UNI.MINDS
Festival znanosti in inovativnosti

CHALLENGES OF THE COMPANY HIDRIA	Searching for
Hidria.1: On the fly" checking of the mechanical properties of the electrical sheet at the input of the production line. Non-destructive characterisation of electrical sheet metal for integration into an automatic punching machine for the production of electric motor blades. Sensors need to be added to the production line to measure the mechanical properties of the electrical sheet "on the fly". The company is looking for partners to collaborate in the development of a method for the characterisation of sheet metal.	**Researchers** **Start.ups**

Hidria.2: Development of the induction battery heater. The heater must provide 9 kW of power at a supply voltage of 850 V, weigh less than 2 kg, and have a max. size of 250x200x100 mm. The company is looking for partners to help them develop the design of the heater holder. The heating method is induction heating, 'Omega' channel design/implementation, coil design and implementation, electronics implementation. The skills required are a good understanding of fluid dynamics, thermodynamics, materials science, electromagnetism, numerical fluid simulation (CFD), magnetic and structural.	**Researchers** **Start.ups**
Hidria.3: Developing silent fans for heat pumps and air conditioners Development of new models of axial and centrifugal fans for use in heat pumps and air-conditioning systems, where energy efficiency and, above all, acoustic competitiveness are the criteria for commercial success. To achieve the latter, it is necessary to develop new geometries for axial elis and centrifugal wheels and other air flow control elements, the design of which will be innovative, unconventional and unencumbered by existing manufacturing technologies.	**Researchers** **Start.ups**

Hidria.4: Development of a dimensionally and cost-optimised 3-phase frequency converter (APFC) for control of an EC fan rated at 6 KW. The converter shall comply with EMC standards including line current harmonic limits (IEEE 519) and achieve universality of EC fans for a wide range of voltage networks (200 - 509V 50/60 Hz).	**Researchers** **Start.ups**
CHALLENGES OF THE COMPANY OLJARNA LISJAK	**Searching for**
Lisjak.1: Digitising olive oil production Analysis of the possibility of digitising the olive oil production process with full traceability of location, temperature and production parameters from harvesting to sale to the final consumer. Preparation, storage, formatting and distribution of information on each litre of oil, available to all those involved in production, distribution and final consumption. Possibility to integrate AI for olive species identification, video AI-assisted production control of pressing ...	**Researchers** **Start.ups**
Lisjak.2: Analysis of the use value of secondary olive pressing waste The olive pressing process produces as much as 75% of waste, which still has a useful energy and nutritional value. An overview of the potential beneficial uses of the waste and the necessary technological processes for the recovery of the waste into useful raw materials.	**Researchers** **Start.ups**

Lisjak.3: Glamping in retro campervans Application for the automation and computerisation of the glamping service in retro campervans: video for the operation of the campervan, ordering of services in the campervan, meals, additional excursion offers, etc.	**Start.ups**
Olive Museum Design of a museum taking into account the exhibits already collected, professional museum guidelines and upgrading with interactive content, projections and innovative museum solutions to achieve uniqueness and wider visibility.	**Researchers** **Start.ups**