West, Richard Striebich, John Graham and Jim Klein

10.25 – 11.00 **BREAK - SPONSORED BY GE WATER & PROCESS TECHNOLOGIES**

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**11.00 Session 7. SYNTHETIC & ALTERNATIVE FUELS II**

**Steve Anderson, Session Chair**

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11.05 – 11.30 **Thermal Stability of Alternative Jet Fuels (FRANCE) – Mickaël Sicard, Bruno Raepsaet, Frédéric Ser, Jacques Ancelle, Laurie Starck, and Nicolas Jeuland**

11.30 – 11.55 **Potential of Alternative Fuels for Aircraft: Focus on Thermal and Oxidation Stability (FRANCE) – Laurie Starck, Mickaël Sicard, Frédéric Ser, and Nicolas Jeuland**

11.55 – 12.20 **Effect of Chemistry and Boiling-Point Distribution on the Properties and Characteristics of Synthetic Paraffinic Kerosene and Blends with Jet A (USA/REP. OF SOUTH AFRICA) – Clifford A. Moses, Petrus N.J. Roets, Carl L. Viljoen and George R. Wilson, III**

12.20 – 13.45 **LUNCH IN RESTAURANT PRIMÀTOR - SPONSORED BY SHELL AVIATION**

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**13.45 Session 8. MIDDLE DISTILLATE FUELS AND HEAVY OILS**

**Rick Kamin, Session Chair**

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13.50 – 14.15 **Analysis of Issues Concerning the Production and Distribution of Low Sulphur Diesel – One Brazilian's Refinery Experience (BRAZIL) – Nelmo F. Fernandes and Paulo Sergio de Souza Rego**

14.15 – 14.40 **Predicting the Impact of ULSD Stability on Modern Engines (USA) – Jack Burgazli and Stephen Cook**

14.40 – 15.15 **Thermal Stressing of Ultra-Low Sulfur Diesel and Low Sulfur F-76 Diesel Fuels (AUSTRALIA) – David J. Evans, Chris K.J. Hulston, Lance C. Kelly, Michael G. O'Connell, Paul Rawson and Christy-Anne Stansfield**

15.15 – 15.45 **BREAK - SPONSORED BY GE WATER & PROCESS TECHNOLOGIES**

15.45 – 16.10 **Oxidative Desulphurization of Diesel Fuel (CANADA) – Michio Ikura**

16.10 – 16.35 **Asphaltenes Stability in Diluted Bitumen and Heavy Oils (CANADA/USA) – Parviz M. Rahimi, Teclemariam Alem, Zhiming Fan and Irwin Wiehe**

17.45 – 18.00 Meet in the Lobby to board buses to Zbiroh Chateau for Gala Dinner

18.00 – 23.00 **GALA DINNER AT ZBIROH CHATEAU - SPONSORED BY FUEL QUALITY SERVICES, INC.**

**Thursday 22<sup>nd</sup> October 2009  
Congress Hall A&B**

08.30 – 08.40 Announcements

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**08.40 Session 9. MICROBIOLOGICAL CONTAMINATION & BIODEGRADATION**

**Graham Hill, Session Chair**

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08.45 - 09.10 **Microbial Contamination in Diesel Fuel – Are New Problems Arising from Biodiesel Blends? (GERMANY) - Wolfgang Siegert**

- 09.10 – 09.35 **Biocontamination Diversity in JP-8 and Jet-A (USA)** – *Marlin Vangsness, Susan Mueller, Loryn Bowen, Lisa Brown, Lori Balster, Capt. Jerrod McComb and Ellen Strobel*
- 09.35 – 10.00 **Effect of FSII on Microbial Contamination: DIEGME and TRIEGME (USA)** – *Lori Balster, Ellen Strobel, Marlin Vangsness, Loryn Bowen, Susan Mueller, Lisa Brown, Daniel Pike and Diana Dalrymple*
- 10.00 – 10.30 **BREAK**
- 10.30 – 10.55 **Effect of Ethanol on Microbial Proliferation in Unleaded Gasoline Microcosms (USA)** – *Frederick J. Passman, Russel P. Lewis, James L. Palmer and Harlan Reid*
- 10.55 – 11.20 **Strategies for Resolving Problems Caused by Microbial Growth in Terminals and Retail Sites Handling Biodiesels (UK)** – *Edward C. Hill and Graham C. Hill*
- 11.20 – 11.45 **Important Technical Considerations When Contemplating Bioluminescence as an Analytical Tool for The Determination of Microbial Contamination of Petroleum Fuels and Other Matrices (USA/GERMANY)** – *Edward W. English and Charlotte Lindhardt*
- 11.45 – 12.15 **Impact of Biodeterioration of Diesel Fuel Systems (Germany)** – *Nelly Klinksporn (Student Awardee)*
- 12.15 – 13.45 **LUNCH IN RESTAURANT PRIMÀTOR - SPONSORED BY SAYBOLT**

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**13.45 Session 10. ANALYTICAL METHODOLOGY**  
**Matt Fielder, Session Chair**

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- 13.50 – 14.15 **A Rapid Laboratory Analytical Method for Detecting Low Levels of FAME in Jet Fuel: Method Development and Preliminary Industry Study Results (UK)** – *Scott J. Hartman, Oliver Seiler, Laura Owen and Paul Spitteler*
- 14.15 – 14.40 **The Development and Use of Flow Analysis by FTIR Spectroscopy in a Rapid Screening Test Method for Measuring Traces of Fatty Acid Methyl Esters in Aviation Turbine Fuels (UK)** – *Paul Spitteler, Rob Shaw, Mike Sherratt, and Scott Hartman*
- 14.40 – 15.05 **BREAK**
- 15.05 – 15.30 **Advances in Fluorescence Evaluation of Thermal Stability (USA)** – *Nigil Satish Jeyashekar and George R. Wilson, III*
- 15.30 – 15.55 **Further Developments in the Measurement of Liquid Phase H<sub>2</sub>S in Marine Fuels (UK)** – *Wanda Fabrick, Chris Roach and Mike Sherratt*

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**16.00 - 16.30 PLENARY SESSION**  
**Graham C. Hill, IASH Chairman**

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- 18.45-19.00 **MEET IN LOBBY TO BOARD TRAMS FOR TOUR OF PRAGUE & TRANSPORT TO UFLEKI BREWERY**
- 19.40 – 22.00 **CLOSING RECEPTION AT UFLEKI BREWERY - SPONSORED BY ENERGY INSTITUTE**

**TECHNICAL POSTER SESSION & EXHIBITOR RECEPTION**  
**Monday Evening, 19<sup>th</sup> October 2009**  
**Helena & Diana Rooms**  
**18.30 – 20.00**

**\*\*\* SPONSORED BY: US DEFENSE ENERGY SUPPORT CENTER \*\*\***

**Pam Serino, Session Chair**

- 1. Baker Hughes (USA/UK)**  
The Development of a Portable Instrument and Automated Data Processing Software to Predict/Control Heavy Fuel Oils Stability/Compatibility Characteristics – Neil Ryding, Corina Sandu, Huzeifa Ismail, and Sebastian Csutak
- 2. Coordinating Research Council (USA)**  
Coordinating Research Council (CRC) Overview and Program Summary – Brent K. Bailey and Jan R. Tucker (Presented by Joanna Bauldreay)
- 3. Compass Instruments Inc. (USA)**  
FALEX 400, A New Jet Fuel Thermal Oxidation Tester, ASTM D 3241 – Jim Hepp
- 4. Dow Europe GmbH, Switzerland**  
An Evaluation of Biocides to Control Microbial Contamination of Hydrocarbon Fuels, Including Biofuels and Their Blends – Phil Keene
- 5. Duquesne University / EMS Energy Institute (USA)**  
Could Jet Fuel Thermal Oxidative Degradation be at Least Partially Responsible for a Recent Crash? A Proposed Hypothesis & Experimental Plan to Test this Hypothesis - Bruce Beaver and Chris Kabana
- 6. Fuel Quality Services, Inc. / Merck KGaA (USA/GERMANY)**  
Technical Issues to Consider When Evaluating Bioluminescence as an Analytical Tool – Edward English and Charlotte Lindhardt
- 7. Southwest Research Institute (USA) – Presented by Steve Westbrook**  
Diesel Fuel Contamination – Analysis of Some Unusual New Contaminants
- 8. Phyre Technologies, Inc. (USA)**  
Enhanced Thermal Stability & Storage of High Viscosity Fuels and Oils Using Phyre's Oil De-Oxygenation System (PODS) – Steven Walker, Wesley Jung, Stuart Robertson and Santosh Limaye
- 9. Southwest Research Institute (USA)**  
Measured Physical Chemical Properties of Model Components – Kavitha Moorthy, James E. Johnson, and George R. Wilson, III
- 10. University of Dayton Research Institute (USA)**  
Microbial Growth on Selected Aircraft Materials – Marlin Vangness, Lisa Brown, Loryn Bowen, Susan Mueller, Lori Balster, and Ellen Strobel
- 11. University of Dayton Research Institute (USA)**  
Variation of JP-8 Properties in CONUS and Potential Implications During Blending with Synthetic Paraffinic Kerosene (SPK) – Erin Shafer, Richard Striebich, Matthew J. DeWitt, Timothy Edwards and William Harrison
- 12. US Air Force/UDRI (USA)**  
Emissions Evaluations of Diesel Engines Operated with JP-8 and a 50/50 Fischer-Tropsch/JP-8 Blend – Edwin Corporan, Matthew J. DeWitt and Christopher D. Klingshirn
- 13. US Naval Research Laboratory / Nova Research, Inc. (USA)**  
Next-Generation Fuel Quality Surveillance: The Navy Fuel Property Monitor - Mark H. Hammond, Robert E. Morris, Kevin Johnson, Jeffrey A. Cramer, Braden Giordano, Christopher Von Bargen, and Susan L. Rose-Pehrsson
- 14. Vic Hughes Associates Limited/Particle Solutions Limited (UK)**  
Assessment of Methods for the Minimisation of Interference from Suspended Water Droplets in Jet Fuel During Particle Counting – Vic Hughes and Paula Zard

## EXHIBITORS

### CYBER CAFÉ SPONSORED BY AIR BP

Air BP – Presented by Steve Anderson

D-2 Incorporated – Presented by Dean Fougere

ECHA Microbiology Ltd. – Presented by Derek Collins & Graham Hill

Energy Institute – Presented by Gareth Parkes & Andrew Sykes

ExxonMobil Aviation – Presented by Dennis Hoskin & Anthony Kitson-Smith

Facet International – *Presented by Camilo Vazquez Perez*

Fuel Quality Services, Inc. – Presented by Howard & Debra Chesneau, Angie Coley & Ed English

Intertek OCA – Presented by Brent Mackin, Wanda Frabiek & Craig Stone

KAM CONTROLS, INC. – Presented by Kam Mohajer & Vicky Garza

Lanxess Deutschland GmbH – Presented by Axel Ingendoh & Milan Kozeny

PAC – Presented by Scott Berkhou, Larry Spino & Bertram Derr

PAMAS GmbH – Presented by Ed Bielo & Michael Schumacher

Parker Hannifin - Presented by Matt Fielder & Craig Saunders-Johnson

Saybolt – Presented by Ron Bennink

Seta Analytics – Presented by Mike Sherratt

Supreme Fuels Trading FZE – Presented by Lisa de Vries, Gilbert Kearns & Stuart Ralph

University of Dayton Research Institute – Presented by Steve Zabarnick

US Defense Energy Support Center – Presented by Pam Serino & Dan Baniszewski

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