

**Keynote lecture**

**Wire – Laser Metal 3D Printing – a disruptive directed energy deposition technology by Meltio**

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**ABSTRACT**

Recently, there has been an increasing development and progress of additive technologies, especially Wire Laser Metal Deposition (W-LMD). This technology is used for the production of metal components, which is an alternative to more well-known powder-based processes. W-LMD uses a laser to melt the wire, depositing it in layers on the surface of the part being produced. The production of parts with this technology can be realized in two ways: using a single wire or dual wire - where it is possible to use different metal materials by printing one part. The most famous printers used for the production of metal parts with W-LMD technology are Meltio (Jaén, Spain). These printers use a wide range of materials, the most famous of which are Stainless Steel 316L, Stainless Steel 308, Mild Steel ER70S, Titanium 64, and Nickel 718 (Inconel). Materials such as copper, aluminum, and refractory materials are still being developed.