



The 1st Doctoral Colloquium on Sustainable Development, DOC-ME'2022
Montenegro, Kotor, Maritime Faculty, 22-24 September, 2022

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Programme

[\[Time slots\]](#) [\[Presenters\]](#) [\[Contributions\]](#) [\[Other data\]](#)

Time slots

September 22 2022

09.00 Registration
10.00 Opening and Introductory
10:30 Session #1
12.30 Break
14:00 Session #2
16:00 Break
16:30 Concluding remarks of the 1st day
20:00 Social Life

September 23 2022

08.00 Registration
09:00 Session #3
11:00 Break
11.30 Session #4
13.30 Break()
14:30 Session #5
16:00 Break
16:30 Concluding remarks of 2nd day and Closing

September 24 2022

10:00 Project issues
12:00 Management issues
13:00 Next meetings

REFORMING DOCTORAL STUDIES IN MONTENEGRO AND ALBANIA – GOOD PRACTICE PARADIGM

Grant: 598465-EPP-1-2018-1-ME-EPPKA2-CBHE-SP

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SESSIONS, PRESENTERS, CHAIRS

Session 1: (22.09, 10.30h)

Chairs: Betim Cico and Boris Vukicevic

Sanja Pavicevic, Tanja Radovanovic, Masa Jovanovic, Neda Boskovic, Alma Kurtiš, Ivana Bulatovic

Session 2: (22.09, 14.00h)

Chairs: Veljko Milutinovic, Nedeljko Latinović

Dejan Zejak, Marija Markoč, Anitta Martic, Marica Melović, Vigan Raca, Arso Ivanović

Session 3 (23.09, 09.00h)

Chair: Mladen Perazić, Brilande Bushati

Snezana Ljesnjak, Atdhe Buja, Virtyt Lesha, Ndricim Topalli, Branka Knežević, Osman Šurla

Session 4: (23.09, 11.30h)

Chairs: Mirjam Dibra, Elenica Pjero

David Kočović, Ana Radovic, Stefanela Zarkovic, Milan Raičević, Vesna Pavlović, Mladen Femic, Esko Muratovic

Session 5: (23.09, 14.30h, Reserve)

Chair: Dejan Lučić

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CONTRIBUTIONS' DATA

Short

#	PhD Author	Title	Affiliation
1	Sanja Pavicevic	Physical potential of photovoltaic system	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro
2	Tanja Radovanovic	Emotional Design in Digital User Experience	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro
3	Maša Jovanović	LSD outbreak in Montenegro 2016- an example of strengths and weaknesses of Veterinary Sector and potential for sustainable public health in the country	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro
4	Neda Bošković	Microplastics presence in aquatic environments in Montenegro: A review on methods, occurrence and sources	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro
5	Alma Kurtis	Biological potential and phytochemical characterization of extracts of the species genus Pinus L. (Pinaceae) from Montenegro	University of Montenegro, PhD in Microbiology, Podgorica, Montenegro
6	Ivana Bulatovic	Marine litter categorization on two Montenegro beaches	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro
7	Dejan Zejak	Growing OF PLUMS (Pruns domestica L.) IN BIJELO POLJE, MONTENEGRO (2000 – 2020)	University of Belgrade, Faculty of Agriculture,, Serbia

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8	Marija Markoč	Biopomological and biochemical characteristics of autochthonous olive varieties and olive processing waste	University of Montenegro, PhD in Biotechnics at Biotechnical Faculty, Podgorica, Montenegro
9	Anita Martić	Fungicide resistance in phytopathogenic fungi: A critical point of successful and sustainable viticulture (case of Botrytis cinerea Pers.)	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
10	Marica Melović	Transition of tourism in Montenegro – from sustainable development to sustainable tourism	University of Montenegro, PhD studies at the Faculty of Tourism and Hospitality, Kotor, Montenegro
11	Vigan Raca	Towards Open Data Quality Improvements through an Assessment Framework	Ss Cyril and Methodius University, Faculty of Computer Sciences and Engineering, Skopje, North Macedonia
12	Arso Ivanović	Advancing computing principles through studying nanoscale memristors using state-of-the-art nanotechnology	University of Montenegro, Department of Physics
13	Snežana Lješnjak	Implementation of the curriculum of Education for sustainable development in elementary and high school teachers' work in Montenegro	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
14	Atdhe Buja	Cyber Security standards for the Industrial Internet of Things (IIoT)	University of South East European, PhD studies in Computer Science, Tetovo, N. Macedonia
15	Virtyt Lesha	The impact on entropy of improving the learning management systems	University Metropolitan Tirana
16	Ndricim Topalli	Privacy Protection techniques for PII protection according to The GDPR	University Metropolitan Tirana

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17	Branka Knežević	Green Infrastructure as a Means of Combating Climate Changes in the city of Podgorica	University of Montenegro, MARDS Department
18	Osman Šurla	THE SIGNIFICANCE OF MACROINVERTEBRATES FOR BIOMONITORING OF THE BOJANA RIVER	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
19	David Kočović	Synthesis, physicochemical characterization and bio-activity of new pyrazole and amoxicillin complex compounds	Head of Laboratory at the Institute of medicines and medical devices of Montenegro
20	Ana Radovic	Synthesis, physicochemical characterization and bio-activity of new pyrazole with transitional metals	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
21	Stefanela Zarkovic	Energy efficient construction	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
22	Milan Raičević	Green insurance as a determinant of sustainable development	University of Montenegro, Faculty of Economics, Podgorica, PhD studies
23	Vesna Pavlović	EXTENDED PRODUCER RESPONSIBILITY - GOOD PRACTICE AND NEW PARADIGM	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
24	Mladen Femic	Land management in Montenegro - new sustainable approach	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro
25	Esko Muratovic	Humanistic perspectives of sustainable development in the world of ethics of transparent evidence and ethics of evident transparency	University of Montenegro, Faculty of Philosophy, Niksic, Montenegro

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With Summary

#	PhD Author	Title	Affiliation	Abstract	Keywords	Session
1	Sanja Pavicevic	Physical potential of photovoltaic system	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro	This paper aims to determine the physical potential of the photovoltaic (PV) system in Montenegro, a country with annual average solar insolation of 1800 kWh/m ² and solar duration of over 2000 h/year for most of its territory [1]. The approach observes two locations in Montenegro where there are expectations to install PV systems on buildings' rooftops. They were selected because they are in urban areas with numbers of sunny days and an adequate continuous series of climatic data. The determination was performed with meteorological datasets provided by the Institute of Hydrometeorology and Seismology of Montenegro and analyzed using MATLAB. The methodology presented in this paper includes detailed meteorological hourly data of global solar radiation on the horizontal surface for the entire 2017 and MATLAB software. The results show that the highest monthly average solar radiation for different inclination and orientation angles of the observed location Podgorica is 7255.724Wh/m ² , and Bar 8428.876Wh/m ² . For both	Solar radiation, Photovoltaic, Physical Potential, Meteorological Data	Session 1: (22.09, 10.30h)





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				locations, the highest levels are in June. For a more precise determination of the potential of PV systems is crucial to know not only the physical potential but also geographic, technical and economic potential. The presented results are the basis and the first step toward a deeper analysis of photovoltaic potential in my future doctoral thesis.		
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2	Tanja Radovanovic	Emotional Design in Digital User Experience	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro	<p>Design and human interaction have, in the last two decades, spread from urban environments to digital ones, as the use of digital products has become a daily norm and a necessity for most of the world's population. In the process of making a successful product design, its function, construction, usability, price, and materials were almost always considered. Still, in this paper, we are shedding light on how people perceive products through emotions and why it is so important for users and product success to include this variable into the design strategy process to get a better user experience. Considering the amount of use of digital products, there is a need to make them designed and optimized for our emotional well-being, inclusivity, and gender equality. Emotions are part of every human experience, and they are brought on by neurophysiological changes, triggered by thoughts, feelings, and behavioral responses, and are fundamental in our decision-making. The impact of emotions is an emerging research topic in every field connected to human experience, from psychology to computer science, urban planning, etc. The questions we are asking are: 'How do products elicit emotions?', 'How can designers influence these</p>	emotional design, product design, design processes, user experience, well-being	Session 1: (22.09, 10.30h)
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				emotions?' and 'What are the patterns that can be used in the design of websites, apps, AR/VR, and metaverse spaces?'		
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3	Maša Jovanović	LSD outbreak in Montenegro 2016- an example of strengths and weaknesses of Veterinary Sector and potential for sustainable public health in the country	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro	A stable epidemiological situation is a prerequisite for a stable and sustainable development of animal husbandry. Surveillance, monitoring and quick response are the basic characteristics of a successful fight against infectious animal diseases. For this reason, the veterinary profession of each country represents the foundation for preservation of public health, animal health, and therefore the sustainable development of animal husbandry as one of the basic branches of agriculture. The outbreak of Lumpy Skin Disease (LSD) in Montenegro in 2016 is a very significant event, but also a warning about the importance of recognizing the dangers that can threaten the sustainability of this branch of agriculture. This situation showed the adequate reaction of the entire veterinary profession of Montenegro, which is not recognized enough, both from the aspect of its importance for public health, through animal health and welfare, and also for food safety through the chain of products of animal origin.	Lumpy Skin Disease, LSD, Veterinary Epidemiology, Public Health, Sustainable Agriculture	Session 1: (22.09, 10.30h)
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4	Neda Bošković	Microplastics presence in aquatic environments in Montenegro: A review on methods, occurrence and sources	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro	Microplastic (MPs) pollution represents a scientific topic that has received increasing attention over the last decade, due to the constant increase in plastic production and its subsequent disposal and accumulation in the aquatic environment. Worldwide reports of MPs in aquatic environment remarking the large spatial distribution of this contaminant and therefore the possible implications which MPs might have in aquatic habitat and food webs. This literature review is based on presence of MPs in the Montenegrin aquatic environment with an emphasis on sustainable water resources.	microplastic, sustainable development, freshwater	Session 1: (22.09, 10.30h)
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5	Alma Kurtis	Biological potential and phytochemical characterization of extracts of the species genus <i>Pinus</i> L. (Pinaceae) from Montenegro	University of Montenegro, PhD in Microbiology, Podgorica, Montenegro	The genus <i>Pinus</i> (Fam. Pinaceae), with over 100 known species, is the largest recent genus of conifers. Literature describing the biological activity of conifers, especially species within the genus <i>Pinus</i> in Montenegro, is pretty scarce. In this study, we determined the biochemical composition and biological potential (antimicrobial, antioxidant, cytotoxic effect on cancer cell lines and influence on the cell cycle and apoptosis) of extracts from five pine species: <i>Pinus sylvestris</i> (white pine), <i>Pinus nigra</i> (black pine), <i>Pinus heldreichii</i> (munika pine), <i>Pinus halepensis</i> (Aleppo pine), <i>Pinus pinea</i> (umbrella pine). Pine needle samples were extracted using organic solvent (80% methanol). The biological activity of plant extracts can be attributed to secondary metabolites such as phenolic acids, flavonoids and other phenolic compounds. The total phenolic content was highest in <i>Pinus sylvestris</i> (343.81 mg/g), followed by <i>Pinus heldreichii</i> (273.19 mg/g). Antibacterial activity was evaluated by determining the minimum inhibitory concentration (MIC) using the broth dilution method. Extract of <i>Pinus pinea</i> showed minimum inhibitory concentration 19 mg/ml on <i>Enterococcus faecium</i> , as well as	pine needles, extracts, biological potential, secondary metabolites	Session 1: (22.09, 10.30h)
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				<p>Pinus sylvestris had on Bacillus spizizenii. The demonstration of antimicrobial activity of pine needles extracts against both gram-negative and gram-positive bacteria suggests that the pine extracts possess compounds with antibacterial properties that can be used as antibacterial agents in novel drugs.</p>		
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6	Ivana Bulatovic	Marine litter categorization on two Montenegro beaches	University of Montenegro, PhD Studies in Sustainable Development, Podgorica, Montenegro	For the purposes of this marine litter research, two beaches on the Montenegrin coast were selected - Jaz beach and Blatna beach. The total number of items in each sampling unit was registered and calculated using the litter density as a number of items per square meter (items/m ²) and per 100 m stretch of the shoreline. Coastal clean index (CCI) is also defined for both beaches. During all research seasons dominant litter type were plastic items. 8 mm of space below list line of affiliation and 10 mm above the abstract. The total amount of litter per 100 m of beach stretch obtained by this research shows that on both selected beaches the amount of beach litter is 10 to 16 times higher than the defined TV at the EU level (i.e. 4 to 5.5 times higher for the Mediterranean level).	marine litter, beach, plastic items	Session 1: (22.09, 10.30h)
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7	Dejan Zejak	Growing OF PLUMS (Pruns domestica L.) IN BIJELO POLJE, MONTENEGRO (2000 – 2020)	University of Belgrade, Faculty of Agriculture,, Serbia	Plum (Pruns domestica L.) is one of the most abundant continental fruits in Montenegro. It is one of the dominant plantations in the valley of the river Lim (Polimlje). Bijelo Polje is the largest municipality in this Region, where the agro-ecological conditions, tradition and the location itself are excellent for growing of this fruit. Based on the official statistical data, certain trends in cultivation and yield of plums and its agro-ecological conditions are presented.	Plum, production trends, fruit growing, Bijelo Polje, Montenegro	Session 2: (22.09, 14.00h)
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8	Marija Markoč	Biopomological and biochemical characteristics of autochthonous olive varieties and olive processing waste	University of Montenegro, PhD in Biotechnics at Biotechnical Faculty, Podgorica, Montenegro	Almost as old as the human civilization, olive growing has always been a particularly significant agricultural branch for the area of Mediterranean, to whom Montenegro belongs. Favorable ecological conditions prevailing along the Montenegrin coast enabled spreading and successful cultivation of olives for more than 2000 years. Comparative research of biopomological and biochemical characteristics of autochthonous olive varieties, as well as olive processing waste products, will facilitate understanding of polymorphism among the most widely grown domestic and domesticated olive varieties in Montenegro. Furthermore, it will also contribute to the characterization of the existing olive genetic diversity developed under the influence of biotic and abiotic factors. This research will be the basis for further analysis of biochemical components extracted from olive oil-by products in Montenegro, thus indicating the possibilities for their valorization.	autochthonous olive varieties; polifenolic compounds; antioxidant activity	Session 2: (22.09, 14.00h)
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9	Anita Martić	Fungicide resistance in phytopathogenic fungi: A critical point of successful and sustainable viticulture (case of <i>Botrytis cinerea</i> Pers.)	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	<p><i>Botrytis cinerea</i> Pers. is the causal agent of grey mould, which is a worldwide disease that causes serious losses in more than 200 host species. Grey mould (also called <i>Botrytis</i> bunch rot) is one of the most important and destructive disease of grapevines. Effective control of grey mould in vineyard is usually based on preventive repeated fungicide applications during the season. Disease management relies on the application of 1-4 treatments with fungicides possessing a single-site mode of action. However, this fungus has been categorized by FRAC as a high-risk pathogen for fungicide resistance development. Another problem is related with the diversity of fungicides available to growers, which according with the current European legislation on pesticides and the European Green Deal, will be reduced by 50% by 2030. Despite the negative impact of the pathogen on grape production, no information is available on the composition of <i>B. cinerea</i> population in our country as well as fungicide resistance in <i>B. cinerea</i> populations from Montenegrin vineyards. Furthermore, understanding fungicide resistance of <i>B. cinerea</i> populations and their prevalence could help develop sustainable and effective</p>	<p><i>Botrytis cinerea</i>, disease, fungicides resistance, sustainable, control</p>	<p>Session 2: (22.09, 14.00h)</p>
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				control programs. In this study the fungicide resistance and molecular profiles of <i>B. cinerea</i> strains isolated from different viticultural areas in Montenegro will be determined to get useful information for the sustainable management of the disease.		
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10	Marica Melović	Transition of tourism in Montenegro – from sustainable development to sustainable tourism	University of Montenegro, PhD studies at the Faculty of Tourism and Hospitality, Kotor, Montenegro	Tourism, as well as other economic areas, in addition to contributing to greater economic benefits, also leads to the creation of problems such as increasing negative impact on the environment, as well as excessive energy consumption. Namely, due to the expansion of travel, many tourist destinations are affected by large tourist flows, which negatively reflects on the quality of life of the local population. As the application of technology in all areas, including tourism, is changing at an increasing speed, numerous challenges for the sustainable development of tourism are occurring, so research on this topic is very current both in domestic and foreign literature. The aim of this paper is to indicate the possibility of developing sustainable tourism in Montenegro, taking into account recent development trends. The results of the research show that due to the natural potential and resources that Montenegro possesses, sustainable development is very promising, with a special emphasis on sustainable (eco)tourism.	sustainable tourism; ecotourism; Montenegro	Session 2: (22.09, 14.00h)
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11	Vigan Raca	Towards Open Data Quality Improvements through an Assessment Framework	Ss Cyril and Methodius University, Faculty of Computer Sciences and Engineering, Skopje, North Macedonia	Open Government Data (OGD) recently has gained the attention around the world aimed to promote accountability and transparency of the governments. While quality of OGD remains an important factor for an effectiveness usage. Different frameworks have been proposed, few of them integrated at application level, but our proposed framework uses different approach. In addition of the OGD quality assessment, the proposed framework will be able to generate compressive and comparative results aimed to provide some recommendations for improvement of quality of data of public sector bodies as main data producers. This approach has been applied to Western Balkans OGD national portals but has the ability to be expanded to other countries.	Open Data, Government, Quality, Metrics, Assessment	Session 2: (22.09, 14.00h)
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12	Arso Ivanović	Advancing computing principles through studying nanoscale memristors using state-of-the-art nanotechnology	University of Montenegro, Department of Physics	This work is focused on fundamental research in nanotechnology, specifically on studying memristors (resistors with memory) by non-invasive scanning probe microscopes. Memristors as key components of so-called neuromorphic (brain-inspired) hardware systems, represent the much needed new computing principles relevant to cognitive processing, big-data analysis and low-power AI systems based on machine learning and the Internet of Things. Here, the focus is on nanoscale physics of memristive systems, understanding of which will give progress to the development of better performing neuromorphic devices with the goal to sustain the growth of innovative data science and information technologies	nanotechnology, memristors, scanning probe microscopy, neuromorphic computing, nanoelectronics	Session 2: (22.09, 14.00h)
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13	Snežana Lješnjak	Implementation of the curriculum of Education for sustainable development in elementary and high school teachers' work in Montenegro	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	Education for sustainable development (ESD) is a complex concept that encompasses a wide range of interrelated and conditional social, economic, and environmental issues, problems, and goals. Education is an indispensable social component and an effective tool for the development of a sustainable society, and the role of the teacher in this process is essential. The curriculum and methodological guidelines of ESD have been implemented as interdisciplinary education in elementary and high schools in Montenegro since 2014. In this study, we investigated the implementation and teachers' attitudes towards ESD, as well as the barriers to its inclusion. An online questionnaire survey was conducted, in which 874 teachers participated. The preliminary results show that 75% of the surveyed teachers do not use ESD in teaching, and 85% are completely or partially unfamiliar with the methodological instructions for the implementation of ESD. They cited the need for quality training, inadequate teacher pay, and lack of appropriate literature in this field as the main barriers to implementing ESD.	Education for sustainable development; teachers; implementation; elementary school; high school	Session 3 (23.09, 09.00h)
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14	Atdhe Buja	Cyber Security standards for the Industrial Internet of Things (IIoT)	University of South East European, PhD studies in Computer Science, Tetovo, N. Macedonia	<p>In the time of industrial revolution known as Industry 4.0 Industrial Internet of Things (IIoT) have advance their technology of sensors and the industry is utilizing massively. The industrial internet of thing (IIoT) are used in several industry sectors including smart cities, manufacturing etc., for a collection of data and providing those in the time when its needed for machines or decision making. The aim of the overall research study was focused in a systematic literature review of actual solution provided and possibly come up with a model of Cyber Security standards for the industrial internet of things (IIoT). Considering the facts of previous scientific work conducted there is a research gap of providing such solution for the Cyber Security of IIoT based on the latest cyber-attacks, threats. Emerging technologies including digital twin, automation, digitalization, cyber security, Internet of things, 5G/6G, and artificial intelligence have increased their development and spread across the industry by utilizing those but not only by them but also harmful individuals or organizations. In this work, we focus on providing Cyber Security for IIoT protection. Our latest development in security breaches have experience events with such advance</p>	cyber security model, industrial iot, Internet of things, digital twin, threats, countermeasure	Session 3 (23.09, 09.00h)
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				cyber-attacks in methods and techniques. Protection of IIoT sensors and industrial infrastructure has become an urgent need on identifying, prevention, prediction and response of cyber threats and implementing the right security controls. Cyber Security for the IIoT still is a challenge for the industry, and since there is a research gap we see as an opportunity to design a model where it can advance Cyber Security level of IIoT and industrial infrastructure.		
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15	Virtyt Lesha	The impact on entropy of improving the learning management systems	University Metropolitan Tirana	<p>The education system needs more and more modernization of learning management systems especially after COVID - 19. Consequently, in the perspective of labor market demands regarding the design of information systems, there is an increase in the number of employees who develop such systems. One of the solutions offered in order to overcome this gap is the compilation of a research model on the improvement of learning management systems taking into account the entropy of learning management systems as part of the domain of information systems. In this regard, this study proposes a research model based on the impact it has on the entropy of an information system when models of learning management system improvement are presented. Also, for the study of entropy, Fisher information is taken into consideration to study the impact of modification / improvement of the computer parameters of a learning management system. To test the research model, empirical data will be collected through a hardcopy questionnaire to professors and students at an Albanian university. Data analysis will be implemented using statistical models and the impact on the Fisher information explorer model will further be considered if the</p>	learning management system, entropy, Fisher information, distance learning, education system	Session 3 (23.09, 09.00h)
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				<p>information system is usable and sustainable. This study contributes to the literature of information systems theories through the development of a model and instrument through which perceived usability and sustainability are measured in the context of LMS. From a social point of view, the findings obtained will provide answers as to whether and how these improved LMS systems are expected to be used in distance education.</p>		
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16	Ndricim Topalli	Privacy Protection techniques for PII protection according to The GDPR	University Metropolitan Tirana	With the introduction of the Internet of Multimedia Things (IoMT) an increasing amount of image and video data is being collected by devices such as mobile phones, tablets, cameras, smartphones and so on. The massive number of images collected are processed (sensitive and private data are collected) and stored, which present substantial challenges for privacy preservation. The purpose of this paper is to propose a new privacy protection framework with the aim to protect the sensitive personal information, as stated by The General Data Protection Regulation (GDPR), 2018, contained in images that are being read by devices. On this paper are shown few different techniques to identify privacy sensitive content in images, such as facial recognition, action and scene detection and then protect them using one of Generative Adversarial Networks (GANs), DeepFakes [29], Face2Face[30] or FaceSwap[31]. The use of those methods can effectively protect users' privacy while maintaining image quality	Session 3 (23.09, 09.00h)
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17	Branka Knežević	Green Infrastructure as a Means of Combating Climate Changes in the city of Podgorica	University of Montenegro, MARDS Department	Podgorica, capital of Montenegro, as rather dynamically developing urban system, is particularly vulnerable to the impacts of climate changes. Even though being recognized by relevant local documents, new solutions, globally proven to be successful in combating climate changes, have not been fully implemented in Podgorica yet.	green infrastructure; climate changes; Podgorica	Session 3 (23.09, 09.00h)
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18	Osman Šurla	THE SIGNIFICANCE OF MACROINVERTEBRATES FOR BIOMONITORING OF THE BOJANA RIVER	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	Macroinvertebrates are a group of organisms that are visible to the eye and spend most of their life cycle at the bottom of the water. Apart from being food for other aquatic organisms, these organisms are the most sensitive link in the aquatic ecosystem. Scientists also call them water ecosystem sensors because they are used to assess the state of a water habitat. This work investigated the possibility of using these organisms in biomonitoring of the Bojana River. An assessment of the situation was made by analyzing the macroinvertebrates at the mouth of this river. By analyzing the presence and absence of certain species as well as the number of individuals within the population, an assessment of the water quality at the mouth of the river was made. This confirmed the effectiveness of these organisms for monitoring the situation in this location.	Bojana River, macroinvertebrates, biomonitoring, pollution, bioindicators, invasive species, mouth of the river	Session 3 (23.09, 09.00h)
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19	David Kočović	Synthesis, physicochemical characterization and bio-activity of new pyrazole and amoxicillin complex compounds	Head of Laboratory at the Institute of medicines and medical devices of Montenegro	The purposes of this research is to synthesize new pyrazole and amoxicillin-based complex compounds using metal ions in correlation with relation of ligand-metal structures, structurally characterize them and check for their bio-activity on microorganisms. The structure of the newly synthesized compounds is to be confirmed on the basis of analytical and spectral data. Some of the prepared compounds are to be evaluated for their in vitro activity on different bacterial strands. The reaction of pharmaceutically active compounds such are pyrazoles and amoxicillin, with metal ions that present high potential bioactivity stimulators, is supposed as to produce a superior compound, by conducting a proper structural forms of these compounds.	Synthesis, characterization, pyrazole, amoxicillin, complex compounds	Session 4: (23.09, 11.30h)
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20	Ana Radovic	Synthesis, physicochemical characterization and bio-activity of new pyrazole with transitional metals	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	The purpose of this research is to synthesize new pyrazole-based complex compounds with selected transition metal using metal ions in correlation with relation of ligand-metal structures, structurally characterize them and check for their bioactivity on phytopathogenic fungus. The structure of the newly synthesized compounds is to be confirmed on the basis of physicochemical characterizations. Some of the prepared compounds are to be evaluated for their in vitro activity on different fungus.	synthesis, pyrazole derivates, potential fungicides	Session 4: (23.09, 11.30h)
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21	Stefanela Zarkovic	Energy efficient construction	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	<p>Contemporary demands for energy consumption, the conception of ecological principles, and new understandings of the rational disposal of resources have led to the situation that humanity and every state must dispose of energy rationally. Therefore, few standards for buildings that use almost zero external energy (NZEB) have been adopted. All of this implies approaches in the processes of designing the cladding of the structures, which has the greatest impact on the quality of the building in terms of its energy efficiency. Practice shows that for the implementation of these standards, in addition to an unquestionable quality and practically applicable legal framework and quality engineers: designers, auditors, and contractors, it is necessary to have a competent and motivated workforce, appropriate equipment, and good communication and cooperation between all participants in the construction.</p>	Energy Efficiency, Nearly Zero Energy buildings, Passive House, sustainable development	<p>Session 4: (23.09, 11.30h)</p>
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22	Milan Raičević	Green insurance as a determinant of sustainable development	University of Montenegro, Faculty of Economics, Podgorica, PhD studies	The world is rapidly changing due to climate variations and environmental pollution, and in that context, climate changes have an impact on all segments of the economy and, therefore, also on the financial sector. That is why, in recent decades, more attention has been paid to sustainable development. Insurance can play a significant role because the main activity of the insurance industry is based on risk management. In this case, it is about climate risk. The aim of this paper is to examine the role of insurance in ensuring sustainable development through the introduction of green (ecological) insurance products on the market of the Western Balkan countries. Additionally, the goal is to examine the readiness of insurance companies for the development of this new segment of insurance. The plan is that this research, through its results, will provide a scientific, methodological, but also practical contribution, which would be reflected in providing assistance to insurance companies and regulators during the introduction and development of green insurance products on the analyzed markets.	climate changes, sustainable development, green insurance, Western Balkan	Session 4: (23.09, 11.30h)
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23	Vesna Pavlović	EXTENDED PRODUCER RESPONSIBILITY - GOOD PRACTICE AND NEW PARADIGM	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	Extended Producer Responsibility (EPR) is a producer-focused mechanism that aims to reduce waste, particularly plastic waste, by increasing recycling and decreasing dependency on new raw materials. EPR moves the cost of managing post use products partially or fully from local governments to the producing industry.	Waste management, recycling, awareness, national policy, EPR, PRO.	Session 4: (23.09, 11.30h)
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24	Mladen Femic	Land management in Montenegro - new sustainable approach	University of Montenegro, PhD studies in Sustainable Development, Podgorica, Montenegro	Land management here in Montenegro is following ex-Yugoslavia practice from the second part of the 20th century which is based on cadaster evidence of the ownership rights connected with graphical interpretation of the data. The system stays on the same level as 4-5 decades ago, while modern geodetic instruments and PC machines are giving the chance to improve all the system and output data. Montenegro is not so big country, it's around 13.812km ² with total population of around 620.000 people. The percentage of arable land is less then 40% and it is very important to save all the resources on the new, sustainable way.	land, land use, land management	Session 4: (23.09, 11.30h)
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25	Esko Muratovic	Humanistic perspectives of sustainable development in the world of ethics of transparent evidence and ethics of evident transparency	University of Montenegro, Faculty of Philosophy, Niksic, Montenegro				Session 4: (23.09, 11.30h)
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Other data

Zoom access:

DAY 1 (22.09):

<https://us02web.zoom.us/j/3740228367?pwd=M0lBNu50SThsbW4rUnBFdWxMRWhCZz09>

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Meeting ID: 374 022 8367

Passcode: docme

DAY 2: (23.09):

<https://us02web.zoom.us/j/3740228367?pwd=M0lBNu50SThsbW4rUnBFdWxMRWhCZz09>

Meeting ID: 374 022 8367

Passcode: docme

Presentation notes:

Max number of slides:

10min presentation, 10 mins questions

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