



IACC2024 - Integrated Hydrogen Production with Carbon Capture and Utilisation

09-10 September 2024, University of Surrey

Organisation

International Association for Carbon Capture (IACC)

Host Organisation

Brunel University London, UK

University of Surrey, UK

Co Organisation

Universidad de Sevilla, Spain

Chair

Dr Salman Masoudi Soltani (Brunel University London, UK)

Co-Chairs

Dr Michael Short (University of Surrey, UK)

Dr Tomas Ramirez Reina (Universidad de Sevilla, Spain)



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Online Access is available:

1) TEAMS:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NGM00WVINmMtODc5Ny00ZmYxLTgwMzMtOGE3MTA1NmVkMTIj%40thread.v2/0?context=%7b%22id%22%3a%228c2b19ad-5f9c-49d4-9077-3ec3cfc52b3f%22%2c%22oid%22%3a%2240c1a25c-62aa-49cf-8d9a-2b028d8d4501%22%7d

2) KouShare live streaming:

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Dr Salman Masoudi Soltani, Brunel University
London, UK

Dr Michael Short, University of Surrey, UK

Dr Tomas Ramirez Reina, Universidad de Sevilla,
Spain

Dr Mike Gorbounov, Brunel University London, UK

Professor Chunfei Wu, Queen's University Belfast,
UK

Dr Yehsui Zhang, University of Aberdeen, UK

William (Billy) Davies, Brunel University London, UK

Dr Muhammad Asif Nawaz, University of Seville

Guillermo Torres Semperet, University of Seville

Sergio Carrasco Ruíz, University of Seville

Dr Kalliopi Kousi, University of Surrey, UK

Meshkat Dolat, University of Surrey, UK

Dr Amin Zarei, University of Surrey, UK

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Professor Sara Colussi, University of Udine

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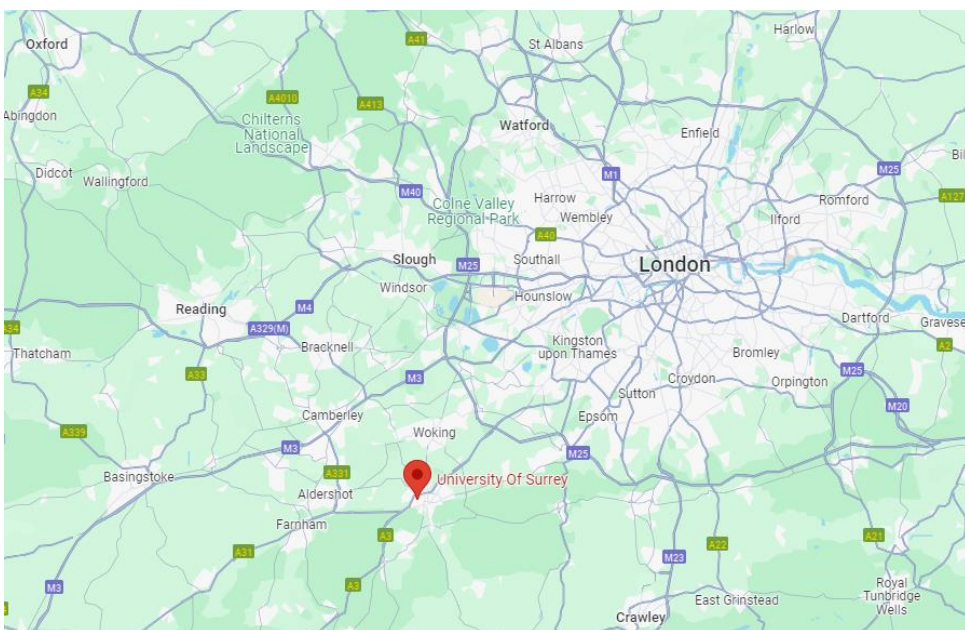
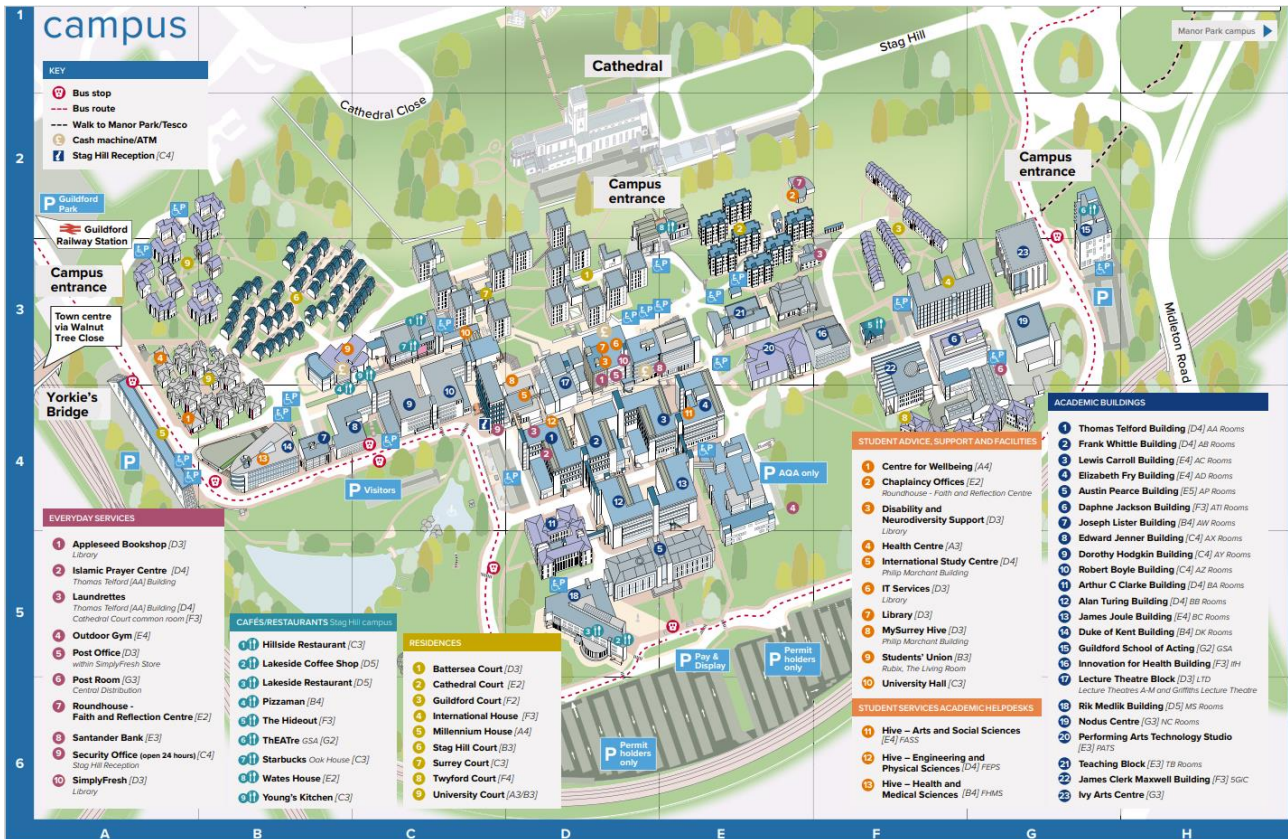
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Location, conference venue and contacts:

University of Surrey, Surrey, 09-10 September 2024

Conference venue: Lecture Theatre Block (No.17 in the following map), University of Surrey, Surrey

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Conference programme:

UK time (09 September 2024)			
09:00	Registration		
10:00	Opening & IACC-SMS awards		
10:20	Plenary 1 (Chair: Chunfei Wu)	Jin Xuan, University of Surrey	Boosting CCUS with Artificial Intelligence
11:10	Tea break		
Session chair: Michael Short, University of Surrey			
11:30	Keynote 1	Chet Biliyok, Technical Director at Petrofac	Challenges of Deploying CO ₂ Capture on Existing Industrial Facilities
12:00	Oral 1	Umaru Musa, University of Nottingham	Advances in Lignin Hydrochar Application as Adsorbent for CO ₂ capture
12:15	Oral 2	Yuanyuan Wang, Queen's University Belfast	Simple marble dust for integrated carbon capture and utilisation with simulated flue gas containing oxygen and water
12:30	Oral 3	Zhao Sun, Central South University/Cardiff University	High-Quality Hydrogen Production via Sorption-Enhanced Steam Reforming of Methanol Using Zr-Doped Cu-MgO Catalytic Sorbents
12:45	Lunch		
Session chair: Tomas R. Reina, University of Seville			
13:45	Keynote 2	Ali Nabavi, Cranfield University	Cranfield's Contributions to Enhancing Hydrogen Production through Carbon Capture and Use
14:15	Oral 4	Andrea Braga, University of Udine	Mechanochemical preparation of RuNa/Al ₂ O ₃ Dual Functional Materials for the integrated CO ₂ capture and methanation
14:30	Oral 5	Abul Hassan Ali Quddusi, Queen's University Belfast	Innovative Biogas Carbon Capture and Hydrogen Production: Enhancing Efficiency and Sustainability
14:45	Tea break		
Session chair: Chunfei Wu, Queen's University Belfast			
15:05	Keynote 3	Yeshui Zhang, University of Aberdeen	Hydrogen production from plastic waste
15:35	Oral 7	Vladislav Zurba, University of Manchester	Algebraic and machine learning models for chemical looping reforming
15:50	Oral 8	Billy Davies, Brunel University London	Cooling Requirements of Blue Hydrogen Production Process: A Comparative Assessment of Water and Air Cooling
16:05	Tea break		
Session Chair: Leila Moura, Queen's University Belfast			
16:25	Oral 9	Maryam Shourideh, Brunel University London	Impact of Safety Culture on Safety Performance Hydrogen-CCS facility



16:40	Oral 10	Abbas Rajaei, University of Bradford	Impact of impurities on hydrogen pipeline performance
16:55	Oral 11	Yuanting Qiao, Swansea University	Techno-economic Analysis and Social Analysis for Net Zero Technologies
17:10	Oral 12	Meshkat Dolat, University of Surrey	Application of Superstructure optimisation for direct air capture integrated with synthetic natural gas production
17:25	Oral 13	Dr Mehdi Hsein, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Carbon Capture and Green Hydrogen: Pioneering Sustainable Energy Solutions in Morocco
17:40	Keynote 4	Professor Jian Liu, Inner Mongolia University	Porous nanoreactor design for efficient hydroconversion of CO _x
18:30	Dinner		

UK time (10 September 2024)

9:00	Plenary 2 (Chair:Tomas Reina)	Subhasish Mukerjee, Chief Scientific Officer, Ceres Power	Ceres technology for green hydrogen and clean power
9:50	Tea break		
Session chair: Salman Masoudi Soltani, Brunel University London			
10:10	Keynote 5	Jin Shang, City University of Hong Kong	Molecular trapdoor mechanism for gas separation
10:40	Oral 14	Christopher de Leeuwe, University of Manchester	RECYCLE: REthining low Carbon hYdrogen production by Chemical Looping rEforming
10:55	Oral 15	Santiago Zapata-Boada, University of Manchester	Techno-Economic Analysis of blast furnace gas utilisation with Calcium Assisted Steel-mill Off-gas Hydrogen production (CASOH) technology
11:10	Oral 16	Yuan Zhu, Queen's University Belfast	Integrated biomass gasification with CO ₂ capture and utilisation (IGCCU)
11:25	Tea break		
Session chair: José Odriozola, University of Seville			
11:45	Keynote 6	Dr Lisa Sun, Surface Measurement System	Influence of humidity on the sorption of CO ₂ , in prototypical porous materials: insights and challenges
12:05	Oral 17	Ghadeer Alhamar, University of Manchester	Chemical looping assisted propylene production: Process assessment and comparison with benchmark
12:20	Oral 18	Majid Haghani, Brunel University London	Simulation of hydraulic fracture during fluid injection in jointed partially saturated porous media using extended finite element method
12:35	Oral	Dr Kalliopi Kousi, University of Surrey	Advanced exsolved interfaces for CO ₂ conversion to useful chemicals



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12:50	Lunch		
13:45	IACC annual general meeting (AGM)		
Session chair: Yeshui Zhang, University of Aberdeen			
14:40	Keynote 7	Leila Moura, Queen's University Belfast	Steering the discovery of liquid CO ₂ sorbents using a high-throughput gas solubility method
15:10	Oral 19	Farzaneh Ghalamzan Esfahani, Brunel University London	Multiphase Flow Modelling for CO ₂ Sequestration in Deformable Porous Media
15:25	Oral 20	Song He, Guangdong University of Technology	Thermodynamic investigation of the calcium looping process integrated with chemical looping hydrogen production for flue gas decarbonisation
15:40	Keynote 8	Dr Paula H. Blanco Sanchez, Aston University	Hydrogen Bioenergy with Carbon Capture and Storage
16:10	Awards and closing		



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