Conference program
All times are given for the BST time zone (UTC+1)

4th of April

19:00-21:00 Informal reception (St. Catharine’s College)

5th of April

09:00 Welcome address

Session 1
09:30 Keynote
Recyclable metal fuels as future zero-carbon energy carrier
Fabien Halter (ICARE – Orléans, FR)

10:15 Contributed talks (1/2)
Reactive molecular dynamics investigation of the oxidation of iron-based nanofuel for next generation low-carbon engines
Kritikos Efstratios, Giusti Andrea

A Lagrangian framework for the numerical simulation of aluminum particle combustion
Gosset Antoine, Courtaud Sébastien, Selle Laurent

10:45 Coffee Break & Poster session

11:05 Contributed talks (2/2)
Iron as a fuel - a numerical study on the propagation of iron dust flames
Ravi Aravind, Goey Philip, Oijen Jeroen

Towards full understanding of single iron particle combustion
Thijs Leon, Van Gool Toos, Ramaekers Giel, Van Oijen Jeroen, De Goey Philip

The utilisation of Fe₂O₃, CuO and SrFeOₓ-δ oxygen carriers in chemical looping combustion of biomass char
Kwong Kenny, Gebers Joseph, Harrison Alexander, Marek Ewa

Modeling Effects of Liquid Droplets on Premixed Laminar Acetone Flames
Ni Shiyao, Hochgreb Simone

12:05 Lunch break & Poster session

Session 2
13:35 Keynote
Process intensification of CO₂ capture and CO₂ utilization
Kevin Van Geem (Gent University)

14:20  Contributed talks
Numerical Investigation of Heavy Duty Diesel Engine powered by Syngas from Waste Gasification
Vashishtha Ashish, Mohamed Ahmed Abd El-Sabor, Cunha Neves Adriana, Casey Brian, Mitchell Kieran, Connolly David, Shanley Captain Aoife, Monaghan Rory F.d.

Numerical Validation and Investigation of Fuel-Lean Premixed Catalytic Hydrogen/Air Flame Under Laminar Condition
Mondal Md Nur Alam, Paul Manosh, Karimi Nader, Jackson David

Experimental investigation of ignition delays in RCM for lean H₂/air mixtures under ICE conditions
Villenave Nicolas, Bréquigny Pierre, Foucher Fabrice

Impact of Hydrogen on Soot Formation in Hydrocarbon Diffusion Flames
Chen Chaoxu, Daly Christos, Hardalupas Yannis, Taylor Alex

Stirred reactor calculations of NOx emission from hydrogen gas turbine combustors
Gkantonas Savvas, De Oliveira Pedro M., Mastorakos Epaminondas

Interplay between NOx emissions and flame stabilization in a dual swirl H₂/air burner
Marragou Sylvain, Magnes Hervé, Aniello Andrea, Selle Laurent, Poinot Thierry, Schuller Thierry

Large eddy simulation of swirling technically-premixed H₂-Air flame with accurate NOx prediction
Capurso Tommaso, Laera Davide, Riber Eléonore, Cuenot Benoit

16:05  Coffee Break & Poster session

Session 3

16:25  Keynote
Assessing and maximising sustainability trade-offs of bioenergy systems
Mirjam Röder (Aston University)

17:10  Contributed talks
Diffusion-Based Implementation Of The Kernel Smoothing Method Used In The Eulerian-Lagrangian Simulations Of The Biomass Combustion
Zhang Jingyuan, Li Tian, Løvås Terese

Gaz and particle emissions of a domestic boiler fed with wood, miscanthus and straw pellet
Martinez Angel, Lacour Corine, Coppalle Alexis, Yon Jérôme

Pyrolysis kinetics of hydrochars derived from agricultural residues using thermogravimetric analysis
Semaan Jean-Noël, Belandria Veronica, Sangaré Diakaridia, Gokalp Iskender, Bostyn Stéphane

Exhaust recycling as a CO₂ utilisation strategy in integrated biomass gasification power cycles
Greencorn Michael, Jackson David, Hargraves Justin, Datta Souvik, Paul Manosh

18:10  Adjourn

19:00  Conference dinner
6th of April

Session 4

09:00  Keynote
Ammonia for Net Zero Combustion
Agustin Valera-Medina (Cardiff University)

09:45  Contributed talks (1/2)
Turbulent Flame Speed Correlations for Pure Ammonia flames and Blends with Methane or Hydrogen
Zitouni Seif, Bréquigny Pierre, Mouniam-Rousselle Christine

Uncertainty Quantification of the Combustion Characteristics of NH₃/H₂ Fuel Blends
Soyler Israfil, Zhang Kai, Jiang Xi, Karimi Nader

A brief understanding of the chemiluminescence signature of premixed ammonia-air flames
Karan Alka, Dayma Guillaume, Chauveau Christian, Halter Fabien

10:30  Coffee Break & Poster session

10:50  Contributed talks (2/2)
Direct numerical simulation of a premixed turbulent ammonia/hydrogen-air flame in a slot burner configuration
Gaucherand Jessica, Coulon Victor, Xing Victor, Laera Davide, Lapeyre Corentin, Poinsot Thierry, Netzer Corinna, Løvås Terese

Effect of Adding Ammonia on the Internal Nanostructure of Soot Particles Formed in Ethylene Laminar Flames
Zaher Mohammed, Dadsetan Mehran, Chu Carson, Thomson Murray

The effects of pressure fluctuations on nanosecond-pulsed discharge plasma-assisted ammonia combustion
Shahsavari Mohammad, Konnov Alexander A., Valera Medina Agustin, Jangi Mehdi

Enabling ultra-lean combustion of ammonia-hydrogen in porous media burners
Vignat Guillaume, Toro Garza Edna Rebeca, Boigné Emeric, Simitz Lauren, Akoush Bassem, Muhunthan Priyanka, Ihme Matthias

High pressure combustion of ammonia blends in an industrial model burner
Ditaranto Mario, Saanum Inge, Larfeldt Jenny, Nogenmyr Karl-Johan

12:05  Lunch break & Poster session

Session 5

13:05  Keynote:
Towards a better understanding of biofuels’ oxidation chemistry
Olivier Herbinet (LRGP-Nancy)

13:50  Contributed talks (1/2)
Diethyl ether cool flames: The impact of ozone-seeding on the reactivity
Panaget Thomas, Potier Kiliyan, Batut Sébastien, Lahccen Amaury, Fenard Yann, Pillier Laure, Vanhove Guillaume

Reaction kinetics of the consumption mechanism of Oxygenated Polycyclic Aromatic Hydrocarbons (OPAHs)
Lizardo-Huerta Juan-Carlos, Taamalli Sonia, Sood Kanika, Gasnot Laurent, Louis Florent, El Bakali Abderrahman, Tran Luc-Sy
Automatic reduction of HEFA bio-jet fuel: From detailed composition to CFD compatible reduced kinetics
Cazères Quentin, Ogier Théo, Lesaffre Thomas, Riber Eléonore, Cuenot Benédicte

The Effects of Butyl-Based Three-Component Advanced Biofuel Mixtures on Compression Ignition Engine Emissions and Performance
Wiseman Scott, Tomlin Alison, Li Hu, Ross Andrew, Dooley Stephen

14:50 Coffee Break & Poster session

Session 6

15:10 Keynote:
HyNet, demonstrating the reality of hydrogen as an energy vector
Andy Brown (Progressive Energy)

15:55 Contributed talks
Investigation on the impact of hydrogen addition in a bluff body stabilized turbulent flame using high repetition OH PLIF-PIV and multiscalar measurements by spontaneous Raman scattering
Rajamanickam Kuppuraj, Lefebvre Franck, Carole Gobin, Godard Gilles, Lacour Corine, Lecordier Bertrand, Cessou Armelle, Honoré David

Impact of ignition strategy and back pressure on bluff body flame stabilization for hydrogen enriched mixtures
Yahou Tarik, Dawson James R, Schuller Thierry

DNS analysis of triple flame speed of H₂/air flames at high inlet temperature and high pressure
Aniello Andrea, Laera Davide, Selle Laurent, Schuller Thierry, Poinset Thierry

Stabilization of low-NOx hydrogen flames on a dual swirl coaxial injector
Leroy Maxime, Mirat Clément, Renaud Antoine, Vicquelin Ronan

An efficient numerical approach for estimating the flame describing function of hydrogen jet diffusion flames
Giraudi Pietro, Morgans Aimee S., Picciani Mark

17:10 Farewell address