SMT37

37th Conference
on Surface Modification Technologies

From 22nd to 24th April 2026

Campus UCharleroi - Belgium

Check the website here

MINES PARIS | PSL

UMONS University of Mons

fnrs FREEDOM OF RESEARCH

materials UMONS RESEARCH INSTITUTE FOR MATERIALS SCIENCE AND ENGINEERING

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PRESENTATION

The **37th International Congress on Surface Modification Technologies** (SMT37) aims to cover progress on all aspects of surface modification technologies. The conference will address industrial materials (metals, alloys polymers, ceramics, composites, ...) and advanced materials and processes, from the macroscopic to the microscopic standpoint.

Producers, users and researchers, engineers and scientists that have an interest in Surface Modification will be brought together for this event, in order to facilitate and encourage, the exchange of knowledge, experience and ideas among the community of people that use, improve, develop, research and assess surface modification processes. The congress is organised in several exciting specialized sessions:

- Thermal and cold spray
- Electro and electroless plating
- Anodisation, plasma electrolytic oxidation and conversion$
- Surface Characterization
- Additive manufacturing
- Functional coatings
- Surface texturation and hydrophobic/philic surfaces
- Corrosion and tribology
- Mechanical surface treatments

A symposium on 'Arts and Surface' will also take place during the last day of the conference, on April 24th.

PLENARY SPEAKERS

Dr Alessandra GIUMLIA-MAIR

BIO

Alessandra Giumlia-Mair, Doctor Philosophiae in Archaeology from the University *Alma Mater Rudolphina* of Vienna and Master of Science in Archaeometallurgy from the University of London. She has lived and worked in Austria, Great Britain, Germany, and Italy.

From 1991 to 2001, she taught Archaeometallurgy and Archaeometry at the Universities of Salzburg (Austria), Trieste, and Udine (Italy). She has also been an invited lecturer at the Universities of Trento, Milan, Turin, Osaka, Klagenfurt, Ljubljana, Paris, Bangalore, Trivandrum, Brussels, Tokyo, Nara, and others.

In 2000, she founded AGM Archeoanalisi, a laboratory specializing in archaeometry, particularly in the analysis of ancient metals. She collaborates with numerous universities, superintendencies, and other official institutions on various research projects.

From December 2020 to December 2023, she was Director of the Research Laboratory at the Institute of Archaeology, Russian Academy of Sciences, Moscow, Russian Federation.

She has studied objects belonging to major museum collections in the United Kingdom, Canada, Germany, Switzerland, Romania, Slovenia, Hungary, Austria, France, Greece, Cyprus, and Italy. She has published over 250 scientific papers, books, and conference proceedings, and has organized several archaeological exhibitions as well as more than 30 international conferences. Dr. Giumlia-Mair is a member of the Standing Committees of international conferences such as BUMA (Beginning of the Use of Metals and Alloys), President of the Standing Committee of the International Conference Archaeometallurgy in Europe, Vice-President of the Standing Committee of the Classical Bronze Conference, and Secretary of the Archaeometry Commission of the International Union of Prehistoric and Protohistoric Sciences (UISPP). She has also served on the organizing and scientific committees of numerous international conferences.

TALK

Black variations on metals in antiquity: an updated survey

In antiquity, decorative items, objects of art, luxurious tools, such as medical instruments, vessels, and ceremonial weapons were often partly or completely blackened by using different techniques. The best-known black material is *niello*, in use since the 5th century BCE around the Black Sea area and from the 1st century AD in the Roman empire. It consists of various kinds of black metal sulphides. Bluish-black or purplish black artificially patinated alloys, developed in chemical baths on copper-based alloys containing small amounts of gold and silver were for a long time mistaken for *niello*. However, such materials were already known in Egypt as early as the 19th century BCE, where they were regarded as special and exquisite items produced for gods, kings and priests.

They were called *hmty km* (black copper). In the 16th-15th century BCE this technique reached Greece, where it was known by the Mycenean term *kuwano*, later becoming *kyanos* in Greek. In Roman times objects made of this material were eagerly collected under the name of *Corinthium aes*.

In Bronze Age Crete the precious Egyptian *hmty km* was also locally imitated by patinating arsenical copper with sulfur, and a method involving sulfur was likewise at the origin of certain blackened metal surfaces in Roman times. In the same period, sulfur contained in hard boiled eggs was allegedly used to blacken silver vessels.

Dark enamels, applied as *cloisonné* or *champlevé* in Late Antiquity can resemble any of the black surface decorations on metal discussed above, especially when altered by a long deposition under the soil.

Finally, in the Medieval period, on Islamic objects such as vessels and candlesticks, black decoration was obtained by filling the chased and silver inlaid surfaces of brass alloys with materials such as bitumen or pitch. This talk will present studies carried out on these different materials and discuss their identification.

Dr Stephanos KONSTANTINIDIS

BIO

Stephanos KONSTANTINIDIS received a master degree in chemistry in 2000 and a PhD degree in 2004 from the University of Mons (Belgium). After a post-doctoral stay at the RWTH Aachen University in Germany in 2007, he established his research group at the University of Mons in 2011 while being appointed research associate of the National Fund for Scientific Research (FNRS).

For more than 25 years, he studies plasma-surface interactions and thin film deposition by plasma-based magnetron sputtering processes by combining both advanced plasma analysis and surface characterization methods.

His team is also developing sputtering-based processes for the synthesis of nanomaterials. He has published more than 90 research articles and review papers, and has given 40 invited talks and lectures in international conferences. He has also participated to the organization of various international scientific meetings such as EMRS Strasbourg, ICMCTF San Diego, Plathinium, etc.

Stephanos is currently FNRS research director and professor at the University of Mons.

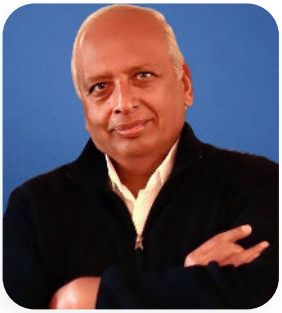
TALK

Plasma-based magnetron sputtering for thin film deposition and more

This presentation will introduce the fundamental principles and key variants of reactive magnetron sputtering for thin film deposition. Special attention will be given to state-of-the-Art High-Power Impulse Magnetron Sputtering discharges (HiPIMS) which allow extended control over film characteristics.

Selected examples from recent research will be discussed too, including approaches such as glancing angle deposition (GLAD) which enables control of the film morphology at the nanometer scale.

The talk will conclude with an exploratory topic: the synthesis of nanoparticles via magnetron sputtering onto vacuum-compatible liquid substrates. This novel approach has led to the development of colloidal suspensions and polymer-based nanocomposites, which have been successfully implemented in a proof-of-concept chemical sensing platform.



Dr Tirumalai S SUDARSHAN

BIO

Is there still a need to introduce Dr Sudarshan to the SMT community? T.S. SUDARSHAN (Suds) is currently the President and CEO of Materials Modification, Inc. He received his B.Tech. in Metallurgy from the Indian Institute of Technology in Madras, India, and his M.S. and Ph.D. in Materials Engineering Science from Virginia Tech.

He worked with Ashok Leyland in the Truck and Bus division as a Senior Metallurgist and later as the Director of R and D at Synergistic Technologies Richmond, Va. For the past 40 years he has been responsible for the management and technical development of innovative materials, processes, and techniques and the development of new technologies related to surface engineering and nanotechnology. He has been active in various committees throughout his career and is currently the Chair of the ASM-IIM lectureship committee. He also chaired the Surface Engineering Critical Technology sector and has been a member of IMR, JMEP, AMP and numerous Awards committees and has also served as a Trustee of ASM International and is currently the Vice President.

Dr. Sudarshan has been the recipient of numerous awards and honors, including the Design News Award and R&D 100 for the microwave plasma technique "Nanogen" and for the Plasma Pressure Compaction technique and the Outstanding Young Manufacturing Engineer award from SME. He has served on numerous committees for decades of the National Science Foundation, National Institutes of Health, U.S. Army, Michigan Economic Development Council, Department of Energy, National Research Council, Ohio Third Frontier and ASM International–The Materials Information Society. He has also served on the technical advisory boards of numerous companies over the last two decades. Dr. Sudarshan is also the editor of two journals Materials and Manufacturing Processes for 38 years and Surface Engineering for more than 28 years and Materials Technology for 4 years.

He is a Fellow of ASM International, Fellow of International Federation for Heat Treatment and Surface Engineering and Fellow of Institute of Mining, Metals and Materials, UK and Distinguished Alumnus of IITM and was a member of the National Materials Advisory Board and has served on numerous NRC committees. He is the coauthor of over 200 publications and coeditor of 36 books including 30 books on surface modification technologies and holder of over 38 patents, developed 18 products and has given over 65 plenary and keynote lectures throughout the world and taught numerous short courses on surface engineering and nanotechnology in several countries.

TALK

Spectrum of Innovations in Surface Engineering

The increasing number of innovations have led to expansion in the challenges associated with performance of the various devices and applications. Coatings or surface modification have taken on significant roles in improving the performance and have created opportunities for entrepreneurs to create new businesses. Applications ranging from solar to clothing have seen improvements to the benefit of the end user.

While many environmental challenges remain, there are sustained efforts to provide for non toxic solutions especially with perfluoro compounds that has resulted in many interdisciplinary solutions. As processes and solutions evolve the number of regulations and controls have also expanded with sometimes conflicting standards from different regions of the world. For the foreseeable future, there is significant opportunities both in research and in creation of businesses which could also be potentially sped up through the use of AI generated solutions. Innovations still need the human mind to craft the final solutions.

Dr Stéphane VALETTE

BIO

Stéphane VALETTE obtains his habilitation in 2012 on laser-material interaction in the femtosecond regime and the structuring of functional surfaces. He is full Professor at Ecole Centrale de Lyon and makes his research in the Laboratory of Tribology and Dynamics of Systems (LTDS UMR 5513) in the Tribology, Physico-Chemistry and Interface Dynamics team.

In 2020, he creates the TREETOP (Tribology and Bio-inspired Surface Engineering) group and he works on the design and manufacturing of bio-inspired super-wetting surfaces. His expertise concerns the relationships between the morphology and the chemistry of complex surfaces, often multi-scale, and the behaviour of liquids in terms of wettability and adhesion. He develops experimental and numerical tools to describe the behaviour of liquid interfaces on such complex solid systems. He is co-author of 61 articles in international journals. In 2022, he creates the international master's degree BIOSURF in biomimicry and surface engineering and he is actually the director.

TALK

Reflections on the super-hydrophobicity of bio-inspired surfaces

The development of super-hydrophobic surfaces is the subject of much theoretical and experimental research. We propose here a reflection on the origins of the super-hydrophobic character of multi-scale textured surfaces. For this, a comparative analysis of the wettability of a lotus leaf with surfaces manufactured by femtosecond laser texture is implemented. The temporal tracking of the wettability properties of textured surfaces makes it possible to sequence the key stages of the evolution of the surface towards superhydrophobicity. The comparison of the wettability results with an analytical model of the wetting on multi-scale surfaces and the observation of the liquid/gas and liquid/solid interfaces under the drop, allows the validation of the proposed approach. The tools implemented pave the way for the possibility of super-hydrophobic surface designs in all types of materials.

COMMITEES

Conference Chairs

Dr Tirumalai S SUDARSHAN
(MatMod Inc)

Dr Francesco DELLORO
(Mines Paris - PSL)

Prof. Véronique VITRY
(UMONS)

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Inass LEBBAR, Mines Paris
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Ann ZAMMIT, L-Università ta' Malta, Malta

Mikhail ZHELUDKEVICH, Hereon, Deutschland

POLYTECH MONS

The **Faculty of Engineering of UMONS**, in short FPMs, is also known as 'Polytech Mons' and was founded in 1837 as the 'École des Mines' (Mining School), the first Mining Engineering school in Belgium, by Théophile Guibal and Adolphe Devillez (bronze monument_shown below, in front of the historical building of Polytech Mons), two young alumni from 'École Centrale des Arts et Manufactures de Paris' (now 'CentraleSupélec'), founded eight years before. In 1853, a new specialist area was created: Chemical Engineering, followed by Mechanical Engineering in 1862 and Electrical Engineering in 1897.

Today, **7 Master's degrees in Engineering** are proposed, and students (around 1000) can choose from the following specialist areas: Architectural Engineering, Chemical Engineering and Materials Science, Electrical Engineering, Energy Engineering, Computer Engineering and Management, Mechanical Engineering, and Geology and Mining Engineering.

The University of Mons (UMONS) was created in 2009 by the merging of Polytech Mons and the University of Mons-Hainaut. UMONS is a French-speaking university in the province of Hainaut, Belgium, near the French-Belgian border. It is approximately 50 kilometers from Brussels, the capital of Europe.

UMONS is one of five academic centers set up in the Wallonia-Brussels Federation, and is one of the founding members of the Pôle hainuyer. It assumes the co-presidency of this cluster, which groups together 3 universities, 3 high schools, 3 graduate art schools and 26 continuing education institutions, and offers nearly 600 courses in 21 fields of education to more than 30,000 students in the province of Hainaut. UMONS is one of the founding members of EUNICE, the European University for Customised Education.

With **more than 1000 researchers**, research objectives in UMONS are pursued both regionally and internationally. The common goal of all UMONS researchers is to develop expertise on a large scale, subsequently benefiting society, particularly the region.

In this framework, UMONS has recently joined forces with other local actors from the higher education sector to open the **CampusUCharleroi**, where all the delocalised programs from the partners in Charleroi are now hosted in a historical building. The dynamic of CampusUCharleroi has led to the creation of new joint programs, allowing the area to benefit from high quality higher education and research programs.

Through its research and close links with industry, UMONS is actively involved in regional development bith in Charleroi and Mons. It maintains close links with scientific research centers, as well as university spin-off and start-up companies, the majority of which are located on the outskirts of those 2 cities.

The research activities at UMONS are structured in **10 research institutes**. One of them is the Research Institute for Materials Science and Engineering (or 'MATERIALS Institute') where research on manufacturing processes is carried out.

The UMONS Innovation Center concept enhances the visibility of the long-standing links of UMONS with a number of university-based research centers, and enable to work with any socio-economic organization, regardless of the TRL. The **5 UMONS Innovation Centers** are Materia Nova, Multitel, Le CLICK, the Belgian Ceramic Research Center and C3E2D.

MINES PARIS - PSL

History

The School was founded in 1783, at a time when mining was a high-tech industry. This field faced major challenges in terms of employee safety, economic planning and geopolitics, particularly with regard to access to rare or strategic raw materials.

For 240 years, Mines Paris-PSL helps to meet the major challenges of the time

On March 19, 1783, an order from King Louis XVI founded the École Royale des Mines, with the aim of training people to carry out mineral exploration and exploitation work as safely and economically as possible.

Established since 1816 in the heart of the Latin Quarter, in the former Hôtel de Vendôme, on the edge of the Luxembourg Gardens, the School expanded in 1967 to Fontainebleau (500 m from the château), then to Corbeil and Evry (on the SNECMA premises), and finally in 1976 to the Sophia Antipolis technology park, in Valbonne near Nice.

Originally responsible for training civil engineers and the French government's technical corps, since the 1960s the École has developed research and post-graduate teaching activities (specialized masters, doctorate), in relation with industry and in partnership with the ARMINES association.

In this way, it has kept pace with major scientific and technological changes, such as the development of railroads, nuclear energy and information technology (from the mathematical morphology center to quantum physics), as well as with societal changes, such as the definition of mission-driven companies resulting from the work of the Centre de Gestion Scientifique.

In 2012, the school joined Paris Sciences et Lettres (PSL) initiative as a founding member. Today, it is one of the 11 institutions of the Université PSL

Supporting ecological and digital transitions

Since it was founded 240 years ago, Mines Paris – PSL has been training engineers and producing essential knowledge to help companies meet the challenges of their time. Originally those of mining to produce the energy needed for the great industrializations, today those of ecological transitions and digital transformations.

A founding member of Université PSL, Mines Paris – PSL is a leading French engineering school, and the leader in research partnerships.

Training committed engineers

Since it was founded in 1783, Mines Paris – PSL has been training top-level engineers capable of solving complex problems in a wide variety of fields.

Thanks to its generalist positioning, Mines Paris – PSL is developing an innovative, multi-disciplinary educational experience, in which Engineering Sciences and Humanities and Social Sciences are closely linked. This dual culture is further strengthened by our membership of PSL, a real opportunity to enrich our career paths.

Graduates of Mines Paris – PSL are able to conduct collective and intercultural projects with a strong international, social and disciplinary dimension in their professional activities, particularly in the corporate world.

A major multidisciplinary research institution

With and through excellence in research, Mines Paris – PSL provides concrete solutions and, in particular, carries out large-scale projects in support of the energy, ecological and digital transitions, thanks to a systemic and multidisciplinary approach that places engineers at the heart of public debate and decision-making. It's a way of combining the quest for meaning with the creation of value for companies and society.

As a driving force behind the innovation ecosystems in which the School and its research centers are located, Mines Paris – PSL cultivates an entrepreneurial spirit that creates value and competitiveness, facilitating the

CHARLEROI. A post-industrial city that fascinates lovers of urban and/or underground activities, is situated to the north of the Metropolitan Area. Its periphery is made up of plateaus and green landscapes featuring small wooded valleys and a listed architectural heritage.

The southern part of the Metropolitan Area boasts a group of 5 lakes in the midst of a wild and unspoilt natural environment whose unique landscape features make this spot an ideal leisure and relaxing getaway destination in Europe.

It's a land of contrasts where the landscapes mix and offset each other to create an unforgettable experience. Walk along the towpath of the Sambre river, at the heart of the industrial wasteland, surrounded by street art, then climb to the top of a slag heap, to admire the beautiful panorama across the city and the natural wealth of its hinterland.

THE CITY OF CHARLEROI

CAMPUS UCHARLEROI was created by four partners (Province of Hainaut, ULB, UMONS, City of Charleroi/Open University) to develop a center for training, research, dissemination of scientific culture, and awareness of scientific and technical careers in Charleroi.

The Zénobe Gramme Building is an iconic building in Charleroi. Built in 1903 for the 1911 Charleroi International Exhibition, the restoration of this 18,392 m² building, listed as a monument since 2004, is part of a project that aims to create a center of excellence combining higher and university education, continuing education and scientific research.

USEFUL INFORMATIONS

EMERGENCY PHONE NUMBER IS 112

- **Website: https://112.be/en**

WIFI

- **CUZG_Evenement**
- **Password : SMT37#ST**

TRAIN

- **The main station in Charleroi is Charleroi-Central.**
- **SNCB-NMBS** (public transport operator): https://www.belgiantrain.be/en
- **SNCB/NMBS** app

PUBLIC TRANSPORT

- The **bus** or **Metro/ Tram** stop (**Lines 2 or 3**) is the **Palais stop**.
- Then walk along the **Boulevard Solvay** and take **rue Clément Lyon** to reach the **esplanade Solvay.**
- **TEC** (public transport operator in the Walloon Region): https://www.letec.be/
- **TEC** app:

TAXI

- **Sympa-tax** — https://www.sympatax.be/ — +32 (0) 800 30 999 or +32 (0) 71 30 30 33
- **Ideal-tax** — https://idealtax.be/ — +32 (0) 71 43 05 05
- **Rapid-tax** — https://www.rapidtax.be/ — +32 (0)800 32 55 5 or +32 (0)71 31 55 55
- **Taxis carolo** — https://www.taxiscarolo.be/ — +32 (0)800 32 32 7

USEFUL INFORMATION

PARKING

- Free parking for up to one hour (unlimited at weekends and during school holidays) on the rue du Mambourg, rue de la Garenne, in the place de la Broucheterre or on the rue de la Broucheterre. Once you have parked, take a free ticket at the ticket machine and take the rue du Mambourg and then the rue Clément Lyon. The entrance is on the Esplanade Solvay
- Free parking at P2 - Charleroi expo 600 metres from the Zénobe Gramme building. Walk up the rue de l'Ancre, turn left into the Boulevard Solvay and join the esplanade Solvay.
- Paid parking along the Bd Solvay, rue Clément Lyon, and rue Lebeau in close proximity to the Zénobe Gramme building. Then join the esplanade Solvay.
- Parking Campus (paid) under the esplanade Solvay in close proximity to the building. The entrance is reached via the Bd Gustave Roullier, off the Marsupilami roundabout. Then join the esplanade Solvay. The Parking Campus has five spaces reserved for people with reduced mobility and 14 charging points for electric cars.

LOCATION

- Despite being one of the major cities of Wallonia, Charleroi remains a walkable and green city. From the Central station, cross the river Sambre and walk up to the 'Ville Haute' to join the campus on foot. Don't forget to enjoy the shopping district of the 'Ville Basse', Rive Gauche, and the Art Nouveau Architecture of the streets of the city. If you enjoy comics, look for the statues of the famous Belgian characters that populate the city. Do you recognize them all? Their story started very close to the city center, in nearby Marcinelle. If you arrive by car, the 'Ring' will enable you to go from one side of the city to the other easily.
- A map with the locations of the conference is available here:

CONFERENCE VENUE

- Campus UCharleroi - Boulevard Solvay, 31 - 6000 Charleroi
- Building Zénobe Gramme

WELCOME DESK - COFFEE BREAK AND LUNCH and POSTER SESSIONS :

- Salle des Musées

PLENARY

- Room S.1.05

PARALLEL SESSIONS

- Room S.1.05
- Room S.1.06
- Room N.1.01

WELCOME DRINK

- Wednesday **22nd April** from **18:00** to **21:00**
- BPS22 - Boulevard Solvay, 22 - 6000 Charleroi
- Exhibition « Bachelot & Caron – Porcelaine et faits divers »

VISIT OF ABBAYE D'AULNE AND CONFERENCE DINNER

- Thursday **23rd April** from **16:00** to **23:30**
- Meeting point : Rue Clément Lyon
- **16:00** Departure of the buses
- **17:15** Guided tour of the Abbaye d'Aulne
- **18:30** Gala diner

  La Carrosserie de l'Abbaye d'Aulne – Traiteur Il Donatucci - 275, rue Vandervelde – 6534 Gozée)
  Please present your ticket if you have allergies or request a vegetarian menu.
- **22:30** Departure of the buses from the Abbaye d'Aulne to Novotel Charleroi Centre (Pl. Verte 17) & Ibis Charleroi Centre Gare(Quai Paul Verlaine 12)

NOTE TO AUTHORS

Oral presentation should be uploaded on the computer of the room where your presentation will take place at least 15 minutes before the beginning of the session.

The session chairs will be very strict about the respect of speaking time, to ensure that all sessions stay as synchronized as possible.

Posters should be put on display from the first coffee break on April 22 to the Lunch break on April 24. Fixation devices will be available at the registration desk. Poster authors that take part to the speed poster presentation should send their slides to **SMT37@umons.ac.be** before April 22, 5PM.

PROGRAM

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 22 (1/3)						
Welcome desk opens	09:00	17:00				
Introduction	**10:00**	**10:30**	**Conference opening address by Prof Marc Labie, Vice Chancellor of UMONS**			
Plenary Talk T.S. Sudarshan	**10:30**	**11:20**	**General**	**Spectrum of Innovations in Surface Engineering**		
Coffee Break	11:20	11:40				
Parallel sessions	**11:40**	**12:40**		**Thermal and cold spray**	**Electro/electroless coatings**	**Anodisation/PEO/ conversion**
				Clavé Batlle Genís: Optimization of Heat Treatments for Cold Gas Sprayed Fe_3Al and Fe_3Al/TiC Coatings: Phase Evolution and Mechanical Performance	Rauch Jeanne-Marie: Optimization of surface preparation, electrodeposition and passivation layer for high performance zinc iron systems.	Tournay-Dufrenne Isis: Corrosion Protection of AZ31 magnesium alloy by PEO layers modified by zinc incorporation for Biomedical Applications

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 22 (2/3)						
				Arseenko Mariia: Towards Additive Printed Electronics: Conformal 3D Heaters with Individual Control	Cobley Andrew: The impact of pre-treatment and electroless copper plating conditions on the metallisation of natural fibre-based textiles	Rakotonirina José: Influence of Surface Roughness, Porosity, and Sol-Gel Sealing on the Nanomechanical Properties of Plasma Electrolytic Oxidation Coatings on AA1050 and AA2024 Alloys
				Poza Pedro: Wear resistance under oscillating conditions of Cold Sprayed Additive Manufactured Ti alloys	Alexis Joel: Thermal Ageing Effects on Microstructure, Mechanical Properties and Adhesion of Trivalent Hard Chromium Coatings	
Lunch Break	12:40	13:50				
Parallel sessions	**13:50**	**15:10**		**Thermal and cold spray**	**Surface characterization/additive manufacturing**	
				Yosri Khalsi: Développement de surfaces auto-biocides Ã base de revêtements cuivreux élaborés par cold spray et texturés par jet d'azote supercritique SNJ	Nier Natalia: Correlative Analysis of Near-Surface Parameters for Material-Specific Prediction of Residual Stresses in Shot Peening	

				Kumaravel Magesh: Enhancing the cold sprayability of refractory type - complex concentrated alloy TaNbTiVCr	Seveno David: Identifying hidden interactions at ice-surface interfaces by freezing X-ray computed microtomography	
				Vicente Albaladejo: Feasibility Study for the Co-Deposition of NiAl Intermetallic Coatings by Cold Gas Spray	Ikiz Meris Meric: Optimizing surface roughness, physical and chemical characteristics of additive manufactured nitinol through electropolishing	
				Dlouhá Žaneta: Influence of Bond Layer Type on the Tribological Behavior of Thermally Sprayed Stainless Steel Coatings on CFRP Substrate	Marchais Kévin: Simulation of Particle-Based Post-Processing for Additive Manufacturing: Towards Granular Approaches Applicable at Industrial Scale	
Coffee Break	15:10	15:40				
Parallel sessions	**15:40**	**17:10**		**Thermal and cold spray**	**Functional coatings/ Surface texturation hydrophobic/philic**	**Electro/electroless coatings**
Invited				**Sheng Yuan: Cold Spray–Induced Features Driving Corrosion Behavior**		**Belen Garcia: Surface Engineering Approaches for Aluminum AM Heat Exchangers: From Chemical Polishing to Electroless Ni-P Coating**

				Lebbar Inass: Mechanical Characterization of Al7075 Powder Particles for Cold Spray Modeling	Culot Alexandre: Plasma Polymer Film as a Sacrificial Interlayer to Enhance Metalized Polymers Disassembly for Recycling	Khalili Mohammad Reza: An investigation into the development of formaldehyde-free electroless copper plating
				Yosri Khalsi: Métallisation du PEEK par projection Cold Spray assistée par jets fluide à haute pression	Federico Apolloni: Controlling the antibacterial properties of biomaterials through the combination of plasma polymerization and plasma etching	Nguyen Thao: Design of a cyanide-free gold electroplating bath and evaluation of current density effects on deposit quality
					Yeyetunde Omowunmi-Kayode Yvonne: Development of a functional relationship between surface morphology parameters and resulting wettability for laser textured Ti-6Al-4V	Boucher Aurélien: Electrolytic deposition: Modeling hydrogen flow to understand and optimize processes at microscopic and macroscopic scales
Social program	18:00	21:00	Visit of BPS22 and coktail (See 'social program' for more information on the timing)			

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 23 (1/2)						
Welcome desk opens	08:00	17:00				
Parallel sessions	**09:00**	**10:30**		**Anodisation/PEO/ conversion**	**Functional coatings**	**Surface texturation hydrophobic/philic**
				Peng Zhou: Constructing an electrically conductive chemical conversion coating on Mg alloy	Nouvellon Corinne: Innovative and advanced colors by PVD sputtering	Bartarya Gaurav: Controlled Surface Texturing through 1D and 2D Vibration Assisted Machining to improve Tribological Performance of Ti-6AL-4V
				Zhang Tao: A novel anti-corrosion strategy for ultra-high purity 316L stainless steel in the semiconductor industry: Leveraging alternating voltage passivation and nitric acid passivation	Monteverde Fabien: GOLD-PAWS - Sustainable Production Process for High-Quality Gold-Plated Wires for Antennae	Hihn Jean-Yves: New insights in electropolishing of gold and gold alloys : electrolytes - agitation - wave polarization
				Klumpp Rafael Emil: Surface Functionalization of Titanium for Medical Implants Using Plasma Electrolytic Oxidation, Hydrothermal post-treatment and Sol-Gel	Boudiba Abdelhamid: Chromium and PFAS-Free Sol-Gel Coatings for Aircraft Wing Leading-Edge Protection	Lamour Laora: Role of chemistry changes in the hydrophobic transition following femtosecond laser texturing of metals

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 23 (2/2)						
Invited				**Endzhe Matykina: Corrosion behavior of anodized and Flash-PEO treated LPBF Ti6Al4V manufactured with reused powder**		
Coffee Break	10:30	11:00				
Plenary Talk S.Valette	**11:00**	**12:00**	**Surface texturation**	**Reflections on the su-per-hydrophobicity of bio-inspired surfaces**		
Lunch Break	12:00	13:30				
Plenary Talk S. Konstantinidis	**13:30**	**14:20**	**PVD coatings**	**Plasma-based magnetron sputtering for thin film deposition and more**		
Posters speed presentations	**14:20**	**14:40**				
Coffee Break and **poster session**	**14:50**	**16:00**				
Social program	16:00	00:00	Visit of Abbaye d'Aulne and conference dinner (See 'social program' for more information on the timing)			

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 24 (1/2)						
Welcome desk opens	08:00	14:00				
Parallel sessions	**09:00**	**10:30**		**Arts and surface**	**Corrosion and tribology**	
Invited				**Piccardo Paolo: Surfaces, colors, and hidden information on casting bronzes**	**Liang Wu: MAO/LDHs@MOFs self-healing Composite Coating on the AZ31 Magnesium Alloys**	
				Roberto Spotorno: Electrochemical probe for localized corrosion diagnostics on cultural heritage artifacts	Legrand Quentin: Electrochemical investigation on femtosecond-laser textured surfaces of 316L stainless steel	
				Török Béla: Technological lessons learned from archaeometric examinations of decorative surface modifications on medieval metal objects found in Hungary.	Moreno Lara: Influence of Tris-buffered SBF on the corrosion behaviour of duplex PEO and PEO/Sol-Gel coatings on AZ31 alloy	

			Room S.1.05	Room S.1.05	Room S.1.06	Room N.1.01
April 24 (2/2)						
				François Berkmans: 3D Surface Topography and Multi-Scale Analysis as Tools for the Study, Interpretation and Authentication of Artworks	Rubino Felice: Improvement of surface quality of additively manufactured Ti6Al4V by post-processing machining treatment: optimization of process parameters and environmental sustainability	
Coffee Break and **poster session for the symposium on arts and surface**	**10:30**	**11:20**				
Plenary Talk A Giumlia Nair	**10:20**	**12:10**	**Arts and surface**	**Black variations on metals in antiquity: an updated survey**		
Lunch Break	12:10	13:30				
Parallel sessions	**13:30**	**14:30**		**Corrosion and tribology**	**Thermal and cold spray**	

				Pham Thu Thuy: The role of Picolinoyl N4-phenylthiosemicarbazide modified ZnAl layered double hydroxide conversion layers in barrier performance of acrylic coating on electrogalvanized steel	Heydari Astaraee Asghar: Cold spray deposition of diffusion-bonded bi-metal powder feedstock	
				Manousakis Aristotelis: Concentrated Solar Energy surface processing for elaboration of wear-resistant NbC-reinforced surface layers	Bagayoko Nouhoum: Heat Control to Achieve the Desired HAZ Microstructure in Martensitic Steels and Reduce Cracking in PTA Chromium Coatings	
				Garrido Maneiro Miguel Angel: Erosive Wear Analysis of Aeronautical Components Manufactured by Cold Spray Additive Manufacturing	Kalipada Maity Kalipada: Machining Performance Enhancement of Inconel 925 Using Cryogenically Treated and Tempered Cutting Tools	
Closing ceremony	14:30	15:00		General	Closing ceremony	
Final coffee break	15:00	16:00				

BOOK OF ABSTRACTS

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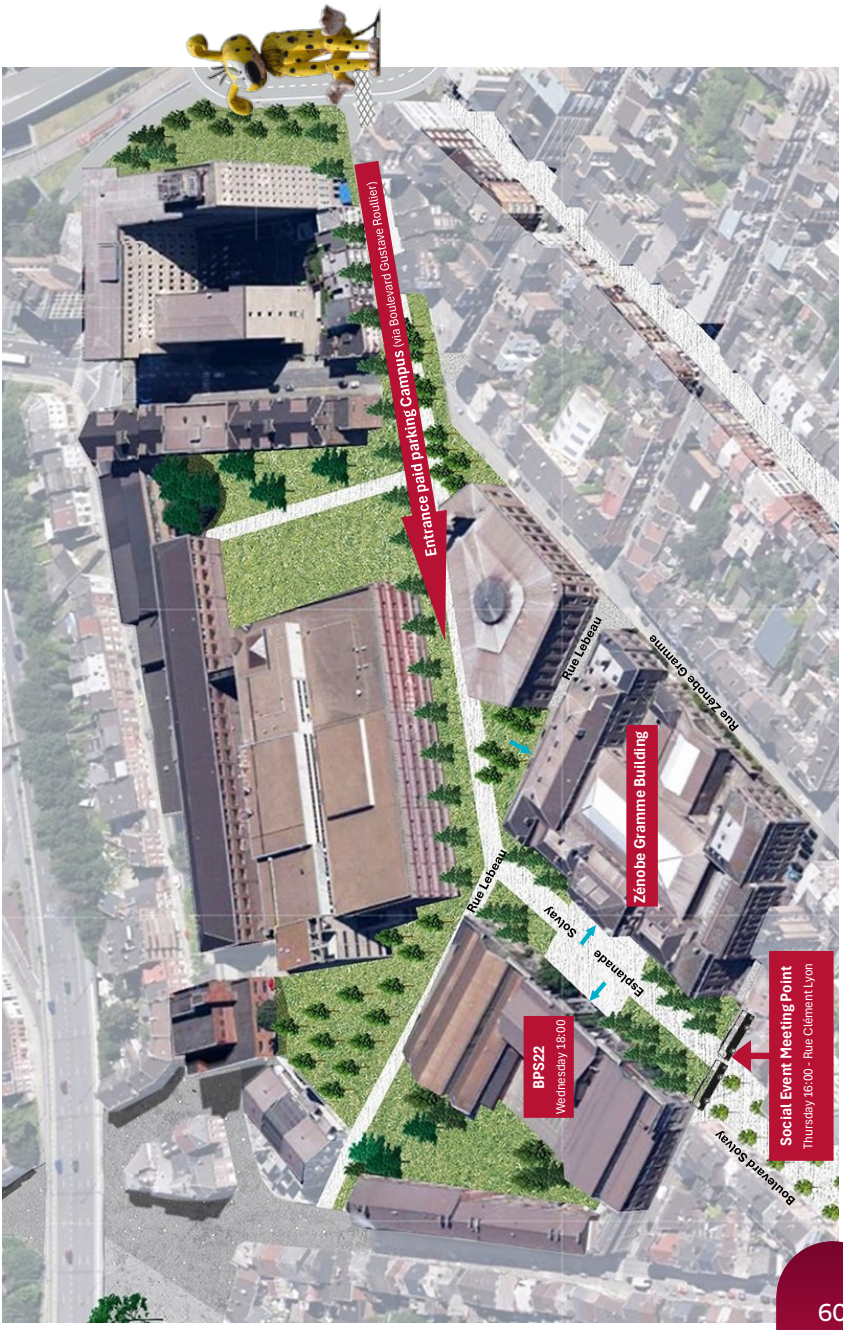
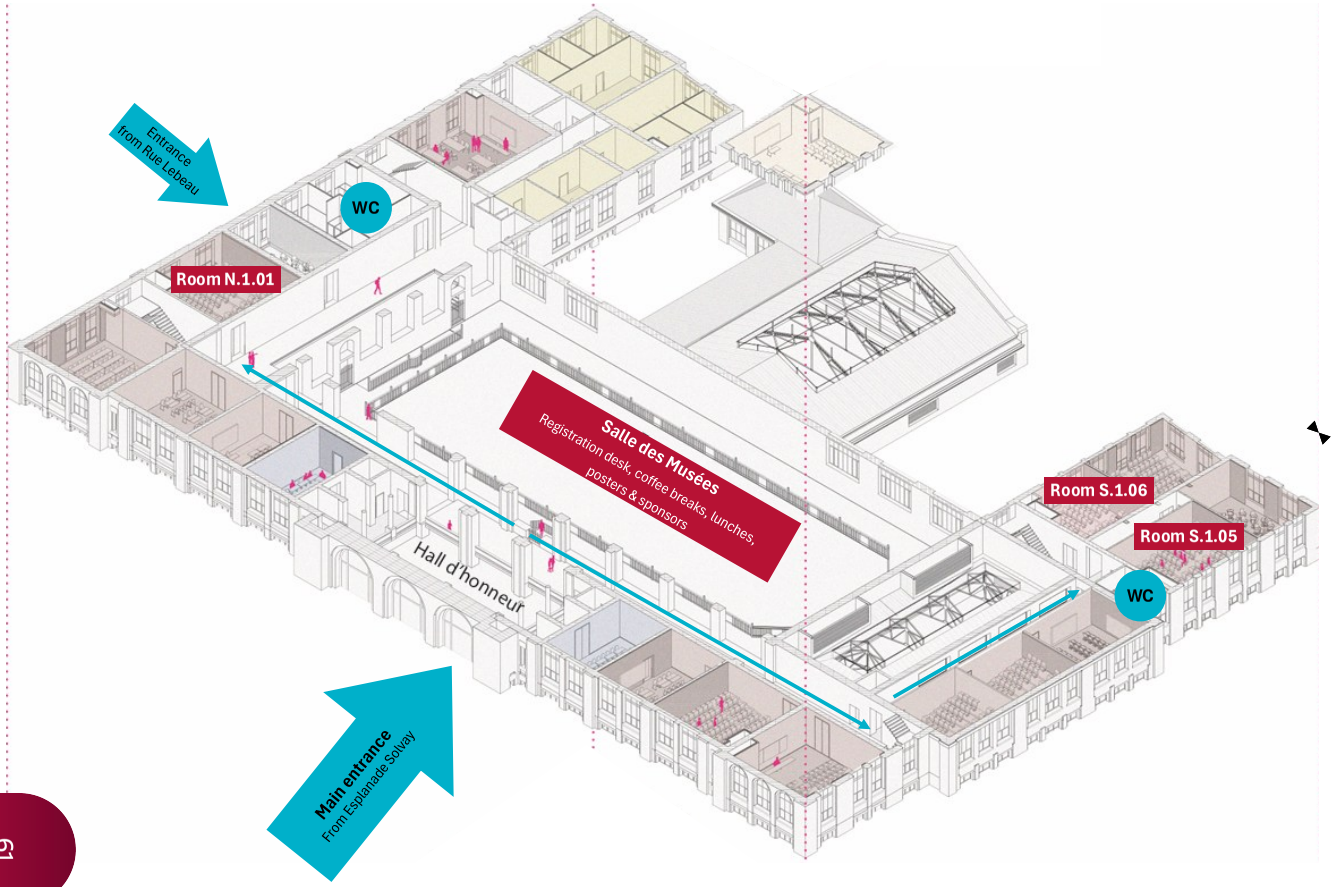
MAPS


Entrance paid parking Campus (via Boulevard Gustave Roulliet)
Rue Lebeau
Rue Lebeau
Rue Zénobe Gramme
Zénobe Gramme Building
Esplanade Solvay
BPS22
Wednesday 18:00
Social Event Meeting Point
Thursday 16:00 - Rue Clément Lyon
Boulevard Solvay


Entrance
from Rue Lebeau
WC
Room N.1.01
Salle des Musées
Registration desk, coffee breaks, lunches,
posters & sponsors
Hall d'honneur
Room S.1.06
Room S.1.05
WC
Main entrance
From Esplanade Solvay

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