**Ústav termomechaniky AV ČR, v.v.i.**

v rámci přednáškového cyklu **Seminář Ústavu termomechaniky**

si Vás dovoluje pozvat na přednášku

# Additive Manufacturing of metals: Past, today and tomorrow

kterou přednese

**Dr. Edson Costa Santos**
director of the SENAI Innovation institute in Laser Processing
Joinville, Santa Catarina, Brazil

The lecture will be addressed the following topics in Additive Manufacturing (AM) of metals:

· Draw some observations from various attitudes to AM world-wide.
· Review shortly various additive manufacturing technologies, their virtues and drawbacks.
· Address cases, in which additive can/cannot replace conventional manufacturing - problems with distortions, variability in micro-structure and consequences, etc.
· Comparison of additive and conventional micro-structures and their impact on macro-mechanical properties: strength, fragility, fatigue, impact resistance, etc.
· Use of additive manufacturing for meta-materials (auxetic and other) for the purposes of "energy absorption or distribution" and "mechanical strength with low weight".
· Additive manufacturing process certification and/or serial production of components - competitiveness in terms of both function and price.
· Design of components for Additive Manufacturing - material only there "where needed" and the related development of software (e.g. topology optimization).
· Future of AM - visions and expectations.
· Describe and introduce FIESC - SENAI focus in AM.

Dr. Edson Costa Santos spent more than a decade in various laboratories related to Additive Manufacturing in Europe, South America and Japan. In the presentation, it will be drawn from his experience, and present a view of current AM layout – technologies, directions and main leaders.

**Přednáška se bude konat**
**v pondělí 19. června 2017 od 10:00 hodin**
**v budově Ústavu termomechaniky (posluchárna B)**
**Dolejškova 5, 182 00 Praha 8**

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