

		Deliverer	Time	Confirmed	Presenter's Bio	Summary of the presentation	Link to presentation
Topics of training sessions/workshops T2:							
Project:	Renewable systems engineering for waste valorisation II						
T2:	Process integration and industrial symbiosis (application to future biorefineries as part of existing industrial clusters, visit to industrial clusters);						
Time slots:							
T2:	December 13-15: hybrid online and F2F						
Available topics:							
No/traing slot:	Topic	Planned/proposed deliverer	Time slot	Confirmation state			

1/T2 :	Advances in Industrial Symbiosis process	Nikolaos Trokanas	T2: Dec 13 @ 9 am	Confirmed	<p>Nikolaos (Nikos) Trokanas is a researcher, ontologist and academic. He begun his academic career with research on enabling technologies for Industrial Symbiosis. He continued to work on digital transformation for sustainability and circular economy. After spending a few years in academia, he pivoted to the Tech industry and is currently a Lead Ontologist ofr Upwork Inc. He is still involved in research projects as a Post-Doc Researcher in NTUA, Greece and an Associate Lecturer at UoS.</p>	<p>We will look into Industrial Symbiosis applications, barriers to success and how digital technologies can be leveraged to overcome some of the barriers. The goal of this session is to leave the audience with i) an understanding of how technology can help promote Industrial Symbiosis and similar paradigms, ii) an understanding of main pitfalls and iii) an appetite to solve these problems.</p>	<p>https://surrey-ac.zoom.us/rec/share/Wfc9BFLVRTJlnGfelRMmzBK_wOv1VGud3WEPGbsr_N00ytpD-kUJ4u5spqHir1j.whFLoJLeyCdJue70</p>
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2/T2	A game-theoretical approach for the analysis of waste treatment and circular economy	Antonis Kokossis	T2: Dec 13 @ 10 am	Confirmed	<p>Dr. Kokossis, FIChemE, FIEE, FRSA, and FIET, is Professor of Process Systems Engineering at the National Technical University of Athens. He is a Chartered Engineer with IChemE (UK). He holds a Diploma in Chemical Engineering from NTUA and a PhD from Princeton University. Prior to NTUA, he worked for 17 years in UK. He is now the co-director of the National Technology Platform for Sustainable Chemistry, a National Representative of Directorate I (Climate Change & Environment), Affiliate of IEA Bioenergy and EERA Bioenergy, and the Greek Delegate of the</p>	<p>Biorefinery processes are challenged to make effective use of commercial flowsheeting software. Challenges include the lack of property data, complexity of raw materials, and emerging non-conventional processes and technologies. Surrogate models could assist by combining data-based models (by means of surrogate models) with conventional models available from flowsheeting vendors. The challenge would be to translate experimental data into property and</p>	
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					<p>Computer Aided Process Engineering (CAPE) group of EFCE. His expertise includes process systems design, modelling, process integration, and optimization. He published extensively and has consulted with the process industry (UOP, Bayer, Mitsubishi, Eastman, MW Kellogg, BP Oil, Unilever) and, more recently, with biorefineries and smaller companies on renewables.</p>	<p>process parameters compatible with models used by commercial software for which a game theory is applied.</p>	
3/T2	Biorefining modelling - model integration	F Cecelja	T2: Dec 13 @ 12 am	Confirmed	<p>Franjo Cecelja from the University of Surrey is currently the Head of Chemical and Process Engineering Department and coordinating several research project. The main area of expertise are the Process Optimisation</p>	<p>This paper proposes a knowledge based decision support tool for biorefining which: i) Coordinates operation of biorefining repositories of process and</p>	<p>https://surrey-ac.zoom.us/rec/share/RKwX79jFbCslpiwNG2l2a3FpelOriyfg2F-ceXS50n52nsL81GoGyVXZc_cmQuFW.allUyhRb11Z6lbQS</p>

					and Application of Artificial Intelligence.	feedstock models and datasets, ii) Supports model and data integration used for for process synthesis and design, and iii) Enables screening opportunities and integration of concomitant networks based on technological capability and resource availability for targeted products.	
4/T1	Bio-processes - Surrey experience	Jhuma Sadhukan	T2: Dec 13 @ 2 pm	Confirmed	A Fellow of the Institution of Chemical Engineers (FIChemE), Chartered Engineer (CEng) and Chartered Scientist (CSci), Jhuma Sadhukan is a Professor of Sustainability, Chemical, Energy and Environmental	Professor Jhuma Sadhukan of the University of Surrey, UK, will discuss the various stages of biorefinery designs from conceptualisation through process integration to whole system	

					<p>Engineering at the University of Surrey, UK. She has extensive industrial and academic experience. She is a specialist in interdisciplinary systems research, including life cycle assessment, techno-economic assessment and process systems engineering. She has published the only authored globally leading textbook on biorefineries, <i>Biorefineries and Chemical Processes: Design, Integration and Sustainability Analysis</i>.</p>	<p>sustainable development. By attending the session, the audience will gain insights into integrated biorefinery configurations co-producing chemicals, materials, biofuel and energy (from high-value to high-volume products), from bio-based unavoidable waste and residues and methodologies to systematically design and develop biorefineries for sustainability.</p>	
5/T2	Round table discussion	F Cecelja	T2: Dec 13 @ 3 pm	Confirmed	Franjo Cecelja FI		

6/T2	Wastewater processing: sonication approach	Madeleine Bussemaker	T2: Dec 13 @ 4 pm	Confirmed	<p>Madeleine completed her PhD at The University of Western Australia's Centre for Energy focusing on the use of ultrasound for the pretreatment of lignocellulosic biomass for biorefinery applications (2013). As part of her PhD, Madeleine spent some time at Beijing Forestry University and at Qingdao Institute of Bioenergy and Bioprocess Technology, (QIBEBT) where she worked on biomass pretreatment and characterisation. Madeleine moved to Surrey in 2013 where she was involved with biorefinery supply chain optimisation, based on a techno-economic assessment</p>	<p>Ultrasonic degradation of per- and polyfluoroalkyl substances: Remediation of impacted waters using ultrasound</p>	
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				<p>of a novel treatment of lignocellulose. Since moving to Surrey Madeleine was appointed as a lecturer (promoted to senior lecturer) and is currently involved in projects on water/environmental remediation (focussing on per- and poly-fluoroalkyl substances, PFAS), sustainable hair dyes, sustainable supply chains, parametric studies on sonochemical effects, waste/biomass processing and classification, and ultrasonic effects in biological systems. Madeleine also spent time in industry at Arcadis during 2018-19 through the Royal Academy of</p>		
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					Engineering Industrial Fellowship.		
7/T2	Reserved time		T2: Dec 14 (all day)				

Εικόνα 1