

Wednesday 21st of January:

Session on composite materials (Amphi Byron)

8h30-9h00: Arrival at the workshop venue

9h00-9h10: Welcome address, Yann Busnel (Scientific director, IMT)

9h10-9h30: Introduction of ITA/RWTH and IMT (focused on composite materials: manufacturing, characterization, modelling/simulation, applications)
Christoph Greb (ITA/RWTH) and Chung-Hae Park (IMT, IMT Nord Europe)

9h30-10h00: Leonie Beek (ITA/RWTH): Porous materials made of aerogel fibres

10h00-10h30: Nicolas Le Moigne (IMT Mines Alès) Towards sustainable and high-performance plant fibre-reinforced composites: selection, fractionation and structuration at interfaces

10h30-11h00: Break

11h00-11h30: Rebecca Emmerrich (ITA/RWTH) Semi-finished parts made of recycled carbon fibers

11h30-12h00: Quentin Govignon (IMT Mines Albi) Composites recycling: from fibre reclaiming to revalorisation

12h00-13h30: Lunch

13h30-14h30: Ka Ho Yim (IMT, Scientific coordinator), **Tom Khalaf** (IMT, IMT Nord Europe, European Project Manager) Presentation of support for Horizon Europe call submission and potential Horizon Europe calls

14h30-15h00: Dmytro Vasiukov (IMT Nord Europe) Composite pressure vessels for hydrogen storage: characterization, analysis, design and validation

15h00-15h30: Markus Welsh (ITA/RWTH) Multiscale statistical analysis of filament wound repeating unit cells with process-induced geometric variations

15h30-16h00: Break

16h00-16h30: Nicolas Moulin (IMT Mines St-Etienne) Multiscale approaches for modelling and numerical simulation of composite manufacturing processes

16h30-17h00: Christoph Greb (ITA/RWTH) Current status of thermoplastic preforming at ITA

17h00-18h00: Brainstorming

19h00-21h00: Dinner

Wednesday 21st of January:

Session on metallic materials (Salle E103S)

8h30-9h00: Arrival at the workshop venue

9h00-9h10 (Amphi Byron): Welcome address, Yann Busnel (Scientific director, IMT)

9h10-9h30: Introduction of IMM/RWTH and IMT (focused on metallic materials: Physical metallurgy, materials science and engineering, mechanics)

Sandra Korte-Kerzel (RWTH, IMM) and Denis Delagnes (IMT, IMT Mines Albi)

9h30-10h00: Sandra Korte-Kerzel & Zhuocheng Xie (IMM/RWTH): Plasticity of intermetallics

10h00-10h30: Frédéric Christien (IMT Mines St-Etienne) Grain boundary segregation and ageing of steels in pressurised water nuclear reactors

10h30-11h00: Break

11h00-11h30: Damien Texier, Julien Genée, Quentin Sirvin (IMT, IMT Mines Albi) Micromechanics for studying the durability of critical materials under extreme conditions

11h30-12h00: Zhuocheng Xie (IMM/RWTH) Atomistic studies of grain boundary segregation landscape in Mg alloy

12h00-13h30: Lunch

13h30-14h30 (Amphi Byron): **Ka Ho Yim** (IMT, Scientific coordinator), **Tom Khalaf** (IMT, IMT Nord Europe, European Project Manager) Presentation of support for Horizon Europe call submission and potential Horizon Europe calls

14h30-15h00: Chunhua Tian (IMM/RWTH) Micromechanics - from plasticity to fracture

15h00-15h30: Szilvia Kalacska (IMT Mines St-Etienne) Probing mechanical properties under extreme conditions: current frontiers of SEM-based micromechanics

15h30-16h00: Break

16h00-16h30: Sylvain Dépinoy (IMT, Mines Paris PSL) Physical metallurgy of additively manufactured materials: the example of 316L stainless steel

16h30-17h00: Sandra Korte-Kerzel (IMM/RWTH) Machine learning for SEM-Capturing statistics and rare events

17h00-18h00: Brainstorming

19h00-21h00: Dinner

Thursday 22nd of January:

Session on building materials (Amphi Byron)

8h30-9h00: Arrival at the workshop venue

9h00-9h20: Introduction of IBAC/RWTH and IMT (focused on building materials)
Qiao Wang, Elsa Qoku (IBAC/RWTH) and Gwenn Le Saout (IMT, IMT Mines Alès)

9h20-9h50: Gwenn Le Saout (IMT Mines Alès): Hydration of sulfoaluminate cement and the effect of admixtures

9h50-10h20: Qiao Wang (IBAC/RWTH) Calcium sulfoaluminate cement hydration kinetics: a focus on siliceous phases

10h20-10h30: Break

10h30-11h00: Vincent Thiery (IMT Nord Europe): Cementitious materials through times and through the microscope, a journey from the raw geomaterials to the final product

11h00-11h30: Mouhamadou Amar (IMT Nord Europe) Beneficial use of reused material in durable matrix: Treatment, Optimization, Formulation

11h30-12h00: Patrick Pizette (IMT Nord Europe) Granular approaches for construction materials: towards application for geomaterial and sustainable building method

12h00-12h30: Elsa Qoku (IBAC/RWTH) Hydration and microstructure development of cement-based materials through advanced characterization techniques

12h30-13h00: Brainstorming

13h00-14h30: Lunch