

# 7th INTERNATIONAL PhD CONFERENCE

LJUBLJANA – GRAZ – RIJEKA

Rijeka, Croatia

October 5 – 6, 2023





*Univerza v Ljubljani*



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# PROGRAMME

## ///// THURSDAY, OCTOBER, 5TH 2023

Faculty of Civil Engineering, Radmile Matejčić 3  
Room G – 003

### ///// REGISTRATION - 11:30-12:00

### ///// OPENING CEREMONY - 12:00-12:15

Madam Rector **Prof. Snježana Prijić Samaržija Ph.D.**

### ///// SESSION 1. - 12:15 - 14:05

Chair **Prof. Igor Prpić, Ph. D., M.D.**, Head of Doctoral school Rijeka

Invited speaker:

**Prof. Senka Maćešić, Ph. D.**, Vice-rector for digitalization and development -  
Universities for Sustainability

**Andrija Poleksić:** Relation extraction for knowledge graph construction on  
scientific corpora

**Biljana Purić:** Political Ecology of Contemporary Eco Art: Imagining New  
Subjectivities and Politics of Sustainability

**Vedrana Jurčević Podobnik:** Influence of socio-economic factors on eating  
habits and human health

**Izidor Natek:** Exploring psychosocial impacts of e-care utilization on older long-  
term care users



## ///// Session 2. - 15:00 - 16:30

Chair **Prof. Senka Maćešić, Ph., D.**, Vice-rector for digitalization and development

Invited speaker:

**Hrvoje Paić, dr. phil:** Academic Sustainability – In Memoriam Karl Kaser

**Lovro Pavletić:** Elastic LIDAR Monitoring of the Night-sky Brightness over Roque de los Muchachos Observatory

**Simon Jamšek:** In It Together: The mediating role of collective efficacy in collective action for reusable products Collective sustainable action

**Benedetta Merlino:** New generations and nationalism: does civil society play a role in guaranteeing social sustainability in Bosnia and Herzegovina?

## ///// Session 3. - 17:00 - 18:00

Chair **Prof. Gordan Jelenić, Ph.D.**, Vice Rector for Science and Arts

**Domen Hojkar:** Carbon footprint assessment for investments in energy efficiency projects

**Romina Agbaba/ Dominik Patafta:** The importance of communication channels when choosing sustainable tourist destinations

**Aleksandar Karangelov:** Investigating the possibility to transcript, reprogram life experience, relationships and interaction between the host and immigrants communities, into defined or non-defined space in order to impact on the process of more inclusive and sustainable home/city design.

## ///// FRIDAY, OCTOBER 6TH 2023

Faculty of Civil Engineering, Radmile Matejčić 3  
Room G – 003

## ///// Session 4. - 09:00 - 10:30

Chair **Hrvoje Paić, dr. phil.**

Invited speaker:

**Assoc. Prof. Vasja Rant Ph. D.:** Sustainable finance in the EU in the context of the European Green Deal



**Nico Rosamilia:** Machine learning for ESG

**Lorenzo Ugurgieri:** Local Acceptance of Operation EUFOR Althea in Republika Srpska. Stereotypes, Legitimacy and Conflict-management

**Ema Petaković:** Environmental management systems in the hotel industry - motivation, benefits and barriers

## //// Session 5. - 11:00 - 12:30

Chair **Prof. dr. Tatjana Marvin Derganc**, Head of Doctoral school Ljubljana

**Prof. Marina Šantić, Ph., D.:** Example of UNIRI experience - Faculty of Medicine

**Ivana Kolić:** Influence of glutathione-S-transferase gene polymorphisms on prenatal exposure to methylmercury

**Jure Gramc:** Life Cycle Assessment of Fuel Cell Battery Electric Vehicles

**Višnja Smoje:** Individual and organizational resilience and performance of micro-entrepreneurs during the COVID-19 pandemic: the example of micro-entrepreneurs of Istria County

## //// Session 6. - 13:00 - 14:00

Chairs **Prof. Gordan Jelenić, Ph.D.**, Vice Rector for Science and Arts and **Prof. Igor Prpić, Ph. D., M.D.**, Head of Doctoral school Rijeka

**David Visentin:** Sustainable Microbiology: Reducing plastics in research and beyond

**Rok Požun:** Sustainable corporate performance and firm risk

**Christopher Lam Cham Kee:** Montenegro at a Crossroad? Understanding Boundary-making Processes on the Daily

## //// CLOSING CEREMONY - 14:15-14:30

**Prof. Igor Prpić, Ph. D., M.D.**, Head of Doctoral school Rijeka



## ABSTRACTS

### ANDRIJA POLEKSIĆ

University of Rijeka, Faculty of Informatics and Digital Technologies

#### **Relation extraction for knowledge graph construction on scientific corpora**

The amount of data is swiftly increasing and processing of information in unstructured textual data can be of great importance. The natural language processing task that tries to automate this process is information extraction (IE), or rather its subtask, relation extraction. Relation extraction is tasked with identification of relations between entities in each sentence, paragraph or larger unit of text in order to automatically create machine-interpretable data collections of entities, relationships between entities, and attributes describing entities. In this paper, relation extraction is approached using the state-of-the-art "Bidirectional Encoder Representations from Transformers" (BERT) and its variant SciBERT. An overview of datasets suitable for the task of extracting sentence-level relations is elaborated. A new variant of dataset for relation extraction in the domain of science, combo160, is created and used to fine-tune the BERT and SciBERT models. The results show a noticeable increase of 2.63% (on average) in the performance of the SciBERT model over the baseline BERT model, when faced with relations in the scientific domain. It can be inferred from the results that thematically similar (here: scientific) pretraining corpora can improve the performance of the later fine-tuned models for relation extraction.

*Keywords: Relation extraction, relation classification, BERT, SciBERT, scientific dataset*

### BILJANA PURIĆ

University of Graz, Interdisciplinary Doctoral Programme Antiquity and Modernity in a European Context

#### **Political Ecology of Contemporary Eco Art: Imagining New Subjectivities and Politics of Sustainability**

Sustainability has been a buzzword for many years now, promoting an idea of sustainable development that is considerate of the environment but based on unimpeded economic growth, which has also been heavily criticized (Swyngedouw, 2006; Luke, 1999; Guha, 1995; Spivak, 2000). Oscillating between the criticism of the idea of sustainability as promoted by Western policymakers and the increasing need for more sustainable development with full comprehension and adequate reaction to inequalities that it implies, visual artists have created numerous responses to the present situation, including various initiatives that fight for ecological justice. The present push for eco-conscious art germinated in the late 1960s with restorationist eco-aesthetics (T.J. Demos, 2009).





However, the first impetus was quickly expanded to include considerations of the inequalities between industrialized nations and the global South, the human-nature relationship, and the consequences of the neoliberal global expansion on economic and, consequently, social and ecological inequalities, expanding the understanding of ecology. This paper examines the recent eco art by looking at several installations and video works that explore the relationship between the human body and nature, shifting the focus from the human to the symbiotic relationship between humans and nature, immersing the organic environment within a complex network of media and cultural ecologies. In particular, the paper weighs in on the ideas of abstract aesthetic awareness and (de)idealization of nature in contemporary art, exploring the role of art in advancing a different form of politics of sustainability.

## **VEDRANA JURČEVIĆ PODOBNIK**

University of Rijeka, Faculty of Medicine

### **Influence of socio-economic factors on eating habits and human health**

Food safety and nutrition are inextricably linked and have big impact on human health. Infectious and non-communicable diseases related with food and nutrition still account for a large share of global morbidity. The influence of socio-economic factors on the availability and use of safe and nutritious food, on the choice in the procurement of certain types of food, the consumption of food in restaurants, the method of preparation and storage of food is increasing. Consumers are increasingly unable to ensure the consumption of nutritious and safe food due to obstacles such as affordability and accessibility. Consumers are also concerned about food safety due to new production technologies as well as more frequent food fraud. Food selection, availability and affordability of quality and safe food products, which is achieved by control and labels of controlled quality of food products, consumer education, as well as social and public health policies that will provide everyone, regardless of socio-economic status, with sufficient amounts of nutritionally balanced and safe food can be significantly affect the improvement of people's health.

*Keywords: Socio-economic status, food, safety, quality*

## **IZIDOR NATEK**

University of Ljubljana, Faculty of Social Sciences

### **Exploring psychosocial impacts of e-care utilization on older long-term care users**

Assistive technologies (ATs), notably e-care, play a pivotal role in enhancing the quality of life for older individuals, enabling sustainable aging in place, and reducing reliance on institutional care facilities.





Despite their potential, the psychosocial impacts of ATs on older users remain underexplored. This research addresses this gap by comprehensively examining the psychosocial impacts of e-care, such as personal alarms, environmental sensors, mobility-related devices, and GPS tracking systems among older people receiving long-term care. Employing an intervention design with 381 participants, who tested e-care for an average duration of 310.2 days, the data was collected through face-to-face surveys from 217 individuals aged 65 or above, resulting in a 57.0% response rate. Utilizing the PIADS-10 scale, the preliminary results reveal that e-care primarily influences users' sense of competence and self-esteem, with a somewhat lesser impact on adaptability. Remarkably, it leads to significant improvements in users' independence, sense of control, and overall quality of life. Furthermore, the analysis of open-ended survey responses underscores a crucial psychosocial impact: an enhanced sense of safety among older e-care users. These findings advocate for the broader integration of e-care technologies to enhance the well-being of older populations, providing valuable insights for healthcare professionals, policymakers, and researchers in the field of gerontology.

*Keywords: Assistive technology, e-care, psychosocial impacts, older people, long-term care*

## **LOVRO PAVLETIĆ**

University of Rijeka, Faculty of Physics

### **Elastic LIDAR Monitoring of the Night-sky Brightness over Roque de los Muchachos Observatory**

Every large world-class observatory must operate in a very dark environment that is as free as possible of anthropogenic sources of light pollution, which can degrade the quality of ground-based astronomical observations. A LIDAR is able to measure, and subtract from its laser return signals, a corresponding contribution from the night-sky brightness. Our elastic LIDAR system is operated in semi-continuous mode at night, very closely following the observation schedule of the MAGIC Telescopes on Canary island La Palma, Spain. For the monitoring of the night-sky brightness, median LIDAR background rates at different atmospheric conditions and sky illuminations have been used. In this talk, results from data taken with the MAGIC LIDAR over seven years, from March 2013 until March 2020, will be presented and discussed.

*Keywords: MAGIC – LIDAR – ORM – La Palma – Site Characterization*



## **SIMON JAMŠEK**

University of Ljubljana, School of Business and Economics Business track

### **In It Together: The mediating role of collective efficacy in collective action for reusable products** **Collective sustainable action**

The ever-increasing production of single-use disposable plastic is placing a heavy burden on the environment and its ecosystems, prompting consumers to turn to reusable products. While previous research has primarily examined how consumers individually contribute to saving the environment through their consumption choices, we focus on their perceptions of collective action. With this in mind, the purpose of this paper is to identify what influences collective action intentions and further purchase intentions for reusable products by extending the Social Identity Model of Collective Action (SIMCA). In our proposed conceptual model, collective action intentions are influenced by three predictors from the original model, namely perceived injustice or anger, social identity, and collective efficacy. We extended the original model by adding two constructs; collective action problem and the perceived size of collective action. The model was tested on a sample of 421 respondents from the United Kingdom. Of the three original predictors, only social identity showed no significant effect, while the other two positively influenced collective action intentions. In addition both added constructs show significant direct effect on the collective intentions, where the collective action problem negatively affects the collective intentions and perceived size of collective action positively. As expected, collective efficacy was found to mediate the effect of the two added constructs on the collective action intentions. Further collective action intention influenced consumers' willingness to purchase reusable products. The results imply many further research opportunities and also offer great implications for marketers in companies that produce reusable products.

## **BENEDETTA MERLINO**

University of Graz, Faculty of Law

### **New generations and nationalism: does civil society play a role in guaranteeing social sustainability in Bosnia and Herzegovina?**

The paper aims to study the impact of Civil Society in contributing to building social sustainability in Bosnia and Herzegovina. The research is grounded on the current socio-political situation of the Country, where, to these days, divisive policies and narratives are proposed by the nationalistic political elites that gained power after the Dayton Agreement in 1995. The political environment creates a permanent status of crises and instability that prevents the Country from growing and ensuring a sustainable peace. Such a political situation is reflected on society, in particular on some social groups, youth among them.



Young people in Bosnia and Herzegovina are in fact particularly exposed to ethnonationalist narratives as affected by transgenerational trauma and entirely grown up within a system that normalized ethnic tensions. Nevertheless, governmental institutions are not the only subjects to interact with youth; Civil Society actors can, in fact, have a pivotal role in contrasting this trend by re-shaping the concept of nationalism and contributing in building a more sustainable and peaceful environment. The study has been conducted in 2022 through surveys and focus groups with youth and through one to one interviews with Civil Society's actors.

*Keywords: Nationalism, youth, civil society, social sustainability, transgenerational trauma*

## **DOMEN HOJKAR**

University of Ljubljana, Faculty of Mechanical Engineering

### **Carbon footprint assessment for investments in energy efficiency projects**

Improving energy efficiency is one of the pillars of sustainable transformation. Projects that improve energy efficiency and reduce the use of energy resources are generally welcomed and considered good for the environment. However, investments in energy efficiency projects usually include investing in devices that will, during their lifetime, consume considerable amounts of energy in forms of electricity, fossil fuels, biomass, district heat etc. This consumption of energy and fuels, directly and in-directly, contributes to the global carbon footprint, and the investor is, at least in part, responsible for those greenhouse emissions. Carbon footprint of investing in energy projects was calculated according to GHG Protocol, which is a leading standard for calculating company's carbon footprint. We calculated carbon footprint for a company that invests in energy efficiency projects and operates in five European markets (SVN, HRV, CZE, SRB, ROU). Identified carbon footprint hot spots are cogeneration devices, natural gas boilers and devices consuming electricity in markets, where carbon footprint of electricity is high (SRB, CZE). Additionally, our analysis of investment opportunities highlights the importance of considering the future development of the energy sector (e.g., percentage of renewables in electricity mix in future years). Because of differences between technologies, country's energy sources and renewable energy ambitions, we developed a mathematical model for assessing carbon footprint of energy efficiency projects. Model enables forecasting project's lifetime emissions while comparing different scenarios and technologies.

*Keywords: Carbon footprint, energy efficiency projects, sustainable infrastructure*





## **ROMINA AGBABA/ DOMINIK PATAFTA**

University of Rijeka, Faculty of Tourism and Hospitality Management

### **The importance of communication channels when choosing sustainable tourist destinations**

Nowadays tourism is encouraging destinations to become sustainable. Tourists are contributing to such a development through their choices and behavior. The research problem is to identify the communication channels that sustainable destinations should focus on to attract tourists, while the purpose is to investigate what sustainable development means to tourists, whether they recognize their role in the destination, what communication channels they use to obtain information about the destination, and what are the most important criteria for choosing a destination. The aim is to investigate the communication channels most frequently used by tourists and to examine the differences between gender and age groups. The theoretical part was conceived of secondary sources from relevant previous researches analyzed in the last 10 years. Then, quantitative research was conducted using an online questionnaire. The data were analyzed in the program IBM SPSS Statistics 23 and tested by methods of descriptive statistics, t-test for independent samples, ANOVA and correlation analysis. The results showed that tourists are increasingly recognizing the sustainable development as one of the key elements when choosing a destination. They are aware of its importance and promotion through various communication channels. Also, information obtained by specific communication channels, about destination sustainability attracts a specific age group of tourists and has a direct impact on attracting tourism demand. The paper contributes to the theory by systematizing and analyzing the literature about the role of communication in promoting a sustainable destination. Practical contribution is reflected in the research results which can be useful for destination managers, because of the key factors that should be considered when promoting a destination as a sustainable one.

*Keywords: Communication channels; sustainability; destination; tourism*

## **ALEKSANDAR KARANGELOV**

University of Ljubljana, Faculty of Architecture

### **Investigating the possibility to transcript, reprogram life experience, relationships and interaction between the host and immigrants communities, into defined or non-defined space in order to impact on the process of more inclusive and sustainable home/city design**

All places are individually experienced from one's unique circumstances, and that's how places become very expressions of our individuality.



Every movement, (example: meeting with someone somewhere) is in correlation with space. Those spaces have no definition of until the action happens. A place owes its character to the experiences it affords for those who spend time there. Interactions give opportunity to transform the participants in the interactions, and so to change the reality. Linking a place to the chosen issue demands an in-depth understanding of connections between spatial/physical and social/political categories. By the project's spatiality and types of boundaries, the architectural design triggers and stimulates public use, and if it becomes an active part of the publicness of the chosen place.

#### METHODS:

- Mapping the existing architectural spatial and environmental qualities of the place (dimensions, materiality and structure, use, users....), everything that belongs to the place and creates its specificity
- Mapping actions and interactions (experiences)
- Spatial stories

#### CONTRIBUTION to scientific development

To examine the relationship between space and place, to demonstrate the range of place experiences and concepts through people's experiences. As people and place/space are in a continual connection, the nature of the identity of the places must be analyzed through the identity of people and interaction and vice versa to establish new identity of people in correlation with places.

The significant original contribution emerges from small gaps within the research areas, by creating synthesis in an original technique which will add new perspective to the issue.

### **NICO ROSAMILIA**

University of Rijeka, Faculty of Economics

#### **Machine learning for ESG**

We evaluate the impact of non-financial disclosure practices on corporate value creating a sector-specific set of indicators for environmental, social, and governance (ESG) performances alternative to the ratings of the agencies. The existing literature extensively studies the implementation of ESG rating systems. Conversely, this study contemplates the effect of ESG adoption practices on corporate value using a different method to define ESG performances. Indeed, we establish a set of indicators for ESG performance tailored to sector characteristics. This set defines an alternative to the compounded scores of ESG rating agencies and avoids the possible offsetting effect of scores. With this approach we define a sector-specific set of indicators to evaluate ESG performance and analyze the marginal effect and the corporate value premium associated with ESG disclosure.



## **LORENZO UGURGIERI**

University of Graz, Faculty of Law

### **Local Acceptance of Operation EUFOR Althea in Republika Srpska. Stereotypes, Legitimacy and Conflict-management**

The paper aims to investigate European Union (EU) peacekeeping in Bosnia and Herzegovina (BiH). To this end, it examines local perception towards Operation EUFOR Althea in Republika Srpska, an entity that the literature often described as dominated by 'anti-Western' political sentiments. To what extent does this assumption hold true at the grassroots level? Where is it more correct to speak of acceptance, resistance or, rather, acquiescence? Why? The answer to these questions represents a crucial contribution not only to the academic debate, but also to society as such in that it helps assess peacekeeping legitimacy in all those contexts where social conflict, although not visible, lies dormant. Supported by theories of phenomenology and institutional change, the present research develops around an exploratory sequential design. More specifically, while the quantitative tool used in the first phase consists of an online survey distributed to a sample of N = 1,000 participants in the period 18 April - 31 May 2022, in the qualitative phase approximately 50 people are selected on the basis of their municipality of residence in Republika Srpska, contacted via LinkedIn and interviewed with both pre-determined and non-planned questions. As a result, the strongest argument advanced here is that conflict can be internalised and managed only if operations such as Althea abandon their 'super partes' rhetoric and create an environment that is conducive for the bottom-up, individual formulation of concrete and real security issues.

*Keywords: EU peacekeeping, BiH, EUFOR Althea, local perception, Republika Srpska, acceptance, legitimacy, social conflict, institutional change, security*

## **EMA PETAKOVIĆ**

University of Rijeka, Faculty of Tourism and Hospitality Management

### **Environmental management systems in the hotel industry - motivation, benefits and barriers**

The preservation of the environment has become a goal to which the whole world aspires. The tourism industry has a significant negative impact on the environment, although the tourism and hotel industry is dependent on natural resources, it can destroy the very resources on which it depends. There is a need to focus on sustainable business to conserve natural resources and reduce negative impacts on the environment. Environmental management systems (EMS) and sustainability certification such as ISO 14001:2015, EMAS, Green Globe, Green Key, LEED and Travelife can help mitigate some of these negative impacts.





The gap in the literature comes from focusing on the positive impacts of EMS while neglecting to discuss the barriers and obstacles faced by organisations. EMS, when implemented, can bring economic benefits such as: Reducing costs, improving the image of the organisation, gaining a competitive advantage, increasing customer satisfaction and loyalty, improving performance, increasing profits, increasing morale and motivation, improving stakeholder relations, regulatory factors, access to international markets. However, there are barriers to implementation such as high implementation and maintenance costs, lack of knowledge, skills and resources, size of the organisation, lack of regulatory requirements, guest satisfaction concerns, unclear policies, lack of sense of urgency/importance. The paper uses a systematic approach to review the literature by summarising the opposing views in the field of environmental management systems, focusing on applicability in the hotel industry. The study contributes by providing a better understanding of environmental management from a hotel industry perspective and highlighting the need for further research in this area.

*Keywords: Environmental management systems; hotel industry; motivation; benefits; barriers; ISO 14001*

## **IVANA KOLIĆ**

University of Rijeka, Faculty of Medicine

### **Influence of glutathione-S-transferase gene polymorphisms on prenatal exposure to methylmercury**

Mercury is one of the top ten chemicals of major public concern, and its prenatal exposure is toxic in development of brain in fetus and children.

Objective of this study is to test the hypothesis that presence of GSTM1, GSTT1 and GSTP1 gene polymorphisms has influence on mercury level in cord blood, hence modifies effect of prenatal exposure to methylmercury affecting size of cerebellum in newborn and psychomotor development at age of 18 months.

About 500 mother-child pairs from Croatia and Slovenia were recruited and during previous studies basic epidemiological data and blood samples were collected. Previous study data regarding mercury concentrations, cerebellum measurements and neuropsychological testing results will be used. Molecular-genetic tests will be performed for GSTM1, GSTT1 and GSTP1 genotyping.

Results of possible modifying effect of GSTM1, GSTT1 and GSTP1 gene polymorphisms in prenatal exposure of methylmercury on cerebellum size and psychomotor development of children could significantly contribute to methylmercury toxicokinetics understanding.

*Keywords: Cerebellum; development; Glutathione S-transferase; mercury; polymorphisms*



## JURE GRAMC

University of Ljubljana, Faculty of Mechanical Engineering

### **Life Cycle Assessment of Fuel Cell Battery Electric Vehicles**

The EU is investing heavily in fuel cell and hydrogen technologies. One of the possible implementations of hydrogen technologies is fuel cell battery electric vehicles (FCBEV). The aim of the study is to assess the carbon footprint of FCBEV, battery electric vehicles (BEV) and diesel vehicles using the LCA methodology. The scope of the study includes the manufacturing and operational phase. For FCBEV and BEV, different scenarios for hydrogen and electricity production in the operational phase are generated. Hydrogen is produced by methane steam reforming or water electrolysis with different electricity mixes corresponding to the electricity mixes used in the operational phase of BEVs. The functional unit is a mid-priced vehicle for 5 passengers that can travel 300 000 km in its lifetime. In the worst-case scenario for FCBEV – hydrogen from electricity mix SI - the carbon footprint is 17% lower than a diesel vehicle, but 44% higher than a BEV with the same electricity mix. In the best case, the carbon footprint for FCBEV – hydrogen from EU green electricity mix is 69% lower than for the diesel vehicle and only 0.7% higher than for the BEV with the same electricity mix. The study shows that the carbon footprint of FCBEV is lower compared to diesel vehicles and in some cases comparable to BEV.

*Keywords: Carbon footprint, life cycle assessment, fuel cell battery electric vehicle*

## VIŠNJA SMOJE

University of Rijeka, Faculty of Economics

### **Individual and organizational resilience and performance of micro-entrepreneurs during the COVID-19 pandemic: the example of micro-entrepreneurs of Istria County**

The development of entrepreneurship has become increasingly important in contributing to the continuity of the economic development of each country. The domain of small and medium-sized enterprises especially affects improvement of economic development at the local and regional level of the country in which they carry out their entrepreneurial activities. The emergence of the global COVID-19 pandemic had a strong and deviant effect on the macroeconomic stability of all countries of the world and consequently destabilized the entrepreneurship of small and medium-sized enterprises. The pandemic caused disruptions in supply and demand at the national level with a strong impact on the activities and supply chain management of Croatian entrepreneurs. The above encouraged micro-entrepreneurs in the County of Istria to establish a new financial balance by introducing changes.



The research problem refers to the examination of the business efficiency and resilience of Istrian micro-entrepreneurs before and after the onset of the COVID-19 pandemic in order to see to what extent their business existence was impaired in the conditions of the crisis and which tools they implemented in order to achieve resilience and business efficiency during and after the crisis. The purpose of the paper is to investigate the determinants of resilience of microentrepreneurs in the context of the COVID-19 crisis, focusing on individual and organizational determinants of resilience. Empirical research will be conducted on the basis of a survey questionnaire on a sample of micro-entrepreneurs in Istria County in sectors affected by the COVID-19 pandemic, whose business has survived despite this and which are therefore expected to show characteristics of resilience. The results of the research indicate a temporary financial and operational destabilization of the business of Istrian micro-entrepreneurs in the conditions of the pandemic and its effective recovery shortly after the end of the pandemic due to their prompt reaction to the effects of the crisis and timely making of business decisions that resulted in resilience to the crisis and business efficiency.

## DAVID VISENTIN

University of Rijeka, Department of Biotechnology

### **Sustainable Microbiology: Reducing plastics in research and beyond**

Microbiology heavily relies on single-use plastics. In this presentation, we explain why this dependency exists and discuss its environmental impact, highlighting the urgent need for change. We explore sustainable alternatives to significantly reduce plastic waste in microbiology while ensuring research integrity. Through practical examples, we will show the feasibility and limitations of replacing plastic materials with reusable, eco-friendly alternatives in laboratory settings. Additionally, we examine the broader implications of these changes, including their potential applicability in other scientific fields. One concrete step we've taken towards sustainability is the creation of a durable anaerobic chamber, designed to minimize the use of disposable plastic bags and sachets for anaerobic growth. This serves as a model of our commitment to sustainability. Our presentation serves as a call to action for the scientific community to address plastic pollution. By adopting sustainable practices, each of us can contribute to a more environmentally friendly future while upholding the integrity and excellence of scientific research.

*Keywords: Plastics, microbiology, sustainability*





## **ROK POŽUN**

University of Ljubljana, School of Economics and Business

### **Sustainable corporate performance and firm risk**

Billio et al. (2021) argue that a combination of factors such as extreme climate conditions, increasing social injustice and inequality, and the 2007-2008 financial crisis have created a unique environment that has brought ESG issues and sustainability into the headlines. The 2007-2008 financial crisis was an example of why good governance practises matter and the consequences of their failure. While the relationship between ESG performance and financial/stock market performance has been studied extensively and the evidence found is mixed as shown by Friede et al. (2015) or Junkus and Berry (2015), the relationship between ESG performance and corporate risk has received less attention. Looking at asset price theory, whether more sustainable companies generate excessively positive returns boils down to their riskiness through a risk-return trade-off. From an economic theory perspective, more sustainable companies may be riskier (according to agency and trade-off theory) or less risky (lower political/regulatory risk, higher stakeholder loyalty). One way to gain more insight into whether more sustainable companies (with higher ESG ratings) are less risky is to see if company characteristics related to corporate risk (debt, liquidity, profitability, etc.) can help explain variability and predict changes in ESG ratings. Another way to analyse ESG company risk is to compare the idiosyncratic volatility of stock returns of low and high ESG rated companies. The former can be analysed using dynamic panel data estimators since ESG ratings tend to be autocorrelated and the latter by modelling idiosyncratic volatility with GARCH models after eliminating the systemic component.

## **CHRISTOPHER LAM CHAM KEE**

University of Graz, Faculty of Law

### **Montenegro at a Crossroad? Understanding Boundary-making Processes on the Daily**

Following the adaption of the Law on Religious Freedom in December 2019, the DPS, which had ruled Montenegro for three decades, found itself at odds with the Serbian Orthodox Church (SOC). The latter argued that the law would transfer its properties into the State's hands. Consequently, the SOC rallied its followers to protest the law, eventually leading to the DPS' electoral loss. On the back of competing nation-building narratives surrounding these events, tensions began to escalate between Montenegrin Serbs and Montenegrins. Through interviews, the paper aims to analyze the population's perspectives on the boundary narratives that have emerged throughout the political elite conflict.



This enquiry will look in depth at Montenegro's historical and political context, including how the Montenegrin identity has developed across time. As a result, the theoretical framework will revolve around the social construction of identities, as well as their practices in daily lay life.

*Keywords: Boundary-making processes, nationalism, nation-building, identities*

