

SCHOOL EVENT 4, 8-9 December 2020, online (TEAMS platform)

## **INTERACT PROJECT SHORT DESCRIPTION ([www.interact.utcluj.ro](http://www.interact.utcluj.ro))**

In today's economy, more than ever, the need to implement the sustainability principle in designing new products has become of utmost importance. Sustainability represents nowadays innovation's new frontier. Becoming environmentally friendly through the development of sustainable products, the industrial actors end up by reducing inputs they use and, thus, lower the costs. Moreover, with better "greener" products, additional revenues are generated. As the automotive industry is one of the most technologically interesting domains to face the societal challenges, the automotive manufacturers are accelerating the development of new sustainable technologies for products to comply with the most stringent standards of efficiency, reliability, safety and sustainability. The trend for more electrified automotive applications (MEAs) asks for a new generation of automotive electrical actuation systems, allowing for a more efficient and environmentally friendly mobility and enhancing the driving experience, making it safer, more comfortable and sustainable.

INTERACT's overall objective is to answer the further enhancement of the next generation of high-performance sustainable automotive electric actuators (SAEAs) by combining high-level scientific research and training activities in a joint academia-industry doctoral programme, focused on solving critical issues (see Section 1.1.2) of the automotive electrical actuation Research & Development (R&D) cycle.

The project is a natural continuation of a fruitful collaboration between the beneficiaries: two universities (UTCN and ULB) and three industrial actors. What started as staff exchange collaboration for technological know-how and transfer of knowledge in the field of electrical machines (EMs) and drives (EMDs) for automotive applications<sup>1,2</sup> has now developed, through INTERACT, into a joint doctoral programme, based on common interests and goals, in the field of R&D of the next generation of SAEAs. More specifically, INTERACT takes advantage of the well-established intersectoral collaboration achievements and of the solid research and training competences and facilities at the beneficiaries for: (i) giving new career perspectives and increasing the employability of six young researchers, by enhancing their creative and innovative potential; (ii) pushing forward and/or extend the industrial partners' portfolio with new technological developments to be integrated into the R&D process

<sup>1</sup> <http://www.emda-loop.com>

<sup>2</sup> <http://www.demotest-ev.com/>, <http://www.researchgate.net/project/DeMoTestEV-DEsign-Modelling-and-TESTing-tools-for-Electrical-Vehicles>



such that they remain and/or enter as an important player in the automotive industry ;  
(iii) strengthening innovation capacity of UTCN and ULB with commercial exploitation of the research.

It is clear that energy-efficient, reliable, robust, low-cost and low-noise electrical machines, along with highly-integrated, energy-efficient power electronics and control modules, are required in order to reduce the impact of automotive electrical actuated powertrain and/or auxiliaries on the overall performance and cost of vehicles, no matter if they are fuel- (fossil or alternative), hybrid- or electric-powered. INTERACT aims at the development of R&D and engineering specialists and services to deal with the design and development of advanced electrical actuation technologies for sustainable automotive applications.

#### **TRAINING EVENT SHORT DESCRIPTION**

Instrumentation and test systems play an important role in providing new tools, new procedures and new methodologies, which are necessary for the development of advanced sustainable automotive applications. The fourth network-wide school event aims to provide knowledge and competences on how to develop flexible high-standard testing facilities based on advanced instrumentation and cutting-edge testing procedures and technologies. In parallel with the school event a School on Sustainable mobility will be organized for maximum 30 PhD students and young researchers coming from all over the world.

**The training event will be organized online, using TEAMS platform. For registration please send a message to [anca.nicu@ethm.utcluj.ro](mailto:anca.nicu@ethm.utcluj.ro) with your contact data (name and surname, title, affiliation, position, email address).**