

Further Information

To receive further information, please send an E-mail through a completed "Interest in Registration" form via the Conference website www.tferf.org/2ndFERIA

Registration

One of the principle aims of this Conference is to encourage wide participation and to enable the cost to participants to be kept at a reasonable level.

The Conference "Early Bird" fees will be [approximately]:

£560	Fuel and Energy Research Forum Member
£285	Student of Fuel and Energy Research Forum Member
£840	Non-member
£430	Student of non-member

The Conference fee will include full attendance, refreshments, lunches, the Poster Buffet Reception and Dinner and the Conference Dinner. These "Early Bird" rates are available until **14th July 2023**. No day rates are offered. All participants are asked to cover their own accommodation and travel costs, where details of accommodation options, including the Jonas Hotel on the Edge Campus, will be publicised via the website once registration is open.

Important Dates

3rd February 2023	Closing date for abstract submission
17th March 2023	Authors informed of acceptance
14th April 2023	Provisional programme published
14th July 2023	Last date for registration by oral and poster presenters and "Early Bird" registration
31st January 2024	Closing date for paper submission to the Virtual Special Edition of "Fuel"

Conference Organising Committee

- Prof Bill Nimmo, University of Sheffield, (Conference Chairman)
- Dr David McCaffrey, McEnergy Consultancy, (Conference Finance Officer)
- Dr Abby Samson, University of Sheffield, (Conference Committee Secretary and Local Organiser)
- Dr Andrew Goddard, Freeland Horticulture Ltd., (Sponsorship Officer)
- Dr Kevin Hughes, University of Sheffield, (Main Local Organiser)
- Dr Katie Chong, Aston University, (Head of Conference Programme Group)
- Prof Ed Lester, University of Nottingham, (Conference Programme Group)
- Dr Trudy Beeley, RJM Corporation (EC) Ltd., (Conference Programme Group)
- Prof Meihong Wang, University of Sheffield, (Local Organiser)
- Dr Will Quick, Uniper Technologies Ltd., (Industrial Representative)
- Dr Bijal Gudka, Gudka Energy Consulting, (Publicity Officer and Conference Manager).

Secretariat Contact

Dr Bijal Gudka, Gudka Energy Consulting, Mob: 07813-697660, E-mai: info@tferf.org

Website

www.tferf.org/2ndFERIA

2nd FERIA

The European Conference on
Fuel and Energy Research
and its Applications



Monday 4th to Wednesday 6th September 2023

The Edge Conference Centre
University of Sheffield
Sheffield
United Kingdom



Organised by the Fuel and Energy Research Forum

www.tferf.org/2ndFERIA

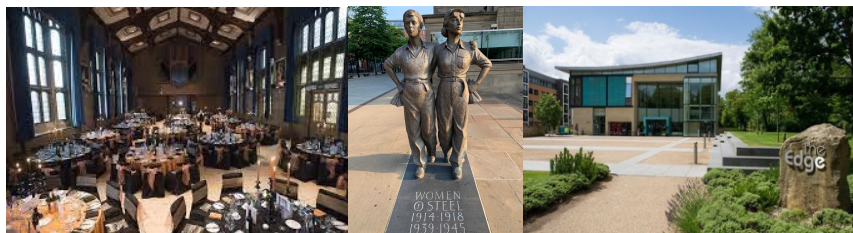
Introduction

The **Fuel and Energy Research Forum** has been created to bring together all those with interests in fuel and energy research, particularly biomass, waste and fossil fuels and to promote and integrate these interests in the UK and worldwide. These research areas are increasingly important as carbon-fuels continue to play a key role in the energy mix of today. These fuels provide a widely-distributed, secure and reliable source of energy that is relatively easy to obtain. Clean carbon-fuel technology is the order of the day, with particular attention being paid to carbon capture and storage in view of global warming and carbon dioxide emissions from carbon-based usage.

This 2nd FERIA Conference, the Successor to the ECCRIA series of Conferences, first held in 1996 at Loughborough University, builds on the success of the previous twelve ECCRIA and 1st FERIA Conferences, is to be held at the University of Sheffield.

Home to over half-a-million people, including more than 60,000 students, Sheffield is situated centrally in the UK and is England's fourth largest city. Bordering the beautiful Peak District National Park, it is a city of stunning landscapes - the greenest in Europe. There are six hills, five rivers and more park and woodland than any other UK city. In the heart of Sheffield, pedestrian shopping areas lead to public gardens and squares. Museums, galleries and theatres share these spaces alongside a great selection of bars and cafés. The city is home to several important galleries and museums which have close links with the Tate and the Victoria & Albert Museum in London. Three distinctive venues form one of the most important theatre complexes in the UK which have been named the best outside London for two years running. Sheffield can also boast the largest independent cinema outside London in the form of The Showroom. Sheffield was the UK's first National City of Sport and has a long sporting heritage including two of the oldest football club in the world, (Sheffield United and Sheffield Wednesday). It is a rich, diverse, multicultural city which is proud of its reputation for being one of the friendliest and safest major cities in the UK.

Sheffield is a particularly well-chosen location for this 2nd FERIA Conference as energy research is a core activity at the University of Sheffield. It is home to the University's Energy Research Group, including the Translational Energy Research Centre and the Pilot-scale Advanced Capture Technologies, (PACT), facilities, the Centre for Energy, Environment and Sustainability, the Headquarters of the UK Energy Research Centre, (UKCCSRC), and the International Flame Research Foundation, (IFRF), which all fit well with the theme of the Conference.



The Edge Conference Centre is located on the Endcliffe Village Campus of the University of Sheffield, about 1.5 miles west of the city centre.

Road: The city is in a central UK location with excellent road links via the M1 and M62.

Rail: Direct rail links mean that Sheffield is only 2:05 hrs from London.

Air: Sheffield has three international airports nearby, Leeds/Bradford, East Midlands and Manchester.

Bus: There are great bus and Supertram services running throughout the day and throughout the city, linking the University to all major city attractions.

Scope and Purpose

The purpose of this Conference is to bring together academic researchers and participants from industry and anyone that is interested in the applications of fuel and energy research. Papers which describe the applications of research in fuel and energy characterisation, technology development, utilisation and preparation are now invited.

Call for Abstracts

Abstracts are invited which describe current academic and industrial research into cleaner fuel and energy research on biomass, waste and fossil fuels and their applications including but not limited to :-

- **Conventional and Advanced Power Generation:** Efficiency improvements, flexible operation of power plant, innovative energy cycles, thermal processes, including enabling technologies and innovative process design for APG
- **Fuel Processes:** Gasification, pyrolysis and all other carbon-based fuel conversion processes, including issues associated with co-firing and with the combustion of biomass and waste.

including alternative NOx, SOx, particulates and trace element reduction techniques to meet more stringent emissions standards throughout the world.

- **Carbon Capture, Storage and Utilisation:** Pre and post combustion capture, transport, storage and utilisation technologies, including oxyfuel combustion, chemical looping, fuel characterisation, conversion to chemicals and fuels, plant diagnostics and post combustion capture plant emissions issues.
- **Hydrogen and Ammonia:** Production, potential use and issues, including their potential use as transport fuels, for stationary applications and emissions control from engines.
- **Industrial combustion:** Burner design, heat transfer, innovations in heat exchanger design and fowling and slagging issues.
- **Energy Storage:** Battery storage, thermal storage, mechanical storage, cold storage and integration with energy systems, including power generation processes.
- **Decarbonising Steel Production:** Carbon based fuel conversion processes including carbonisation and other metallurgical uses and fuel-derived products.
- **Fuel cells:** Advances, fuels, efficiency and utilisation
- **Biofuels for Transport:** The sustainable production and utilisation of biofuels and biogas for transport, including road, aviation and marine.
- **Biogas:** anaerobic digestion, landfill gas, production, upgrading and utilisation.
- **Heating, Ventilation and Cooling:** Efficiency innovations, energy reduction and heat pumps.
- **Integrated Renewable Energy Systems, (IRES):** Experimental and simulation studies. Integration of biomass, solar, wind, etc. for off-grid and grid connected communities and industry settings.
- **Biomass and waste:** Waste to energy, pre-treatment and processing, including torrefaction, washing, etc.
- **Fuel preparation and handling:** Biomass and waste issues associated with feedstock quality, safe storage, (fuel degradation, spontaneous combustion and other storage issues), processing, handling and feeding of these feedstocks into process systems.
- **By Products from Energy Processes:** Bottom, fly and others ashes, APC Residues, etc.
- **Case studies:** On the challenges facing the users of biomass and waste.
- **Policy and technoeconomic studies:** Legislation towards power from carbon-based fuels, government policy, legislative framework and life cycle assessment issues, including industrial de-carbonisation, both UK and International

Research students are also strongly encouraged to submit abstracts, attend and give presentations - there is a reduced Conference fee for students.

All authors are asked to submit one or more abstracts by **Friday 3rd February 2023** to the Conference Manager, Gudka Energy Consulting, at info@tferf.org. Abstracts must conform to the format specified in the website template, and must be submitted by the named presenter, (not a third party). For abstracts accepted, the named presenter/author will present the paper at the Conference either as an oral presentation or as a poster. This author must register and pay their conference fee before **Friday 14th July 2023** in order for their paper/poster to be confirmed in the programme.

Proceedings

All authors of accepted abstracts are invited to submit, by **Friday 29th September 2023** at the latest, a full paper for possible inclusion in a Virtual Special Issue to be published on the Elsevier website for the "Fuel" Journal. The papers submitted must be prepared strictly in accordance with the Guide for Authors and must be submitted electronically via <http://ees.elsevier.com/jfue/>. Authors should clearly indicate that the paper is from the **2nd FERIA Conference** for inclusion in the Virtual Special Issue of "Fuel". All full papers will be subject to the normal peer review requirements of "Fuel".

Sponsors and Exhibition Packages

Sponsors and Exhibitors are encouraged to support this well-established event. The Sponsorship packages are as follows, **which include one full Conference attendance fee**, and where full details of these packages are available on request.

£1,200	Level 1 : Organisation logo on all the Conference publications and the inclusion of the Sponsor's literature or brochure in delegate packs
£1,400	Level 2 : As Level 1 plus an exhibition stand
£1,650	Level 3 : As Level 1 plus an Exhibition Stand and a Dedicated Session.
£1,650	Level 4 : As Level 1 plus named sponsorship of one of the Conference Lunches
£2,150	Level 5 : As Level 1 plus sponsorship of Poster Buffet Dinner
£2,550	Level 6 : As Level 1 plus sponsorship of Conference Dinner
£ 500	Exhibitor package : An Exhibition Stand with one trade stand staff who will have access to daytime catering only. This package excludes access to technical sessions, evening dinners (may be bought as extras), logo and literature inclusion.

Website

www.tferf.org/2ndFERIA