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REDEEM University	KTH Royal Institute of Technology
Title of the JP	THRUST- Turbomachinery Aeromechanical University Training
Field of study	Mechanical Engineering
Partner universities	University of Liège (ULg) in Belgium, Aristotle University of Thessaloniki (AUTH) in Greece and Duke University in the United States
Short description	<p>Turbomachines produce more than 90% of all electricity in the world, drive the majority of aircrafts and are used extensively as compressors, pumps, etc. in many modern applications (e.g. refrigerators, ventilators, etc).</p> <p>Aeromechanics is one of the main limitations for more efficient, lighter, cheaper and reliable turbomachines, be it jet engines, steam turbines, gas turbines, wind turbines or hydro turbines, as well as various kind of compressors.</p> <p>THRUST is a two-year program. The first two semesters provide an advanced introduction to aeromechanics in turbomachines at one university (KTH). In the third semester the students specialize in one of the three options:</p> <ol style="list-style-type: none"> 1) Unsteady Aerodynamics (Duke University, USA) 2) Structural Vibration and Fatigue (Aristotle University of Thessaloniki, Greece) 3) Aeromechanical & Material Design (Université de Liège, Belgium) <p>In the final year the students will perform the MSc-thesis project, either at one of the academic institutions or at one of the industrial partners involved in the programme. The thesis topics will cover different aspects within the field of turbomachinery aeromechanics</p>

	<p>The programme is highly integrated, first of all regarding student and teacher mobility for certain common lectures, but also related to the extended use of remote teaching by the specialist teachers at all four universities, in conjunction with “face-to-face” and “virtual” interactive workshops and project courses. The educational programme THRUST offers a unique, modern and highly interactive learning material which enhances the student learning process. This, together with the “remote learning” aspects, will also allow for a substantial potential for already active industrial persons to participate in the programme as part of the life-long learning inside their respective companies.</p> <p>Companies that are involved in mainly the following three ways in THRUST:</p> <ol style="list-style-type: none"> 1. Guest lecturers - People from companies come regularly to teach using practical examples of aeromechanical problems from their perspective. Companies involved are among others Siemens, GKN Aerospace and Rolls-Royce. 2. Summer internships - Several industry partners have a number of offers each summer for internships 3. Projects for the master’s thesis – A number of students each year can do their projects in industry or in a project that is run in collaboration with industry.
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