

Tentative Schedule for Onsite Participation 4 November 2021 (Thursday)		
Time	Hall A (Main Hall for Opening)	Room 2
09:00 – 09:30	Registration	
09:30 – 10:15	Hall A Welcome address by Assoc. Prof. Jiří Hlinka (Vice Dean) SPIL Opening Presentation by Prof Jiří Jaromír Klemeš (Head of SPIL)	
10:15 – 11:00	Chair: Prof Jiří Jaromír Klemeš, Secretary: Dr Yee Van Fan (Hall A) Invited Lecture 1 (Guest of Honour) Prof Petr Stehlik, Dr.h.c. (Brno University of Technology, CZ) Title: Waste-to-Energy-to-Product – Clean Ocean Project	
11:00 – 11:15	Group Photo	
11:15 – 11:45	Coffee Break (Foyer)	
11:45 – 12:30	Chair: Prof Jiří Jaromír Klemeš, Secretary: Dr Yee Van Fan (Hall A) Invited Lecture 2 (Plenary Speaker) Prof Sandro Nižetić (University of Split, Croatia) Title: A pathway to improve performance and applicability of photovoltaic technologies in energy transition	
12:30 – 13:30	Lunch	
13:30 – 14:35	Parallel Session (Hall A) Chair: Prof Jin Wang and Dr Bohong Wang <ul style="list-style-type: none"> • Dr. Hrvoje Mikulčić (Keynote Lecture – 20 minutes) SPIL2021.0108 Utilization of Renewable Power for Sustainable Green Ammonia Production • Dr. Michal Špiláček SPIL2020.0016 Shift from Natural Gas to Solar Powered Heat Pumps in the Conditions of Central Europe – a Carbon-Free Future • Prof. Jakov Baleta SPIL2020.0081 Ammonia as a Hydrogen Vector in Energy Systems • Dr. Bohong Wang SPIL2020.0064 SPIL-HX: A Software Package for Heat Integration and Equipment Design 	Parallel Session (Room 2) Chair: Dr. Abdoulmohammad Gholamzadeh Chofreh and Dr Benjamin Hung Yang Ong <ul style="list-style-type: none"> • Mr. Jaroslav Pluskal SPIL2020.0026: Waste production and treatment forecasting for EU • Dr. Xuexiu Jia SPIL2020.0066: Life Cycle Impact Assessment (LCIA) of Selected ZIF-8 Synthesis Methods • Mr. Hrvoje Stancin Prediction of the product yield from the co-pyrolysis of biomass and waste plastics and the influence of the synergistic effect • Dr. Yee Van Fan SPIL2020.0047: Forecasting Plastic Waste Generation and Interventions for Environmental Hazard Mitigation
14:35 – 15:15	Chair: Prof Jin Wang and Dr Bohong Wang (Hall A) Invited Lecture Exclusive Online (Plenary Lecture) – Video Playing <ul style="list-style-type: none"> • Prof Aoife M. Foley (Queen’s University Belfast, UK): Green Energy Systems by 2050 for a ‘net’ Zero Carbon future 	
15:15 – 15:45	Coffee Break (Foyer)	
15:45 – 17:30	Chair: Dr. Abdoulmohammad Gholamzadeh Chofreh (Hall A) Invited Lecture Exclusive Online (Guest of Honour and Plenary Lecture) – Video Playing <ul style="list-style-type: none"> • Prof Ignacio E. Grossmann (Carnegie Mellon University, US): Optimization of Power Systems Infrastructure Planning with High Renewables Penetration • Prof Andre Bardow (ETH Zurich, Switzerland): System Engineering Makes the Carbon Go Round – From Molecular Design to Net-zero Plastics • Prof Fengqi You (Cornell University, US): Can Renewable Generation, Energy Storage and Energy Efficient Technologies Enable Carbon-Neutral Energy Transition? The Case of Cornell University Campus and New York State 	
18:00 – 20:00	Invited Dinner (By invitation)	

Tentative Schedule for Onsite Participation 5 November 2021 (Friday)		
Time	Hall A/ Room 1	Room 6
08:45 – 09:00	Registration	
09:00 – 09:45	Chair: doc. Ing. Dr. habil. Petar Sabev Varbanov, Secretary: Dr Yee Van Fan (Hall A)	
	Invited Lecture 3 (Guest of Honour) Prof Kravanja Zdravko Title: Synthesis of Sustainable Regenerative Systems - from Concepts to Applications	
09:45 – 10:30	Chair: Prof Jiří Jaromír Klemeš, Secretary: Dr Yee Van Fan (Hall A)	
	Invited Lecture 4 (Plenary Lecture) Prof Paweł Ocloń (Cracow University of Technology, Poland) Title: Modeling of Underground Thermal Energy Storage unit coupled with sun-tracked PVT and solar collectors	
10:30 – 11:00	Coffee break	
11:00 – 11:45	Chair: Prof Sandro Nižetić, Secretary: doc. Ing. Dr. habil. Petar Sabev Varbanov (Hall A)	
	Invited Lecture 5 (Guest of Honour) Prof Dimitrios Gerogiorgis (The University of Edinburgh, UK) Title: Sustainability via Optimisation in Pharmaceutical and Food & Drink Manufacturing	
11:45 – 12:30	Chair: Prof Jiří Jaromír Klemeš, Secretary: Dr Yee Van Fan (Hall A)	
	Invited Lecture 6 (Guest of Honour) Prof Ferenc Friedler (Széchenyi István University, HU) Title: Process Design: Integration vs Resilience	
12:30 – 13:30	Lunch	
13:30 – 14:45	Parallel Session (Room 1) Chair: Dr Xuexiu Jia <ul style="list-style-type: none"> • Prof Farooq Sher (Keynote Lecture – 20 minutes) Climate Change, Carbon Reduction Drivers and Energy Trilemma • Mr. Ivan Eryganov SPIL2020.0049 Cooperative Waste Treatment Cost Reduction Game • Mr. Hon Huin Chin SPIL2020.0046 Machine Learning and Process Integration: A Data-driven Material Pinch Analysis framework • Dr. Sing Yong Teng SPIL2021.0098 Chemical Quality Prediction by Inversing Dynamic PLS-MARS: Balancing Interpretability and Accuracy 	Parallel Session: (Room 6) Chair: Dr Bohong Wang <ul style="list-style-type: none"> • Dr. Abdoulmohammad Gholamzadeh Chofreh SPIL2020.0048 Blockchain technology for agricultural supply chains during the COVID-19 pandemic: Benefits and solutions • Ms. Limei Gai SPIL2020.0083 Mass Integration Considering Multiple-level Fresh Resources and Intermediate Headers • Prof. Jin Wang SPIL2020.0094 Thermal analysis of nanofluids filled in a heat exchanger • Dr. Petar Sabev Varbanov SPIL2020.0062 Structural Features and Strategic Reasoning of the Need for Smart Symbiosis Networks
14:45 – 15:00	Coffee Break (Foyer near to Room 1)	
15:00 – 16:00	SPIL International Scientific Board Meeting (By invitation) – (Room 5)	
15:00 – 17:00	Chair: Dr Xuexiu Jia and Dr Bohong Wang (Room 1)	
	Invited Lecture Exclusive Online (Guest of Honour) – Video Playing <ul style="list-style-type: none"> • Prof Iqbal M Mujtaba (University of Bradford, UK): Water – The Global Challenge and Everybody's Business: Social & Technological Perspective • Prof Robin Smith, (The University of Manchester, UK): Process Integration – Current Perspective • Prof Qiuwang Wang (Xi'an Jiaotong University, CN): Fundamentals and Technologies of Waste Heat Recovery from High Temperature Solid Granules 	
17:00 – 17:15	Closing Presentation (Onsite) by Prof Jiří Jaromír Klemeš (Room 1)	
<i>All the presentations will be available at the conference online platform for discussion from 4 – 12 November 2021 The official closing and award ceremony video will be uploaded by 10 November 2021 (Friday)</i>		

Remark: Keynote Lecture Exclusive Online (Virtual Conference Platform)	
Keynote 1	Saif Kazi, Ishanki De Mel, Lorenz Biegler, Michael Short*
Dr Michael Short	Shift from Natural Gas to Solar Powered Heat Pumps in the Conditions of Central Europe – a Carbon-Free Future
Keynote 2	Mohd Arif Misrol, Sharifah Rafidah Wan Alwi*, Jeng Shiun Lim, Zainuddin Abdul Manan
Prof. Sharifah Rafidah Wan Alwi	Optimisation of Eco-Industrial Park for Water, Waste, and Energy Nexus
Keynote 3	Ting Ma*
Prof Ma Ting	Study on compact high temperature heat exchanger used for advanced energy and propulsion systems
Keynote 4	Raymond R. Tan*, Santanu Bandyopadhyay, Dominic Foo
Prof Raymond Tan	Graphical Method for Optimizing Peer-to-Peer Carbon Trading
Keynote 5	José Antonio Luceño, Ester De La Fuente, Mariano Martín*
Prof Mariano Martin	Optimal design of solar receivers in CSP plants: effects of facility location
Keynote 6	Monika Bakošová*, Anna Vasičkaninová
Prof Monika Bakosova	Neural Network-based Innovative Control of a Fermentation Process
Keynote 7	Peng Jiang*, Yee Van Fan, Jiří Jaromír Klemesš
Dr Jiang Peng	Digitalised Waste Management via Big Data and Social Media Analysis
Keynote 8	Juan Ramón Lizárraga-Morazán, Martín Picón Núñez*
Prof Martin Picon Nunez	The Sizing and Operation of Low Temperature Solar Thermal Systems
Keynote 9	Chew Tin Lee, Yee Van Fan, Cassandra Bong, Jiří Jaromír Klemesš, Pei Ying Ong
Prof Lee Chew Tin	Food Waste Recycling: the Bottlenecks and Socioeconomic Potentials

Remark: Keynote Lecture (Onsite)	
Keynote 1	Farooq Sher
Prof Farooq Sher	Climate Change, Carbon Reduction Drivers and Energy Trilemma
Keynote 2	Hrvoje Mikulčić, Luka Perković, Boris Brigljević, Xuebin Wang, Hankwon Lim
Dr Hrvoje Mikulčić	Utilization of Renewable Power for Sustainable Green Ammonia Production

Hotel International Brno (BEST WESTERN PREMIER)

