EDITOR'S NOTE

Research has always been an important activity among the universities members of AUIF (The Manufacturing Engineering Association from Romanian Universities). Besides teaching, the technical universities aimed to produce knowledge and usually there are three main funding sources, for the research carried out within the university laboratories: national projects, European projects and commercial projects in co-operation with industrial companies.

The Romanian government tries to fund and support as much as possible the research activities and the UEFISCDI is organizing from time to time national competitions, to select the best proposals to be funded. Unfortunately, the available funds for national grants have been limited in the last years.

Commercial contracts with companies are very good, to maintain a good contact with the reality from the Romanian industry, to measure and test the capability of the research groups to undertake and sort out properly different technical tasks and difficulties, that some companies are facing at present. Anyhow, these commercial contracts are short time contracts to sort out specific issues and they are not enough for a research group, for long term and substantial research plans.

European projects have become a significant funding source for research activities. It is not easy to win a European project, as it is an open competition with research groups from the other European countries, both from Eastern and Western developed countries. In 2015 the rate of success in some Horizon 2020 competition was about 12%. The topic of a successful project should be among the latest state of the art and the research group has to prove that their background and competences are closer to the European top level, in that field. It is also important for a successful proposal, to present a comprehensive management plan, in order to ensure a significant impact of a future project. These projects funded from public money, are meant not just to support a research of excellence, but mainly to support that kind of research, which is able to bring significant benefits to the communities, regardless the target are industrial companies for industrial applications, or national health service for medical applications.

AMaTUC (Additive Manufacturing at Technical University of Cluj) is one of the Horizon 2020 successful proposals in 2005. It is a 3 years twinning project entitled: "Boosting the scientific excellence and innovation capacity in additive manufacturing of the Technical University of Cluj-Napoca", starting on 1st of January 2016.

Additive Manufacturing (AM), also known as 3D printing, first emerged in the 80's and since then it was the subject of many researches and technological developments leading to numerous printing technologies (e.g. SLS, SLM, LOM, FDM, etc.). In 2012, The Economist described AM as the third industrial revolution and we witnessed a large adoption by various types of industry but also designers, engineers, hobbyists and consumers.

The Department of Manufacturing Engineering (DME) at the Technical University of Cluj-Napoca (TUCN) has more than 20 years experience in the field of AM technologies and built strong cooperation with national industries to promote and democratize the use of AM. The AMaTUC project aims to boost the scientific excellence and innovation capacity of TUCN for the benefit of the automotive industry and personalised products markets.

The 3-year project will build upon the existing strong research and innovation base of TUCN and its twinning partners. The AMaTUC consortium is composed of four excellent partners specialised in AM, innovation and technology transfer: Loughborough University (LbU), FH Aachen University of Applied Sciences (ACUAS) and Intelligentsia Consultants (Intelligentsia).

The AMaTUC project will focus on sub-topics relevant to AM with a high socioeconomic impact for European and Romanian markets. There are 3 main project's sub-topics:

1. Improve existing AM technologies;
2. Integrate the AM technologies with suitable Rapid Tooling methods;
3. Design for competitive manufacturing of personalised products and computer planning (CAEFEM) analysis and simulation.

I hope that more and more research groups from AUIF will be able to access European projects, for the benefits of the academic and industrials communities from Romania.

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