Faculty of Civil Engineering		
Name and Surname	**Organizational Unit**	**Keywords connected to research interests**
Gordan Jelenić	Chair of Engineering Mechanics	Continuum mechanics, non-linear elasticity, Cosserat theory, micropolar theory, Lie groups
Josip Peranić	Department of Hydrotechnics and Geotechnics / Chair of Geotechnics	Unsaturated soil; landslides; transient rainfall infiltration; suction monitoring; soil-water retention curve
Leo Škec	Chair of Applied Mechanics	Composite structures, adhesive joints, failure analysis, metamaterials, structural analysis
Nina Čeh	Engineering Mechanics Group	Seismic analysis, experimental investigation, blocky structures, multiple support excitation, dynamic characterisation
Nino Krvavica	Department for Hydrological Engineering	Flood risk, compound events, hydrological modelling, hydraulic modelling, machine learning, remote sensing
Sanja Dugonjić Jovančević	Geotechnical Department	Landslides hazard, coastal vulnerability, modelling, monitoring, karst -flysch contact
Teo Mudrić	Engineering mechanics	Peridynamics, Computational mechanics, Contact mechanics, Multibody dynamics

SCIENTIFIC SUPERVISOR	
Name and Surname	Gordan Jelenić
UNIRI Faculty	Civil Engineering
Organisational Unit / Research Group	Chair of Engineering Mechanics
Research Team	The research group involves seven members of the academic staff (Gordan Jelenić, Dragan Ribarić, Edita Papa Dukić, Leo Škec, Nina Čeh, Teo Mudrić, Sara Grbčić Erdelj), and four research-contract staff working on fixed-term research projects. Among other fields, research is being conducted in structural analysis of highly flexible slender structures (https://thread-etn.eu/), Cosserats' continuum mechanics (https://fimcos.gradri.uniri.hr/), and spatial/temporal discretisation on non-linear manifolds (https://canfas.gradri.uniri.hr/). The research group has been supported in the past fifteen years from a number of competitive international and national funding sources as well as national and university research grants in the total value of cca €1M. The group has collaborated with academic institutions in Slovenia, Great Britain, Italy, Spain, Finland, Germany, France, Ireland, Belgium, Austria and China. Particular emphasis is given to the interconnection between theory, numerical analysis and experimental research, for which the following equipment is provided: - Zwick Z 600E 600 kN universal compression/tension/bending testing machine - GOM Aramis/Pontos optical system involving two high-speed cameras and software for contactless measurement - National Instruments acquisition system including LabVIEW software - Quanser I-40 and two Quanser III bi-axial shake tables with LabVIEW and Matlab software support - FEAP source code - Intel Fortran, Wolfram Mathematica and Mathworks Matlab programming environments The prospective candidate should have the background in engineering, physics or mathematics and possess strong interest and broad knowledge of mechanics firmly grounded in fundamental physical principles with more specific expertise in one of the areas of interest of the

	supervisor, possibly acquired during Ph.D. studies. Additional expertise in programming (Wolfram Mathematica, MathWorks Matlab, Python, Fortran, LabVIEW) particularly welcome.
Research Interests	Non-linear continuum mechanics, General theory and parameter identification of Cosserats' and couple-stress continuum (https://doi.org/10.1016/j.ijsolstr.2024.112647, https://doi.org/10.1016/j.ijsolstr.2020.05.025), Geometrically exact beam theory (https://doi.org/10.1016/S0045-7825(98)00249-7, https://doi.org/10.1098/rspa.1999.0352), Finite-element interpolation and time integration on Lie groups (https://doi.org/10.1016/j.cma.2023.116665)
Keywords (max. 5) connected to your research interests	Continuum mechanics, non-linear elasticity, Cosserat theory, micropolar theory, Lie groups
EU-funded project experience	Joint training on numerical modelling of highly flexible structures for industrial applications (THREAD) Work-package leader, UNIRI PI Horizon 2020 MSCA ITN-ETN 2019, 1.10.2019-31.3.2024
Scientific panel	Information Science and Engineering
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SCIENTIFIC SUPERVISOR	
Name and Surname	Assistant Professor Josip Peranić
UNIRI Faculty	Faculty of Civil Engineering
Organisational Unit / Research Group	Department of Hydrotechnics and Geotechnics / Chair of Geotechnics
Research Team	Full Professor Željko Arbanas, PhD Chair of Geotechnics Assistant Professor Martina Vivoda Prodan, PhD Chair of Geotechnics Assistant Professor Nina Čeh, PhD Chair of Engineering Mechanics Juraj Stella, Technician Geotechnical Laboratory
Research Interests	My research focuses on rainfall-induced landslides and unsaturated soils. Our laboratory and expertise offer MSCA postdocs a wide range of opportunities related to these topics. These include equipment for advanced hydraulic and mechanical characterisation of soils under saturated and unsaturated conditions, tests on small-scale slopes equipped with sensors for pore water pressure and soil moisture under simulated rainfall, numerical modelling of transient infiltration and slope stability, etc.
Keywords (max. 5) connected to your research interests	Unsaturated soil; landslides; transient rainfall infiltration; suction monitoring; soil-water retention curve
EU-funded project experience	Interreg project ITHR0200175 RESONANCE: impRoving landslidE riSk preventiOn aNd mAnagement iN Coastal arEas (co-funded by the EU)
Scientific panel	Information Science and Engineering
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SCIENTIFIC SUPERVISOR	
Name and Surname	Professor Leo Škec
UNIRI Faculty	Faculty of Civil Engineering (GRADRI)
Organisational Unit / Research Group	Chair of Applied Mechanics
Research Team	University of Rijeka, Faculty of Civil Engineering: Gordan Jelenić, Dragan Ribarić, Ivan Hlača, Damjan Jurković, Giulio Alfano, Brunel University London, UK Dejan Zupan, University of Ljubljana, Faculty of Civil and Geodetic Engineering, Slovenia
Research Interests	Geometrically and materially non-linear mechanics of structures, composite structures, layered structures, adhesive joints, fracture mechanics, damage mechanics, cohesive-zone models, modelling crack propagation, plasticity, viscosity, fatigue, impact loads, elastic and inelastic properties of 3D printed materials (including 3D printed concrete), materials with microstructure, auxetic materials, parameter-identification algorithms, experimental mechanics, software development.
Keywords (max. 5) connected to your research interests	Composite structures, adhesive joints, failure analysis, metamaterials, structural analysis
EU-funded project experience	**H2020-MSCA-IF-2015-EF** (Marie Skłodowska-Curie Individual Fellowships): Modelling mixed-mode rate-dependent delamination in layered structures using geometrically nonlinear beam finite elements (MOLAY-STRUDEL) – research fellow **H2020-MSCA-ITN-2019** (Marie Skłodowska-Curie Innovative Training Networks): Joint Training on Numerical Modelling of Highly Flexible Structures for Industrial Applications (THREAD) – collaborator and PI in the subsequent project proposal
Scientific panel	Information Science and Engineering
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SCIENTIFIC SUPERVISOR	
Name and Surname	Associate Professor Nina Čeh
UNIRI Faculty	Faculty of Civil Engineering
Organisational Unit / Research Group	Engineering Mechanics Group
Research Team	Nina Čeh, Teo Mudrić, Leo Škec, Edita Papa Dukić, Katarina Tutić
Research Interests	Experimental (seismic platform + DIC measuring techniques), numerical (time integration algorithms, DEM, FEM), and analytical investigation of rocking motion; energy-loss mechanisms at impacts/collisions between bodies during rocking; the dynamic response of multi-block structures with cohesive contacts; experimental and numerical dynamic characterisation of discontinuous blocky structures; dynamic response and asymmetric modes in multiple support seismic excitation of long structures.
Keywords (max. 5) connected to your research interests	Seismic analysis, experimental investigation, blocky structures, multiple support excitation, dynamic characterisation
EU-funded project experience	MSCA - Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN): THREAD - European Training Network on Highly Flexible Slender Structures for Industrial Applications (2019-2024)
Scientific panel	Information Science and Engineering
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SCIENTIFIC SUPERVISOR	
Name and Surname	Associate Professor Nino Krvavica
UNIRI Faculty	Faculty of Civil Engineering
Organisational Unit / Research Group	Department for Hydrological Engineering
Research Team	Research Team consists of researchers from the Faculty of Civil Engineering, but also other faculties at the University of Rijeka, and other institutions. • Nino Krvavica (supervisor, University of Rijeka, Faculty of Civil Engineering) – expert in numerical modelling in coastal engineering and hydrological engineering • Igor Ružić (University of Rijeka, Faculty of Civil Engineering) – expert in remote sensing in coastal engineering • Marta Marija Bilić (PhD student, University of Rijeka, Faculty of Civil Engineering) – researching numerical modelling of compound flooding • Jonatan Lerga (University of Rijeka, Center for Artificial Intelligence and Cybersecurity) – expert in machine learning and signal processing • Suzana Ilić (Lancaster University) – expert in ocean dynamics and coastal processes • Goran Lončar (University of Zagreb) – expert in numerical modelling in hydraulic engineering Research team has received funding from the Croatian Science Foundation for the project "Compound Flooding in Coastal Croatia under present and future climate - 4SEAFLOOD (2023 -2027)".
Research Interests	Research interests are focused on compound flooding in coastal regions. We will quantify the current and future compound flooding potential along the Croatian coast, analyse and map compound flooding hazards in selected pilot areas, and increase the overall knowledge about the mechanisms of compound flooding. Our research team welcomes qualified and skilled postdocs with experience in numerical modelling of oceanographic and hydrological extreme events, machine learning, as well as statistical analysis.
Keywords (max. 5) connected to your research interests	Flood risk, compound events, hydrological modelling, hydraulic modelling, machine learning, remote sensing

EU-funded project experience	• 2021 - 2023: Strategic development of flood management (STREAM), expert in pluvial floods and coastal floods (team leader), Interreg Italy-Croatia, European Regional Development Fund, (https://www.italy-croatia.eu/web/stream). • 2014 - 2023: Water and Environmental Monitoring, Analysis, and Solutions (VEPAR), expert in the Study of sea flood risk management, European Regional Development Fund (ERDF), OPKK, (https://vepar.voda.hr/). • 2019 - 2021: Resilience information platform for Adriatic cities and towns (ADRIADAPT), expert in modeling hydrological processes in coastal areas, Interreg Italy-Croatia, European Regional Development Fund, (https://adriadapt.eu/). • 2013 - 2016: Networking for Drinking Water Supply in Adriatic Region – DRINKADRIA, collaborator, IPA Adriatic Cross Border Cooperation.
Scientific panel	Information Science and Engineering
ORCID (link)	https://orcid.org/0000-0001-5014-5476
Personal or Research Team's Website	https://nkrvavica.github.io/ https://4seaflood.uniri.hr/
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SCIENTIFIC SUPERVISOR	
Name and Surname	Associate Professor, Sanja Dugonjić Jovančević
UNIRI Faculty	Faculty of Civil Engineering
Organisational Unit / Research Group	Geotechnical Department
Research Team (Members)	Martina Vivoda Prodan, Josip Peranić, Igor Ružić, Čedomir Benac
Research Interests	Investigating landslides in on the flysch –carbonate contact and in flysch areas, monitoring and interpretation of landslide monitoring results, vulnerability and instabilities in coastal areas, investigation of the geotechnical parameters relations in landslide materials, landslide hazard and risk assessment, numerical analysis in the landslide affected areas and influence of the climate changes on landslide appearance.
Keywords (max. 5) connected to your research interests:	Landslides hazard, coastal vulnerability, modelling, monitoring, karst -flysch contact
EU-funded project experience	2006-2014. Croatian Ministry of Science project Assessment, mitigation and management of geological hazards in the Kvarner region,; 2009-2014 Bilateral Croatian-Japanese SATREPS scientific research project "Risk Identification and Land-Use Planning for Disaster Mitigation of Landslides and Floods in Croatia"; 2012-2016 International Programme on Landslides project "Study of landslides in flysch deposits of North Istria, Croatia: sliding mechanisms, geotechnical properties, landslide modeling and landslide susceptibility; 2014-2015. bilateral Croatian-Slovenian Ministry of Science project “Study of landslides in flysch deposits: sliding mechanisms and geotechnical properties for landslide modelling and mitigation“; 2016-2017. bilateral Croatian-Slovenian Ministry of Science project “Laboratory testing and numerical modelling of landslides in flysch deposits of Croatia and Slovenia”; 2017-2021 International Programme on Landslides project „Rockfall Hazard Identification and Rockfall Protection in The Coastal Zone of Croatia “; 2018-2022 Research project of the Croatian Science Foundation - "Physical modelling of the behaviour of structures for landslide rehabilitation under static and seismic conditions"; 2025-2026 Croatian- Chinese bilateral Ministry o Science project „Study of mechanisms of rainfall induced landslides; 2021-2024 KA2 Erasmus + project Career Garden; 2024-2026 Erasmus +project XRGREEN.CON – eXtended Reality for Training Green Skills in the Construction Sector.
Scientific panel	Environmental and Geosciences
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SCIENTIFIC SUPERVISOR	
Name and Surname	PhD Assistant Professor Teo Mudrić
UNIRI Faculty	Faculty of Civil Engineering in Rijeka
Organisational Unit / Research Group	Engineering mechanics
Research Team	I am working within a research team at the Chair of engineering mechanics, Faculty of Civil Engineering in Rijeka. The research interests described below are related primarily to myself, while the team research interests are much wider. Nonetheless, it is worth mentioning that two other research team members have experience in contact mechanics, namely Nina Čeh and Gordan Jelenić. Research team: • Nina Čeh • Gordan Jelenić • Leo Škec • Edita Papa Dukić • Sara Grbčić Erdelj • Dragan Ribarić
Research Interests	Peridynamics modelling of solid mechanics problems. In particular, deformation of solid bodies, including the initiation and propagation. Coupling of peridynamics non-local theory with the standard or local continuum theory of solid body mechanics. Coupling between numerical procedures for local continuum theory and peridynamics theory, e.g. FEM and peridynamics. Contact mechanics modelling of mechanical systems, involving application to real life engineering problems and investigation of numerical solution procedures (e.g. time integration, algorithms).
Keywords (max. 5) connected to your research interests	Peridynamics, Computational mechanics, Contact mechanics, Multibody dynamics
EU-funded project experience	Co-worker on the EU-funded project “Joint Training on Numerical Modelling of Highly Flexible Structures for Industrial Applications (THREAD)”, from 2019 to 2024.
Scientific panel	Information Science and Engineering
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