

## Technological Systems, Sustainability and Safety (TS3)

Location: Sorbonne Université, Campus Pierre et Marie Curie, 4, place Jussieu, Paris

[Tour 44 - Room 108](#)

Tuesday, February 6 <sup>th</sup> 2024	
8.45 – 9.25	<b>Welcome and coffee</b>
9.25 – 09.45	<b>Opening</b> <i>F. Lamarque (UTC), F. Yalaoui (UTT), V. Hilaire (UTBM), J. Favergeon (I. MSTD)</i>
09.45 – 10.25	<b>How complete is our understanding of the H2 value chain ?</b> <i>Patrick Hendrick, Professor at ULB (Université Libre de Bruxelles) and KU Leuven</i>
<b>10.25 – 12.10</b>	<b>Session 1 - Sustainable resources and Bioeconomy</b>
10.25 – 10.40	A Weighted Sum Method for Evaluating Environmental Responsibility in the Supply Chain of the Textile and Clothing Industry - <i>Mezatio Eric Papain et al.</i>
10.40 – 10.55	Context-Aware Sustainable Design: Knowledge Graph-Based Methodology for Proactive Circular Disassembly of Smart Products – <i>Marconnet Bertrand et al.</i>
10.55 – 11.10	Toward a FBG Interrogation Scheme for Temperature Measurement based on Gaussian optical source – <i>Jouni Chourouk et al.</i>
11.10 – 11.25	Using the MBPCA-OS method on French real estate data to detect the relations between price and Energy and Climate Performance labels – <i>Logosha Elizaveta et al.</i>
11.25 – 11.40	Wind turbine components' life cycle assessment for eco-design purposes: state of the art - <i>Aloui Rabie et al.</i>
11.40 – 11.55	Comparative Study of Ultrasonication and Pulsed Electric Fields Effects on Cellulose and Lignin Extraction from Almond Shells - <i>El Khayat Driaa Yassine et al.</i>
11.55 – 12.10	Extraction and characterization of hemicellulose from wood residues - <i>Najjoun Nicole</i>
<b>12.10 – 13.45</b>	<b>Lunch</b>
<b>13.45 – 16.00</b>	<b>Session 2 - Processes and Health</b>
13.45 – 14.00	Carotenoids bioproduction by two psychrophilic microalgae <i>Sphaerocystis</i> sp. and <i>Pleurastrum</i> sp. - <i>Gherabli Adila et al.</i>
14.00 – 14.15	High temperature pyrolysis of lignocellulosic biomass for biogas production - <i>Proust Christophe et al.</i>
14.15 – 14.30	Influence of the initial pressure and temperature on the explosion behavior of methane and hydrogen in industrial pipings – <i>Auvray Alexandre et al.</i>
14.30 – 14.45	Understanding the mechanisms involved in bioremediation of benzo(a)pyrene by the fungus <i>Talaromyces helicus</i> in soil - <i>Bertone Salome et al.</i>
14.45 – 15.00	Actuation strategy for a miniature tubular electromagnetic actuator for drug delivery - <i>Ben Salem Mouna et al.</i>
15.00 – 15.15	Application of supercritical fluid technology to the formulation of solid amorphous dispersions of quercetin with chitosan - <i>Couvidat Léa et al.</i>
15.15 – 15.30	Design of Antibacterial Molecules by Photopharmacology (ECOPHOTOSKIN) - <i>Aubert Amélie et al.</i>
15.30 – 15.45	Synthesis and evaluation of new vanillin derivatives for crop protection against phytopathogens – <i>Dhemayed Mayssa et al.</i>
15.45 – 16.00	Bioactive coatings on Zinc-based alloys for sustainable and absorbable orthopedic implants – <i>Justine Ravaut</i>
<b>16.00 – 16.30</b>	<b>Coffee Break</b>



<b>16.30 – 17.00</b>	<b>Trustworthy AI: state of art and challenges</b> <i>S. Destercke, Directeur de recherche CNRS, Responsable chaire Safe AI, Laboratoire Heudiasyc UMR 7253, UTC</i>
<b>17.00 – 18.15</b>	<b>Session 3 – Green AI</b>
17.00 – 17.15	Emotional and sustainable design: how style and materials are experiencing emotions in car's sustainability – <i>Bluntzer Jean-Bernard et al.</i>
17.15 – 17.30	How to support System Engineering with Knowledge in the context of sustainability - <i>Hilaire Vincent</i>
17.30 – 17.45	Recent advances in ML/IoT for fiber-optic sensors applications: A literature review - <i>Erawashdeh Zeina</i>
17.45 – 18.00	Towards Adaptive Security for Mobile IoT - <i>Arab Asma</i>
18.00 – 18.15	Vision-Based Deep learning for Robot Grasping Application in Industry 4.0 - <i>Li Lulu</i>
<b>18.30 - 20.30</b>	<b>Cocktail (<a href="#">Room 2400 – Tour Zamansky</a>) – Panoramic view of Paris</b>

### Wednesday February 7<sup>th</sup> 2024

<b>8.30 – 9.00</b>	<b>Welcome</b>
<b>9.00 – 9.40</b>	<b>Keynote - ...</b> <b>David Rogers – Nanovation</b>
<b>9.40 – 11.25</b>	<b>Session 4 - Green Materials</b>
9.40 – 9.55	A Normalized Diagram for Compare Densities in Additive Manufacturing of Iron-Silicon Magnetic Alloys – <i>Velasquez Salazar Abilo Andres et al.</i>
9.55 – 10.10	Degradation of pesticide atrazine in water by high voltage electrical discharges – <i>Hong Junting et al.</i>
10.10 – 10.25	Experimental study of water debinding on water soluble PEG behavior for SS 316L parts printed by pellet-based additive manufacturing process - <i>Piérard-Smeets Alice et al.</i>
10.25 – 10.40	Ge and Si nanostructure composites for Li-ion batteries anode materials - <i>Nemaga Abirdu Woreka et al.</i>
10.40 – 10.55	Gold nanoparticles and DNA-based biosensors to code information - <i>Gaillard Margaux et al.</i>
10.55 – 11.10	Signal amplification in self-referenced Quantitative Phase Imaging for the characterization of nano-objects - <i>Rogez Benoit et al.</i>
11.10 – 11.25	Bottom-up approaches for sustainability: an empirical comparison of Frugal Innovation and Low-Tech - <i>Lopez Santiago Luis Miguel</i>
<b>11.25 – 11.55</b>	<b>Coffee Break</b>
<b>11.55 – 13.10</b>	<b>Session 5 – Eco-Mobility</b>
11.55 – 12.10	Designing for Comfort: Non-Driving Activities in Level 4 Autonomous Vehicles – <i>Cai Yuan</i>
12.10 – 12.25	GAN-based paired image generation with dedicated encoding streams and dynamic balancing - <i>Kas Mohamed et al.</i>
12.25 – 12.40	Energy Efficiency of CAVs in Unsignalized Intersections based on Cooperative Risk-Assessment Strategy - <i>He Shan et al.</i>
12.40 – 12.55	Motion Sickness Mitigation in Road Vehicles with a Triad of Focus on Safety and Sustainability – <i>Emond William et al.</i>
12.55 – 13.10	Spatial relationships knowledge integration in deep learning modeling for panoptic segmentation in urban driving scenarios - <i>Benkirane Fatima Ezzahra et al.</i>
<b>13.10 – 13.25</b>	<b>Closing</b>
<b>13.25– 14.00</b>	<b>Lunch</b>