AMaTUC

European project
on Additive Manufacturing

Boosting the scientific excellence and innovation capacity in additive manufacturing of TUCN

The AMaTUC project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691787

Project Datasheet

AMaTUC

Boosting the scientific excellence and innovation capacity in additive manufacturing of the Technical University of Cluj-Napoca

Jan. 2016 – Dec. 2018

36 months

UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA

Loughborough University

FH AACHEN UNIVERSITY OF APPLIED SCIENCES

intelligentsia consultants

AMaTUC European project on Additive Manufacturing

Project Objectives

- The project aims to raise the research and innovation excellence of the department of Manufacturing Engineering at the Technical University of Cluj-Napoca (TUCN).
- The Twinning activities will benefit TUCN but also the other consortium partners.
- The project will also benefit the Romanian and European automotive industry and personalised products markets.

Project Objectives

Objective 1

- Strengthen TUCN's research excellence in AM

Objective 2

- Enhance the research and innovation capacity of TUCN and Twinning partners

Objective 3

- Raise the research profile of TUCN and the Twinning Partners

Objective 4

- Contribute to the research and innovation priorities of Romania

Objective 5

- Support research and innovation on a European level

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Research Topics

- Improve the existing AM technologies
  - *Selective Laser Melting (SLM) process capabilities*
  - *Selective Laser Sintering (SLS) process capabilities*
  - *Manufacture customised parts for the automotive industry*
- Integrate AM technologies with suitable Rapid Tooling methods
  - *Rapid Tooling for small to medium volume production of plastic and metal parts*
  - *Rapid manufacturing of complex parts made from composite materials*
  - *Innovative manufacturing of customised parts by combining AM with other key technologies*
- Design for competitive manufacturing of personalised products and computer planning (CAE-FEM) analysis and simulation
  - *Design for AM and estimate the technical efficiency of the new tailored made manufacturing processes, for small volume production*
  - *Planning new personalized products (CAE) and kinematical analysis*
  - *Finite element modelling (FEM) of new personalised products to simulate their main functional requirements;*

Project Activities

- Staff exchange between TUCN, LbU and FH Aachen.

- Training events (workshops, summer schools, and international conference).

- Promotion and dissemination of project results to a large audience.

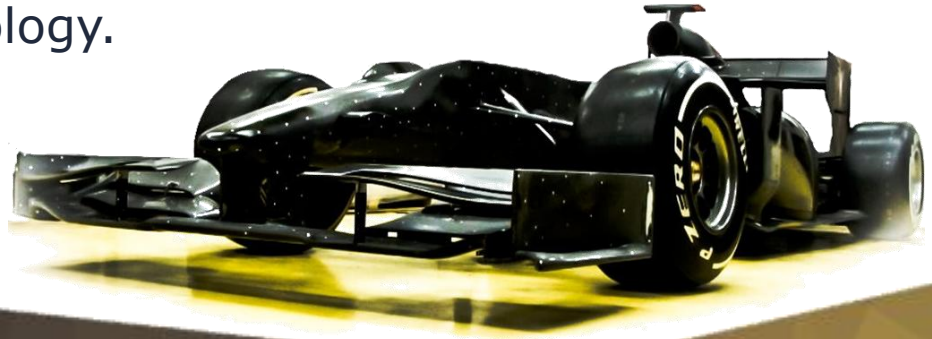
Successful partners

Technical University of Cluj-Napoca

UNIVERSITATEA TEHNICĂ
DIN CLUJ-NAPOCA

The department of Manufacturing Engineering has an impressive track records of international publications and contracts with the manufacturing industry. TUCN is really successful in competitive research as well: AMaTUC is not their first European project and certainly not the last one.

The AMaTUC coordinator, Nicolae Balc, is the reference figure of additive manufacturing S&T in Romania and frequently promote AM through various media channels, contributing to the democratisation of the technology.



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Successful partners

- ***Loughborough University***

  Loughborough University is widely regarded as the world's leading centre for additive manufacturing research, development and dissemination.

- ***FH Aachen***

  FH Aachen and its successful GoetheLab will largely contribute to the exchange of knowledge in AM topics and the consortium will utilise their unique FabBus for promotion purposes.

- ***Intelligentsia Consultants***

  Intelligentsia has a strong experience in European project management and technology transfer activities. Intelligentsia will provide tailored training to TUCN staff on transferable skills topics.

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Thank you for your attention

www.amatuc.com

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