

On the processing of light metals via near-net-shaping for structural, industrial, and biomedical applications

Speaker

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Light metals are relatively new engineering materials as compared to other (structural) metals like steel but are becoming progressively more relevant as engineering materials in all sorts of applications, from the transportation industry to the biomedical sector. Technological challenges related to manufacturing, materials behaviour, and sustainability still, however, need to be solved to achieve the widely diverse performance required for different applications. In this presentation, Dr. Leandro Bolzoni will give a scientific overview of the potential and challenges of processing light metals via near-net shape technologies and an insight about the performances achievable with these materials. Emphasis is focused on the development of new (e.g., low-cost) and functionalised (e.g., antimicrobial) compositions, properties optimisation, and development of alternative manufacturing technologies.

Dr. Leandro Bolzoni is a metallurgist, a mechanical engineer specialised in materials science and engineering by training, whose scientific interest is on the physical metallurgy of light metals (i.e. Ti, Al and Mg) for a wide range of engineering application, spanning from biomedical to aerospace. Leandro currently works at WaiCamm, the Waikato Centre for Advanced Materials and Manufacturing of the School of Engineering, at the University of Waikato in Hamilton (New Zealand) where he is the leader of the Metals and Advanced Alloys Research Group. Leandro is also the programme leader of the ENZ (Engineering New Zealand) accredited Materials and Process BE (Hons) programme, and a committee member of the Society of Materials New Zealand Inc. (SMNZI).

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