

## R&D Profile Form

<b>Name of the Organisation</b>	Project Laboratory for Numerical Analysis of Damage in Aeronautical Structures, University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Department of Aeronautical Engineering
<b>Organisation Short Name</b>	FMENA
<b>Organisation Type</b>	Academic Institution
<b>Country</b>	Croatia
<b>Fields of Activity</b>	<ul style="list-style-type: none"> <li>• stress analysis of aeronautical structures;</li> <li>• composites engineering;</li> <li>• application of numerical methods in stress analysis;</li> <li>• numerical simulations;</li> </ul> university education in the areas of aeronautical structures and composites engineering
<b>Skills and Expertise Offered</b>	<ul style="list-style-type: none"> <li>• impact damage analysis of aeronautical structures;</li> <li>• bird strike analysis using EOS and CEL;</li> <li>• application of explicit finite elements methodology (Abaqus /Explicit) in the composites engineering;</li> <li>• development and implementation of new constitutive models and modeling procedures by user subroutines in Abaqus/Explicit/Standard;</li> <li>• application of Coupled Euler Lagrangian methodology in impact damage analysis;</li> <li>• finite element analysis of metallic/composite/sandwich structures;</li> <li>• consultancy in the aeronautics;</li> <li>• analysis of research potentials and trends in air transport;</li> </ul>
<b>Keywords</b>	aeronautical structures, composites engineering, numerical simulations
<b>Previous FP Projects Participated</b>	<ul style="list-style-type: none"> <li>• MOMENTUM – Composites in Transport (FP6 Marie Curie)</li> <li>• WBC-IncoNet</li> <li>• AirTN-FP7</li> </ul>
<b>Research topic(s) of interes</b>	<ul style="list-style-type: none"> <li>• AREA 7.1.1.1. GREEN AIRCRAFT</li> <li>• AAT.2012.1.1-2. Aerostructures</li> <li>• AAT.2012.1.1-4. Systems and equipment</li> <li>• AAT.2012.1.2-2. Maintenance and disposal</li> <li>• AREA 7.1.3.1. PASSENGER FRIENDLY CABIN</li> </ul>

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	<ul style="list-style-type: none"> <li>• AAT.2010.3.1-2. Noise and vibration</li> <li>• AAT.2012.3.3.1. Aerostructures</li> <li>• AAT.2012.3.3.x. Propulsion: tolerance to particle ingestion</li> <li>• AAT.2012.3.3.2. Systems and equipment</li> <li>• AAT.2012.3.3.x. Helicopter safety</li> <li>• AREA 7.1.3.4. OPERATIONAL SAFETY</li> <li>• AAT.2012.3.4.1. Design systems and tools</li> <li>• AAT.2012.3.4.2. Maintenance</li> <li>• AREA 7.1.4.1. AIRCRAFT DEVELOPMENT COST</li> <li>• AAT.2012.4.1-1. Design systems and tools</li> <li>• AAT.2012.4.1-2. Aerostructures</li> <li>• AAT.2012.4.x-x. Integrated approach to lean manufacturing of composite and hybrid aircraft / engine structures</li> <li>• AREA 7.1.4.2. AIRCRAFT OPERATIONAL COST</li> <li>• AAT.2012.4.2-2. Aerostructures</li> <li>• AREA 7.1.4.3. AIR TRANSPORT SYSTEM OPERATIONAL COST</li> <li>• AAT.2012.4.3.1. Design systems and tools</li> <li>• AREA 7.1.5.1. AIRCRAFT SECURITY</li> <li>• AAT.2012.5.1.1. Aerostructures</li> <li>• AREA 7.1.6.1. BREAKTHROUGH AND EMERGING TECHNOLOGIES</li> <li>• AAT.2012.6.1-1. Lift</li> <li>• AAT.2012.6.1-3. Interior space</li> <li>• AREA 7.1.6.2. STEP CHANGES IN AIR TRANSPORT OPERATION</li> <li>• AAT.2012.6.2-1. Novel air transport vehicles</li> <li>• AREA 7.1.6.3.PROMISING PIONEERING BREAKTHROUGH TECHNOLOGIES AND CONCEPTS FOR AERONAUTICS AND AIR TRANSPORT</li> <li>• AAT.2012.6.3-1. Breakthrough and emerging technologies</li> <li>• ACTIVITY 7.1.7. CROSS-CUTTING ACTIVITIES FOR IMPLEMENTATION OF THE SUB-THEME PROGRAMME</li> <li>• AAT.2012.7-xx. Fostering innovation in framework programme funded research projects</li> <li>• AAT.2011.7-xx. Assessment of the potential insertion of unmanned aerial system in the air transport system</li> <li>• AAT.2012.7-xx. Facilitating access to aircraft for disabled people</li> <li>• AAT.2012.7-xx. Attracting young Europeans to future careers in the field of aeronautics</li> <li>• AAT.2012.7-xx. Monitoring the progress towards the vision</li> </ul>
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	<p>2020 goals</p> <ul style="list-style-type: none"> <li>• AAT.2012.7-xx. Supporting the organization of conferences and events of special relevance to aeronautics and air transport research</li> </ul>
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