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9<sup>th</sup> European Congress on  
**3D PRINTING & ADDITIVE  
MANUFACTURING**

October 07-08, 2024 | London, UK

Coalesce Research Group  
33 Market Point Dr,  
Greenville, SC 29607, USA

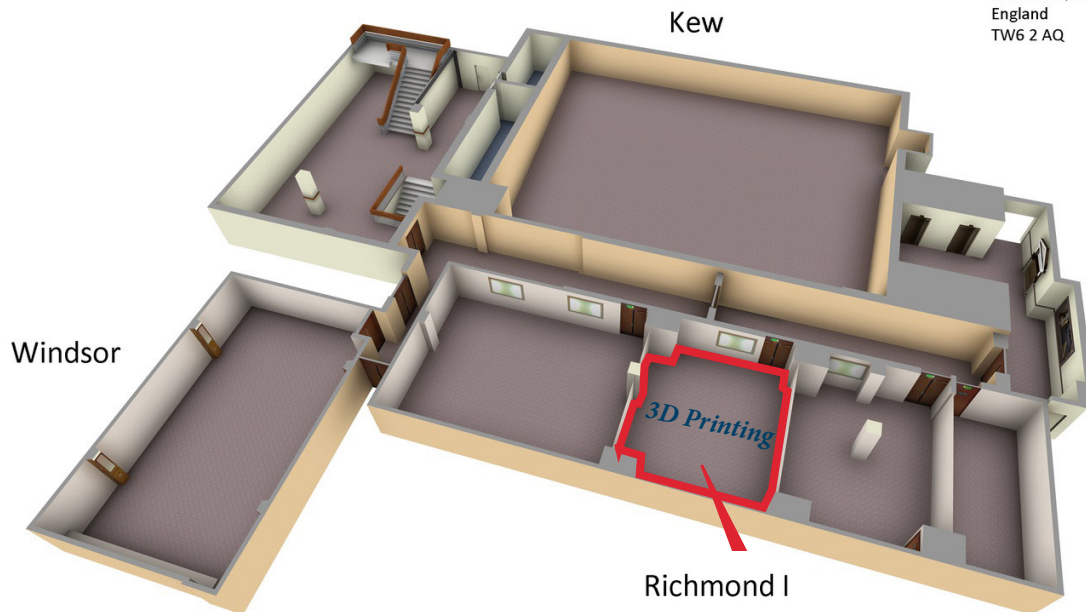
**Contact Us:**

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# Floor Map

## LOWER GROUND FLOOR

**R**  
RENAISSANCE®  
LONDON HEATHROW HOTEL  
Bath Road, Hounslow  
England  
TW6 2 AQ



All dimensions must be checked on-site and not scaled from drawing

Phone +44 20 88976363  
Fax +44 20 88971113

## Conference Hall



### Wi-Fi Details:

**Username:** Marriott Guest

**Password not required** - Open Wi-Fi

# ***Scientific Program***

9<sup>th</sup> European Congress on

# 3D Printing & Additive Manufacturing

Day 1 - October 07, 2024

Meeting Hall: Richmond Suite I

08:00 - 08:45 Registrations

08:45 - 09:00 Opening Ceremony and Introduction

## Keynote Presentations

9.00 - 9.40 Binder Jetting Powder Bed Additive Manufacturing followed by Reactive Infiltration Assisted Sintering of Metal/Ceramic Heating Elements  
**Alexander Katz-Demyanetz**, Israel Institute of Materials Manufacturing Technologies, Israel

9.40 - 10.20 3D Nanoprinting – Possibilities, Strategies and Applications  
**Harald Plank**, Graz University of Technology, Austria

## Networking & Refreshments: 10.20 - 11.00 @ York Lobby

11.00 - 11.40 Thixotropic Metal Processing and 3D Printing of Zinc and Magnesium Bio-Alloys for Biomedical Implant Applications  
**Jack Zhou**, Drexel University, USA

## Oral Presentations

Session Chair: **Hamid Mehrabi**, University of Sunderland, UK

Session Chair: **Jack Zhou**, Drexel University, USA

**Sessions:** Metal 3D Printing | 3D Printing Materials | Polymers in 3D Printing | 3D Bio Printing | Clinical applications of 3D Printing in Orthopedics and Traumatology | 3D Printing | 3D Printing Future Technology | Challenges in 3D Printing | Innovations, Design & Future Technology in 3D Printing

11.40 - 12.05 A Construct To Perform *In situ* Deformation Measurement of Material Extrusion Fabricated Structures  
**Daniel Nelson**, United States Air Force Test Pilot School, USA

12.05 - 12.30 Mechanical Factors that affect the Stability and Sustainability of 3D Printed and 3D Bioprinted Objects  
**Maria Mavri**, University of the Aegean, Greece

12.30 - 12.55 Investigations into Polymer Bonding During the Fused Filament Fabrication Process and its Effect on Mechanical Properties  
**Julian Klingenbeck**, University of the Bundeswehr Munich, Germany

## Group Photo: 12.55 - 13.10

## Lunch: 13.10 - 14:00 @ Market Garden Restaurant

14.00 - 14.25 The Use of Fibers in the Production of Geopolymers using the 3D Printing Method  
**Szymon Gadek**, Cracow University of Technology, Poland

14.25 - 14.50 Experimental Analysis of Thermal Properties and Microstructural Evolution of Ti-6Al-4V during LPBF Printing  
**Johannes Rottler**, University of the Bundeswehr Munich, Germany

14.50 - 15.15 Numerical Investigation of Porous Structures for Additive Manufacturing in Biomedical Applications  
**Babak Ziaie**, Atlantic Technological University, Ireland

9<sup>th</sup> European Congress on

# 3D Printing & Additive Manufacturing

15.15 - 15.40 Processability of Aluminium Alloys by Pbf -Lb/M Additive Manufacturing

**Ignacio González-Barba**, University of Seville, Spain

15.40 - 16.05 The Additive Manufacturing Transformation: Empowering Manufacturing with 3D Printing

**Wilderich Heising**, Boston Consulting Group (BCG), Germany

Networking & Refreshments: 16:05 - 16:30 @ York Lobby

Poster Presentations

**Poster Judges Alexander Katz-Demyanetz, Harald Plank, Hamid Ahmad Mehrabi and Jack Zhou**

3DP-01 A Structure-properties Assessment of Co-28Cr-6Mo Alloy Manufactured by Laser Powder Bed Fusion (LPBF)

**Yuliia Chabak**, Institute of Materials Research of Slovak Academy of Science, Slovakia; Pryazovskyi State Technical University, Ukraine

3DP-02 Structure and Tribological Behaviour of "(TiC+WC)/Hardened Steel" Particulate Metallic Matrix Composite Additively Manufactured by Pulsed-plasma Spraying

**Vadym Zurnadzhy**, Institute of Materials Research of Slovak Academy of Science, Slovakia; Pryazovskyi State Technical University, Ukraine

3DP-03 Marine Propellers Printed in Metal 3D Printing Technology

**Joanna Kulasa**, Łukasiewicz Research Network – Institute of Non-Ferrous Metals, Poland

3DP-04 Research on the Development of a Bearing Shells Production Technology by Applying a Sliding Layer in the 3D Printing Process using the Wire Arc Additive Manufacturing Method

**Anna Brudny**, Łukasiewicz Research Network – Institute of Non-Ferrous Metals, Poland

3DP-05 Development of The on-Line Reading Oxidative Potential System using Resin-Based 3D Printing Technology

**Antonio Toto**, University of Lausanne, Switzerland

3DP-06 CFD Modeling of strand Deposition Flow in Robocasting for Geopolymer-Based Composites

**Abrar Gasmi**, Laboratoire des Technologies Innovantes, France

3DP-07 Multiscale *In situ* Quantification of the Role of Surface Roughness and Contact Area using a Novel Mica-PVS triboelectric nanogenerator.

**Jack Perris**, University of Glasgow, UK

3DP-08 Stereolithography Printing for the Fabrication of Flexural Ultrasonic Sensors with Significantly Enhanced Operational Bandwidth

**Mahshid Hafezi**, University of Glasgow, UK

Day-1 Concludes followed by Award Certifications



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# 3D Printing & Additive Manufacturing

Day 2 - October 08, 2024

Meeting Hall: Richmond Suite I

## Keynote Presentations

9.00 - 9.40 Comparative Analysis of Investment Cast Inconel 625 with Atomic Diffusion Additive Manufacturing

**Hamid Ahmad Mehrabi**, University of Sunderland, UK

9.40 - 10.20 Design, Simulation, and Experiments for Direct Thixotropic Metal 3D Printing

**Jack Zhou**, Drexel University, USA

## Networking & Refreshments: 10.20 - 10.45 @ York Lobby

10.45 - 11.25 Development and Performance Evaluation of Cement Systems for Aerial Additive Manufacturing

**Richard J Ball**, IMPS Bath University, UK

## Oral Presentations

Session Chair **Alexander Katz-Demyanetz**, Israel Institute of Materials Manufacturing Technologies, Israel

Session Chair **Harald Plank**, Graz University of Technology, Austria

## Sessions:

Metal 3D Printing | 3D Printing Materials | Polymers in 3D Printing | 3D Bio Printing | Clinical applications of 3D Printing in Orthopedics and Traumatology | 3D Printing | 3D Printing Future Technology | Challenges in 3D Printing | Innovations, Design & Future Technology in 3D Printing

11.25 - 11.50 Effect of Pulsed Plasma/Laser Surface Modification on Structure and Tribological Behaviour of 316L Steel: Wrought vs. Laser Powder Bed Fusion

**Efremenko V**, Institute of Materials Research of Slovak Academy of Science, Slovakia; Pryazovskyi State Technical University, Ukraine

11.50 - 12.15 3D Printing Parameters for Leakproof Capsules – Additive Encapsulation of PCM

**Miguel Moreira**, University of Aveiro, Portugal

12.15 - 12.40 Advancements in 3D Printing of Ceramic-Like Geopolymers

**Abrar Gasmi**, Laboratoire des Technologies Innovantes, France

12.40 - 13.05 Evaluation of Additive Manufacturing Feasibility in the Energy Sector: A Case Study on Gas-insulated High-voltage Switchgear

**Elham Haghighat Naeini**, Hitachi Energy, Poland

## Lunch: 13.05 - 14:00 @ Market Garden Restaurant

14.00 - 14.25 Numerical Investigation of Inkjet Based Bioprinting of Viscoelastic Liquids

**Rahul Pundora**, Indian Institute of Technology Jodhpur, India

14.25 - 14.50 3D Edible Printing: Food-grade Materials with Binder Jetting Printers

**Shahnaz Mansouri**, Monash University, Australia

## Networking & Refreshments: 16:00 - 16:30 @ York Lobby

Day-2 Concludes followed by Vote of Thanks and Certificate Felicitations

# ***Virtual Program***

9<sup>th</sup> European Congress on

# 3D Printing & Additive Manufacturing

Virtual Program (British Summer Time Zone)

Day-1 | October 07, 2024

09:45 - 10:00 Introduction

## Keynote Presentation

10.00 - 10.40 **Crystallographic Basis of Shape Reversibility in Shape Memory Alloys**  
**Osman Adiguzel**, Firat University, Turkey

## Oral Presentations

10.40 - 11.05 **Use of 3D Printed Bioscaffolds from Decellularized Umbilical Cord for Cartilage Regeneration**  
**Tayyaba Bari**, Interdisciplinary Research Centre in Biomedical Materials (IRCBM), COMSATS University Islamabad, Pakistan

11.05 - 11.30 **Innovative Redesign of Decorative Lighting Frames: Transitioning from Traditional Manufacturing to Additive Manufacturing for Enhanced Sustainability and Customization**  
**Liyanage Hemal**, EPF Engineering School, Troyes, United Kingdom

11.30 - 11.55 **3D Printing Technology and its Combination with Nanotechnology in Bone Tissue Engineering**  
**R. Thiruchelvi**, St. Josephs College of Engineering Chennai, India

11.55 - 12.20 **Effect of Selective Laser Melting (SLM) Process on Tribological Behavior of Ferrous and Non-ferrous Alloys**  
**Omid Ashkani**, Islamic Azad University, Iran

12.20 - 12.55 **Improving the Fatigue Design of Mechanical Systems such as Refrigerator**  
**Seongwoo Woo**, Ethiopian Technical University, Ethiopia

12.55 - 13.20 **Ultra Thin Metal Shell Structure: Big Data, Simulation and AI**  
**Pablo Lorenzo-Eiroa**, New York Institute of Technology, USA.

## Poster Presentations

13.20 - 13.35 **Using 3D Printed Cardiac Abnormality Models in Pre-Clinical Medical Education**  
**Sthefon Tran**, California University of Science and Medicine, USA

13.35 - 13.50 **The Design and Development of 3D-Printed Tablets for Neurological Disorders: Current Status, Challenges, and Future Trends**  
**Jeevandeep Mishra**, Medi-Caps University, India



*Bookmark The Dates*

10<sup>th</sup> European Congress on

# 3D Printing & Additive Manufacturing

August 25-26, 2025 | Valencia, Spain



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