Preliminary Program

FUEL SPECIFICATIONS AND THE IMPACT OF DISTRIBUTION AND NEW PRODUCTION TECHNOLOGIES

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Sheraton Parco de' Medici – Building 1

Technical Sessions located in Sala Medici

Technical Posters & Exhibits located in Sala Visconti

Speaker Ready Room located in Sala Scaligeri

Registration from 07.30 – 17.00 Daily

SUNDAY, 10 SEPTEMBER 2017

10.00 – 12.00	Board of Directors Meeting in Sala Pepoli (Members & Invited Guests)
14.00 - 17.00	Registration in Lobby of Building 1 – Continues throughout the week in Sala Medici Foyer
12.00 - 17.00	Set up Posters and Exhibits in Sala Visconti

19:00–21:30	**OPENING RECEPTION POOLSIDE AT THE SHERATON PARCO de' MEDICI, BUILDING 1** **Sponsored by Southwest Research Institute**

MONDAY, 11 SEPTEMBER 2017

07.00 – 08.30 **Breakfast in Savoia Restaurant included in hotel group rate**
08.30 – 08.45 **Welcome and Introduction by Pam Serino, Conference Chairperson**

08:45 – 09:15	**KEYNOTE ADDRESS: How European Standards Guarantee Fuel Quality, Vehicle Functioning and Emissions - *Ortwin Costenoble, CEN Fuels Standardization***
09:15 – 09:40	**Chevron Award of Excellence in Honor of John Bacha paper:** **Phenols and Aromatic Methyl Ethers from Biomass Pyrolysis Oil: Implications for Jet Fuel Stability** – *Mariam Ajam, Carl L. Viljoen, Chris Woolard, and Eric van Steen*
09.40	**SESSION 1: FUEL PRODUCTION AND QUALITY CONTROL** **Joanna Bauldreay, Session Chair**
09:45 - 10:10	**Application Progress of Residue Hydroprocessing in China** - *Jiankun Liu*
10:10 –10:35	**Stability Characterization of Residual Hydroracking Effluents by the S-value Method (ASTM D7157) Effect of the Analytical Parameters** – *Jérémie Barbier, Andre Diot, Matthieu Dreillard, and Joao Marques*
10:35 –10:55	**BREAK**
10:55 –11:20	**Factors Affecting Filterability of Middle Distillate Fuels** -*David A Daniels, Andrew McKnight, Arthur Fogiel, Alex Belly, and Christopher LeMieux*
11:20 –11:45	**A Theroretical and Full Scale Investigation into the Use of Tank Settling to Remove Water and Solid Contaminants From Aviation Fuel** -*Alisdair Clark, Steve D. Anderson, Andrew Glendinning, and Gary Norris*

11:45	**SESSION 2: MARINE DIESEL FUELS** **Zhenning Gu, Session Chair**
11:50 – 12:15	**Effects of Aromatic Type and Concentration on Properties and Stability of Alternative Marine Diesel** - *Jinxia Fu and Scott Q. Turn*
12:15 – 12:40	**The Impact of Changing Regulation on Marine Fuel Quality and the Role and Effectiveness of Fuel Additives** -*Simon Mulqueen and Michael Banning*
12:40 – 14:00	**LUNCH IN SAVOIA RESTAURANT – Sponsored By Falex**
14:00	**SESSION 3: FUEL CONTAMINATION** **Rick Kamin, Session Chair**
14:00 –14:25	**Impact of Water Bottoms on Aviation Turbine Fuel Chloride Content** *– Paul P. Wells*
14:25 –14:50	**Application of Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry to the Characterization of High Molecular Weight Fuel Contaminants** *– Thomas N. Loegel, Jeffery D. Cramer, and Iwona A. Leska*
14:50 –15:00	**BREAK**
15:00 –15:25	**Quantification of Phosphate Ester-Based Hydraulic Fluid in Jet Fuel** *– Diana Gertopski Stamker, Moshe Rabaev, and Konstantin Tartakovsky*
15:25 –15:50	**Cold Filter Blocking Tendency as a Predictor for Low Temperature Operability of Diesel Fuels** – *Ian P. Mylrea, Jerry Burton, and David Swan*
15:50 –16:15	**A Users Perspective and Experience with Particle Counting in Liquid Fuels** *– Joel A. Schmitigal*
18:00 –19:30	**POSTER SESSION & EXHIBITOR RECEPTION IN SALA VISCONTI – Sponsored by UDRI**

TUESDAY, 12 SEPTEMBER 2017

07.00 – 08.00 **Breakfast in Savoia Restaurant include in hotel group rate**
08.00 – 08.15 **Announcements**

08:15	**SESSION 4: BIODIESEL AND DIESEL** **Melanie Thom, Session Chair**
08:20 – 8:45	**Storage Stability Studies and Shelf Life Determinations of Commercial Brazilian Biodiesels Stocked in Sub-tropical Conditions in Carbon Steel Containers** *– Eduardo H. de S. Cavalcanti, Adriane Zimmer, Marcos Ferrao, and Fatima Menezes Bento*
08:45 – 09:10	**Thermal and Oxidative Instability in Biodiesel Blends During Vehicle Use and Onboard Fuel Storage** – *Steven R. Westbrook*
09:10 – 09:35	**Demystifying the Role of Diesel Fuel Composition in Internal Injector Deposits with Vase** *– David Abdallah, Scott K. Berkhous, Krystal B. Wrigley, Matt I. Watkins, and Paul Lacey*

09:35– 10:00	**Degradation of Diesel in a Modern FIE System** – *Christopher Smith, Kesavan Gopalan, Christopher J. Chuck, and Christopher D. Bannister*
10:00–10:20	**BREAK**
10:20 –10:45	**Adventures in Diesel Stability: Standardizing the Quartz Crystal Microbalance Method** – *David Evans, Renee l. Webster, Paul M. Rawson, Nathan Matheson, and Christy-Anne Stansfield*
10:45 –11:10	**Carbonaceous Internal Diesel Injector Deposits: Mechanisms, Characterization, and Remediation** – *Andrew McKnight, Jim Barker, and Jacqueline Reid*
11:10	**SESSION 5: AVGAS and GASOLINE** **Anne Gandubert, Session Chair**
11:15 –11:40	**A Novel Approach for the Evaluation of the Deposit Forming Tendencies of Spark-Ignition Fuels** – *Steven R. Westbrook and George R. Wilson III*
11:40 –12:05	**Oxidation Stability of Unleaded Aviation Gasoline for General Aviation** – *Cunping Huang, Sneha Gollamudi, Jonathan Doyle and Dave Atwood*
12:05 –13:30	**LUNCH IN SAVOIA RESTAURANT - Sponsored by AD Systems**
13:30	**SESSION 6: ALTERNATIVE AVIATION FUEL** **Edwin Corporan, Session Chair**
13:35 – 14.00	**Impact of Aromatic Types and Quantities on O-Ring Polymers** *Mikeal Sicard, Jacques Ancelle, Bruno Raepsaet, and Frédéric Ser*
14:00 – 14:25	**Impact of Aromatic Content in Different Alternative Aeronautic Fuel Emissions** – D. Delhaye, *J Ancelle, M. Sicard, L. Jing, and I. K. Ortega*
14:25 – 14:50	**Evaporation Ignition of Alternative Fuels** – *O. Rouzaud, J Garraud, R. Lecourt, C. Lempereur, M. Orain, G. illac, and M. Sicard*
14:50 – 15:15	**BREAK**
15:15	**SESSION 7: MICROBIOLOGY** **Dietmar Posselt, Session Chair**
15:20 –15:45	**Use of Illumina 16S rRNA Next Generation Sequencing to Investigate Anaerobic Bacterial Community Composition in Environmental and Fuel Associated Waters** – *Giovanni Cafa, Lisa Offord, and Joan Kelley*
15:45 –16:10	**Advanced Molecular Tools for the Detection and Mitigation of Fuel Biodeterioration** – *Oscar N. Ruiz, and Thusitha S. GunaseKera*
16:10 –16:35	**Factors Effecting the Precision of Fuel Microbiology Test Methods** *-Frederick J. Passman, Joan Kelley, and Pat Whalen*
16:35 –17:00	**The Relationship Between Microbiological Contamination in Water Phase and Fuel Phase in Jet Fuel Systems and its Detection by Industry Standard Methods** *-Gareth J. Williams, and Graham C. Hill*

WEDNESDAY, 13 SEPTEMBER 2017

07.00 – 08.00 **Breakfast in Savoia Restaurant include in hotel group rate**
08.00 – 08.15 **Announcements**

08.15	**Session 8: FUEL TESTING AND TEST METHODS – Section 1** **Steve Westbrook, Session Chair**
08:20 – 08:45	**Comparison of Particulate Contamination Measurement Techniques in Distillate Fuels** – *Thomas G. Smagala, Camden Cook, Andy Ye Yuan Chen, and Krege M. Christison*
08:45 – 09:10	**Evaluation of Particle Counting as a Valid Tool to Determine the Filtration Efficiency** – *Robert Pawlik, Tom Muzik, and Lewis Wolfe*
09:10 – 09:35	**What New Methods for Evaluating D3241 Heater Tubes Deposit Thickness May Mean to the Development of New D3241 Methods** – *Michael Croudace*
09:35 – 10:00	**Novel Automated Systems for Onsite Fuel Stability and Compatibility Testing According to ASTM D4740** – *Didier Pigeon*
10:00 –10:20	**BREAK**
10:20	**SESSION 8: FUEL TESTING AND TEST METHODS – Section 2** **Amy Carico , Session Chair**
10:25 – 10:50	**FAME in Jet Fuel: A Novel Analytical Test Method Based on Laser Mid-Infrared Spectroscopy** – *Bernhard Siebenhofer, Michael Martl, and Wolfgang Ritter*
10:50 – 11:15	**Understanding Precision Issues with Single Temperature Testing by ASTM D3241** – *George R. Wilson III*
11:15 – 11:40	**Application of Chemometric Methods to Devolve Co-Eluting Peaks in GC-MS Data** – *Jeffery A. Cramer, Mark H. Hammond, and Thomas N. Loegel*
11:40 – 12:05	**Selective Isolation of Cyclic Sulfides from Jet Fuel and Their Contribution of Fuel Oxidation Rates** - *Paul Rawson, and Sylvester Abanteriba*
12:05– 13:20	**LUNCH IN SAVOIA RESTAURANT - Sponsored By Shell Aviation**
13:20	**SESSION 8: FUEL TESTING AND TEST METHODS – Section 3** **Anthony Kitson-Smith, Session Chair**
13:25 – 13:50	**Development of a New Automotive Fuel Filter Test Method Incorporation Vibration and Cyclic Flow Test Parameters** - *Gary Bessee and Larry Hollingsworth*
13:50 – 14:15	**Comparison Between SAE J1488 and ISO 16332 Diesel Fuel Water Separation Test Methods** – *Gary Bessee and Kristi Rutta*
14:15 – 14:40	**Fuel Contamination Specifications by ASTM D5452 Gravimetric , MIL-DTL-2261D Light Obscurance (JF-WA1-NP), and Laser Particle Counter ASTM D7619, Comparisons and Performance Review, Future Potentials** – *Alan J. Fougere*
18:30 **19:00-22:00**	**Meet in Hotel Lobby for Transportation to Awards Dinner at 6:15** **IASH AWARDS DINNER AT VILLA MIANI** **Sponsored by Parker Hannifin and Pratt & Whitney**

THURSDAY, 14 SEPTEMBER 2017

07.00 – 08.00 **Breakfast in Savoia Restaurant included in hotel group rate**
08.00 – 08.15 **Announcements**

08.15	**SESSION 9: FUEL PROPERTIES AND EFFECTS – Section 1** **David Abdallah, Session Chair**
08:20 – 08:45	**New Sulphur Reduction Technology as Solution to Increasingly Stringent Sulphur Regulations** *-Zhenning Gu, Ksenija Babic, Paul Biggerstaff, Don Wolfe, Jerry Weers, and Waynn Morgan*
08:45 – 09:15	**Evaluation of Aviation Fuel Property Influences on Diesel Engine Performance** *– Andy McDaniel*
09:15 – 09:40	**Pentamethyl Heptane as a Primary Reference Standard for Cetane Number** *– Indresh Mathur and Mical Renz*
09:40 – 10:05	**Design of an Onboard Aviation Fuel Deoxygenator Unit for Improvement of Fuel Thermal Stability** *– Ehsan Alborzi, Matthew Dwyer, Simon G. Blakey, and A H J M Meijer*
10:05– 10:25	**BREAK**
10:25	**SESSION 9: FUEL PROPERTIES AND EFFECTS – Section 2** **David Abdallah, Session Chair**
10:30 – 10:55	**The Content of the ISO-Paraffins in Jet Fuel and its Influences on Properties** *– Zhiping Tao*
10:55 – 11:20	**Endothermic Reactivity of Hydrocarbons Under Conditions Relevant to High Speed Flight Systems** *– Matthew DeWitt, Donald K. Phelps, Theodore Williams, Tyler Hendershott, Quinn Casselberry, Rich Striebich, Linda Shafer, Steven Zabarnick, Zachary West, and Tim Edwards*
11:20	**SESSION 10: FUEL CHEMISRTY, RESEARCH AND DEVELOPMENT – Section 1** **Matthew DeWitt, Session Chair**
11:25 – 11:50	**The Role of Hydrocarbon Composition on the Thermal Stability of Aviation Fuel** *– Matthew R. Dwyer, Simon G. Blakey, Ehsan Alborzi, and Anthony J.H.M Meijer*
11:50 – 12:15	**The Impact of Organonitrogen Compounds on the Storage Stability of Middle Distillate Fuels** *Robert E. Morris, Thomas N. Loegel, Kristina M. Meyers, Iwona W. Leska, Christopher J. Katlile, Alison E. Metz.*
12:15 – 13:25	**LUNCH IN SAVOIA RESTAURANT**
13:25	**SESSION 10: FUEL CHEMISTRY, RESEARCH AND DEVELOPMENT – Section 2** **Matthew DeWitt, Session Chair**
13:30 – 13:55	**Investigation of Thermally Unstable Aviation Turbine Fuels** **-** *Zachary West, Linda Shafer, Richard Striebich, Steve Zabarnick and Timothy Edwards*

13:55 – 14:20	**The Detailed Measurement of Fuel Heteroatoms by Element Specific Detectors and GCxGC-MS** - *Richard C. Striebich, Linda M. Shafer, Susan S. Mueller, Zachary j. West, and Steven Zabarnick*
14:20 – 14:45	**Studies of the Role of Heteroatomic Species in Jet Fuel Thermal Stability: Model Fuel Mixtures and Real Fuels -** *Steven Zabarnick, Zachary J. West, Linda M. Shafer, Susan S. Mueller, and Richard C. Striebich*
14:45 – 15:05	**BREAK**
15:05	**SESSION 11: FUEL CHEMISTRY, RESEARCH AND DEVELOPMENT – Section 3** **Robert Morris, Session Chair**
15:10 – 15:35	**Unraveling the Detailed Composition of Oxidized Jet Fuels: An Original Detailed Mechanism of Toluene Autoxidation** -*Arij Ben Amara, Detlev Conrad Mielczarek, Mikael Matrat, and Laurie Starck*
15:35 – 16:00	**Wall Roughness Effects on Deposition of Thermally Stressed Aviation Fuel** -*Phil Gadsby and Simon G. Blakey*
16:00 – 16:25	**Gaining a Fundamental Understanding of Fuel Performance Through Advanced Chemical Composition Measurements** -*Robert E. Synovec, Chris E. Freye, and Matthew C. Billingsley*
16:25 – 16:55	**PLENARY SESSION: Matt Fielder** **IASH Chairman**
19:00–21:00	**CLOSING RECEPTION ON RESTAURANT TERRACE** **Sponsored by Air BP**

SALA VISCONTI
TECHNICAL POSTER SESSION & EXHIBITOR RECEPTION
MONDAY EVENING, 11 SEPTEMBER 2017
18.30 – 20.00

Steven Zabarnick, Session Chair

1. **AC2T Research GmbH (GERMANY) – *Marcella Frauscher***
   Identification and Quantification of Oxidation Products of Fuel Components Analyzed by Mass Spectrometry

2. **Air Force Institute of Technology (POLAND) – *Jaroslaw Sarnecki***
   Laboratory Test Rig with Miniature Turbojet Engine as a Tool for Tests of Alternative Aviation Fuels

3. **BASF (GERMANY) - *Mark Parsons***
   Thermal Stability Additive (BASF - Rewriting)

4. **Chimec S.p.A. (ITALY) – *Milena Mantarro***
   Scale Down of Dewaxing Process

5. **Chimec S.p.A. (ITALY) – *Milena Mantarro***
   Investigation of the Compatibility Between HFO and LSFO in Maritime Industry and the Effect of Stabilizing Additives Using Fuel Stability Analyzer (ASTM D7157)

6. **Chimec S.p.A. (ITALY) - *Silvia Bozzi***
   Microbiological Contamination of Fuel -Treatment Management from Storage Tanks to Waste Water System and on Filling Station

7. **Chimec S.p.A. (ITALY) – *Silvia Bozzi***
   Issues with New Raw Materials as Feedstocks in Biofuel

8. **Conidia Bioscience Ltd. (UK) – *Joan Kelley***
   Microbial Contamination in Road Vehicle Diesel – A Survey of Gas Station Underground Tanks in Two U.S. States.

9. **D-2 Inc. (USA) - *Alan Fougere***
   Comparison of ASTM Method D8073-16 (Small Scale Water Separation Method) With Real Filter Coalescing Performance by Single Element Test Stand Water Mapping

10. **Defence Science and Technology Group (AUSTRALIA) – *Paul Rawson***
    Identification of Oxidized Compounds in Aviation Fuels Using Nafion Fibre Solid Phase Microextraction

11. **Defence Science and Technology Group (AUSTRALIA) – *David Evans***
    Determination of Ignition Delay and Lean Blowout Limits of Narrow Distillation Profile Alternative Fuels Using a Small Glass Turbine

12. **ExxonMobil Research & Engineering (USA) – *David Abdallah***
    Single JFTOT Tests for Understanding the Breakpoint of a Fuel

13. **IFP Energies Nouvelles (FRANCE) - *Laurie Starck***
    Modeling Tools to Predict Properties of Jet Fuels (Conventional and Alternative)

14. **Israel Air Force (ISRAEL) – *Moshe Rabaev***
    Preparation, Stability and Properties of Water-Emulsified Jet Fuel at Low Surfactant Content

15. **National Technical University of Athens (GREECE) – *Chrysovalanti Tsesmeli***
    A Study on the Stability of Marine Distillate Fuel in the Presence of FAME and HVO

16. **Southwest Research Institute (USA) – *Gary Bessee***
    Update on EI 1535 Water Mapping Test Method

17. **Stanhope-Seta (UK) - *Paul Spitteler***
    Phenol in Aviation Fuel Monitoring on IP 583/ASTM D7797 Equipment

18. **University of Dayton Research Institute (USA) - *Marlin Vangsness***
    Microbial Contamination Test Methods in Bulk Fuel Storage

19. **US Air Force Research Laboratory (USA) – *Edwin Corporan***
    Fuel Composition-to-Performance Studies at the United States Air Force Research Laboratory's Fuels and Energy Branch

20. **U.S. Air Force Research Laboratory (USA) – *Matt Billingsley***
    Combustion Testing of Candidate Rocket Fuels: Overcoming Specification Challenges Through Subscale Evaluation

21. **U.S. Naval Research Laboratory (USA) - *Kristina Myers***
    Assessment of the Role of Copper Contamination on Diesel Fuel Storage Stability

22. **VUV Analytics (USA) – *Dan Wispinski***
    Introducing ASTM Method D8071 for PIONA Compound Analysis by GC-VUV

EXHIBITORS

AD Systems

- Presented by Didier Pigeon

Air BP

- Presented by Steve Anderson and Alisdair Clark

CHIMEC S.p.A.

- Presented by Silvia Bozzi, Matteo Bascelli, and Stefano Cacciatori

ECHA Microbiology Ltd.

- Presented by Graham Hill, Mike Haywood and Gareth Williams

FALEX Corporation

- Presented by Michael Croudace

Parker Hannifin

- Presented by Matt Fielder and Shaun Skilton

Southwest Research Institute

- Presented by Gary Bessee, Steve Westbrook & George Wilson

Stanhope-Seta

- Presented by Martin Verity and Paul Spitteler

University of Dayton Research Institute

- Presented by Steve Zabarnick & Matt DeWitt