

MFC 2026

CONFERENCE PROGRAMME

September 17, 2026



10th MY FIRST CONFERENCE

08:45 – 09:15	REGISTRATION		Faculty Hall
09:15 – 09:30	CONFERENCE OPENING AND WELCOME SPEECHES		P2
09:30 – 10:00	KEYNOTE LECTURE Karlo Jakac & Luka Lanča: <i>Autonomous UAV system for oceanic search and rescue</i>		P2
10:00 – 11:00	SECTION 1.1 P2 CHAIRMAN: Luka Calcich & Matko Glučina Matko Glučina, Jonatan Lerga: <i>Multi-Horizon Forecasting of Household Electricity Consumption Using Ensemble Learning</i> Luka Calcich, Alfredo Višković, Vladimir Valentić: <i>Resilience-Oriented Planning of Territorial Virtual Power Plants for Critical Infrastructure Supply</i> Ivan Chetyrbok: <i>Multi-Scale Marine Diesel Engine Modelling for a Real Time Engine Room Simulator</i> Ivana Gredelj, Ivica Stančerić, Saša Ahac: <i>Military Vehicle Mobility Assessment</i>	SECTION 1.2 P1 CHAIRMAN: Josip Zorčić & Mario Prpić Josip Zorčić, Josip Peranić: <i>Integrating Field Monitoring and Soil Characterisation for Slope Stability Modelling</i> Mario Prpić, Dario Iljkić, Sunčana Smokvina Hanza, Božo Smoljan: <i>Development of Hardness Prediction Models for Quenched and Tempered Steels</i> Anđela Janković, Leo Škec, Nina Čeh: <i>Numerical and Experimental Investigation of Progressive Failure in Adhesively Bonded Masonry Under Dynamic Loading</i> Sara Antolović, Petra Dragčević, Silvija Mrakovčić, Neira Torić Malić: <i>Mechanical and Durability Performance of High Strength Concrete Reinforced with Recycled Polymer Fibres</i>	
11:00 – 11:30	COFFEE BREAK		Faculty Hall
11:30-13:00	SECTION 2.1 P2 CHAIRMAN: Martina Ivić & Zvonimir Mrle Martina Ivić, Marta Alvir, Stefan Ivić, Lado Kranjčević: <i>Offshore Wind Farm Layout Optimisation</i> Zvonimir Mrle, Ante Sikirica, Zoran Čarija: <i>CFD Investigation of Cavitation in a Francis Turbine: Identifying Cavitation in a Commissioned Hydroelectric Power Plant</i> Anivija Baldigara, Ante Skoblar, Luka Traven: <i>Machine Learning-Based Estimation of Oil Burial Depth as a Tool for Coastal Beach Pollution Assessment</i> Matej Mališa, Stefan Ivić: <i>Confidence Correction Based on Real-World Target Size for UAV Object Detection</i> Merouane Djouahra, Vladimir Valentić, Luka Calcich, Alfredo Višković: <i>Technical Analysis of a Micro-Hydro Power System Integrated with a Water Distribution System in the Istria Region</i> Ugo Gruden, Anica Trp: <i>Numerical Analysis of Fluid Flow and Heat Transfer Characteristics in a Plate Heat Exchanger with Chevron-Type Corrugation</i>	SECTION 2.2 P1 CHAIRMAN: Raul Ivan Gašljević & Ena Dražić Raul Ivan Gašljević, Domagoj Lanc, Goran Turkalj: <i>Numerical FE Model for Creep Buckling of an Al-SiC Composite Beam</i> Tomislav Bašić, Aleksandra Deluka-Tibljaš, Marijana Cuculić: <i>Effect of Surface Colour and Wood Ash in Asphalt Mixtures on Asphalt Pavement Thermal Behaviour</i> Dominik Salma, Ante Skoblar, Goranka Štimac Rončević: <i>Calculation of Natural Frequencies and Mode Shapes of Euler-Bernoulli Beams Using the PINN Method</i> Marijana Ružić: <i>Networking Urban Voids: Public Infrastructure Model for Fragmented Port Cities</i> Ena Dražić, Ivan R. Sasselli, Helena S. Azevedo, Daniela Kalafatović: <i>Supramolecular Biomaterials: From Composition to Morphology and Function</i> Mirjana Plečko: <i>The Quality 5.0 Paradigm: Redefining Quality Management for Industry 5.0 Manufacturing</i>	
13:00 – 14:00	LUNCH		Restaurant
14:00 – 14:30	KEYNOTE LECTURE Hrvoje Marušić: <i>Connecting Classrooms, Labs, and Companies: RITEH's Holistic Approach to University-Industry Cooperation for the Employability of Students and the Competitiveness of Local Industry</i>		P2
14:30- 15:30	SECTION 3.1 P2 CHAIRMAN: Gea Mišćević & Karlo Severinski Marko Kopic, Goran Vukelić, Dean Bernečić, Tomislav Senčić: <i>Digital Twin Technology in Marine Engineering</i> Luka Bugarin, Goran Vizentin: <i>Parametric Finite Element Analysis of Keyway Length and Shoulder Fillet Radius in a Windlass Main Shaft under DMV Static Pull</i> Rikard Miculinić, Goran Vizentin: <i>Circular Use of ASA Filaments: Influence of Marine Exposure on Mechanical Properties and Recycling Potential</i> Bernard Vušković, David Brčić: <i>Modelling the Efficiency of Differential GPS Corrections as a Function of Range</i>	SECTION 3.2 P1 CHAIRMAN: Luka Liker & Darijan Jelušić Darijan Jelušić, Ivan Štajduhar: <i>Hyperspectral vs RGB Imaging for Deep Learning-Based Segmentation of In Vitro Fungal Colonies</i> Mária Krajčí, Ivan Štajduhar: <i>Web-Based AI-Assisted Annotation Framework for Croatian Radiology Reports</i> Mateo Mikulić, Ivan Štajduhar: <i>Human-in-the-Loop Semantic Segmentation of Bacterial Colonies Across Acquisition Conditions</i> Luka Liker, Dario Ogrizović: <i>Comparing Virtual Reality and Computer-Based Visualisation in Simulation and Modelling Learning</i>	
15:30 – 15:45	CONFERENCE CLOSING		P2



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