

## ARIS research projects in progress

ARIS	Project number	Title	Responsible person / Project coordinator on the Faculty of Mechanical Engineering	Duration
	<b>J7-60118</b>	Human Exposure to Radiation from new Wireless Communication Technologies using Advanced Electromagnetic-Thermal Dosimetry Models	Prof. Dr. Jure Ravnik Jure.ravnik@um.si	1.2.2025 – 31.1.2028
	<b>J2-60048</b>	Development of anisotropic thermally conducting and insulating substrates for recyclable flexible electronics	Assoc. Prof. Dr. Vanja Kokol vanja.kokol@um.si	1.1.2025 – 31.12.2027
	<b>J2-60049</b>	Development of Advanced Cellular Metamaterials	Assist. Prof. Dr. Nejc Novak nejc.novak@um.si	1.1.2025 – 31.12.2027
	<b>J7-60120</b>	Design, development, and characterisation of innovative biodegradable vascular stents	Prof. Dr. Janez Kramberger janez.kramberger@um.si	1.1.2025 – 31.12.2027
	<b>L2-60138</b>	Self-learning collaborative welding application	Assist. Prof. Dr. Timi Karner timi.karner@um.si	1.1.2025 – 31.12.2027
	<b>N2-0328</b>	Effect of temperature conditions on the microstructure and mechanical properties additively manufactured materials	Prof. Dr. Damjan Klobučar/ Prof. Dr. Franc Zupanič franc.zupanic@um.si	1.1.2024 – 31.12.2027
	<b>Z2-60175</b>	Efficient bacterial cellulose-based anion exchange membranes for alkaline fuel cell applications	Dr. Maša Hren masa.hren@um.si	1.1.2025 – 31.12.2026
	<b>N2-0388</b>	Novel approach to acquire UltraPURE nanoCELLulose	Senior Research Fellow Dr. Selestina Gorgieva selestina.gorgieva@um.si	1.1.2025 – 31.12.2026
	<b>N2-0326</b>	Experimental and numerical analysis of static and fatigue double-side bending of rubber matrix composites	Prof. Dr. Jernej Klemenc/ Prof. Dr. Srečko Glodež srecko.glodez@um.si	1.1.2024 – 31.12.2026

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	J2-50086	Nanofibrillar cellulose membranes in microbial fuel cells: material development for sustainable, high value-added applications	Senior Research Fellow Dr. Selestina Gorgieva selestina.gorgieva@um.si	1.12.2023 – 30.11.2026
	J2-50087	Fabrication of high capacitance electrospun fibrous net for flexible supercapacitor	Assist. Prof. Dr. Alenka Ojstršek alenka.ojstrsek@um.si	1.10.2023 – 30.9.2026
	L2-50059	Nanostructured coatings of high-entropy alloys for use in toolmaking	Dr. Aljaž Drnovšek / Prof. Dr. Franc Zupanič franc.zupanic@um.si	1.10.2023 – 30.9.2026
	V2-24074	Extension of the national measurement standard basis in the field of "length" and development of physical and technological basis for ensuring traceability of laser interferometers with frequency in infrared range on the unit metre	Prof. Dr. Bojan Ačko bojan.acko@um.si	1.10.2024 – 31.3.2026
	Z2-50082	Developing advanced metamaterials with improved vibration fatigue resistance	Dr. Branko Nečemer branko.necemer@um.si	1.10.2023 – 30.9.2025
	L7-4494	New complex, bone layer incorporating human in vitro skin model for testing of non-invasive glucose sensors	Assist. Prof. Dr. Tina Maver / Prof. Dr. Matej Vesenjajk matej.vesenjajk@um.si	1.10.2022 - 30.9.2025
	J1-4416	The development of a highly sensitive electrochemical method for trace determination of antibiotic compounds based on magnetic polymeric nanocomposites in environmental systems	Assist. Prof. Dr. Olivija Plohl olivija.plohl@um.si	1.10.2022 - 30.9.2025
	J7-4492	Advanced technological processes for recycling of waste keratin biomass and development of novel keratin based functional bio-product	Prof. Dr. Mojca Škerget / Prof. Dr. Lidija Fras Zemljič lidija.fras@um.si	1.10.2022 - 30.9.2025
	J2-3053	Development of high-performance piezoelectric coatings for self-powering of nonwovens used in e- mobility	Assoc. Prof. Dr. Vanja Kokol vanja.kokol@um.si	1.10.2021 - 30.9.2025
	L2-3167	Cognitive geometrical control of machined forged parts based on big data from the manufacturing process	Assoc. Prof. Dr. Mirko Ficko mirko.ficko@um.si	1.10.2021 - 30.9.2025