

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

C12_Joining

Virtual

Thursday 16 September

14:40

C12 Joining: C12_1_Fusion Welding I

Session | Location: Room 9

14:40–15:20

Wire-based additive manufacturing of an advanced age-hardenable Al-Mg-Zn-Cu alloy (Keynote)

Speaker

Dr Thomas Klein

15:20–15:40

Undermatched welding of ultra-high strength steel S1100 with metal-cored wire - Influence of welding positions on mechanical properties

Speaker

Prof. Norbert Enzinger

15:40–16:00

Experimental investigation of fatigue performance of steel welded tubular X-joints, for offshore wind energy platforms

Speaker

Dr Anna Zervaki

16:00–16:20

Characterization of Hydrogen Diffusion in a Thick-walled Submerged Arc Multi-Layer Weld Joint

Speaker

Tim Richter

16:20

16:40

C12 Joining: C12_2_Fusion Welding II

Session | Location: Room 9

16:40–17:00

Synchrotron X-ray observation of flow evolution during fusion welding.

Speaker

Fan Wu

17:00–17:20

Joining Ti6Al4V to alumina by diffusion bonding using titanium thin interlayers

Speaker

Prof. Sónia Simões

17:20–17:40

Study of the Influence of Hardening Models on the Evolution of Residual Stress in type 316LN Stainless Steel Weld Joint

Speaker

Mr Pavan A R

17:40-18:00

Formation of the long-range ordered η''' -Fe₂(Al,Si)₅ phase during welding of aluminum-steel sheets with silicon-rich and silicon-poor fillers

Speaker

Ms Sabine Krisam

18:00-18:20

Liquid Metal Embrittlement of a 3rd Generation Advanced High Strength Steel

Speaker

Mr Outhmane Siar

18:20

Friday 17 September

09:50

C12 Joining: C12_3_Fusion Welding III

Session | Location: Room 9

09:50–10:10

A comprehensive study on the microstructure and mechanical properties of welded joints of 316Ti steel

Speaker

Dr Marek Węglowski

10:10–10:30

Analysis of local strain evolution during electron beam welding of hot crack sensitive nickel base conventionally cast Alloy 247

Speaker

Mr Torsten Jokisch

10:30–10:50

Similar joining of advanced high strength steels: Multitechnical characterisation of the microstructure after laser welding process

Speaker

Ms Ana Julia Vasconcelos Moreira

10:50–11:10

Effect of fibre orientation on light scattering during laser transmission welding.

Speaker

Ms Rowshni Jabeen

11:10

11:50

C12 Joining: C12_4_Friction Weelding I

Session | Location: Room 9

11:50–12:10

Microstructural and Mechanical Properties Study of Friction Stir Processed Cu

Speaker

Prof. Michael Regev

12:10–12:30

Friction stir welding of a CoCrFeMnNi high entropy alloy compared to AISI 304 austenitic stainless steel: evolution of microstructure and mechanical properties

Speaker

Mr Tim Richter

12:30–12:50

Rotational friction welding of high strength steel anchor strands

Speaker

Mr Christian Hoflehner

13:10–13:30

Joining ultrafine grained aluminium by friction stir welding

13:30

Speaker

Dr Marta Orlowska

14:40

C12 Joining: C12_5_Friction Welding II & Brazing**Session** | **Location:** Room 9

14:40–15:00

Manufacturing of structural and functional hybrid material systems by ultrasonic metal welding**Speaker**

Mr Moritz Liesegang

15:00–15:20

Impact behavior of dissimilar AA2024-T351/AA7075-T651 butt joints produced by Friction Stir Welding: effects of microstructure and Al₂O₃-SiC particles addition**Speaker**

Dr Cindy Morales Bazaldua

15:20–15:40

Brazing of zirconia to titanium with pure gold**Speaker**

Mrs Marie Fischer

15:40–16:00

Joining Ti6Al4V to ZrO₂ with Ag-Cu sputter-coated Ti brazing filler**Speaker**

Prof. Sónia Simões

16:00

16:40

C12 Joining: C12_6_Special Joining Techniques**Session** | **Location:** Room 9

16:40–17:00

Interfacial microstructure and mechanical property of explosively welded Mg/Al alloy plates**Speaker**

Dr Mami Mihara-Narita

17:00–17:20

Process Optimization of Continuous Induction Welding of CFRPC**Speaker**

Mr Stephan Becker

17:20–17:40

Load transfer behaviour of ultra-lightweight CFRP-metal struts under elevated and cryogenic working temperatures**Speaker**

Dr Stephan Ucsnik

17:40–18:00

Shape Memory Alloy Connecting Elements - A Known Principle with New Perspectives**Speaker**

Mr Andreas Keck

18:00-18:20

Self-piercing riveting of aluminum alloys with high-strength steels against the favorable joining direction

Speaker

Dr Josef Domitner

18:20