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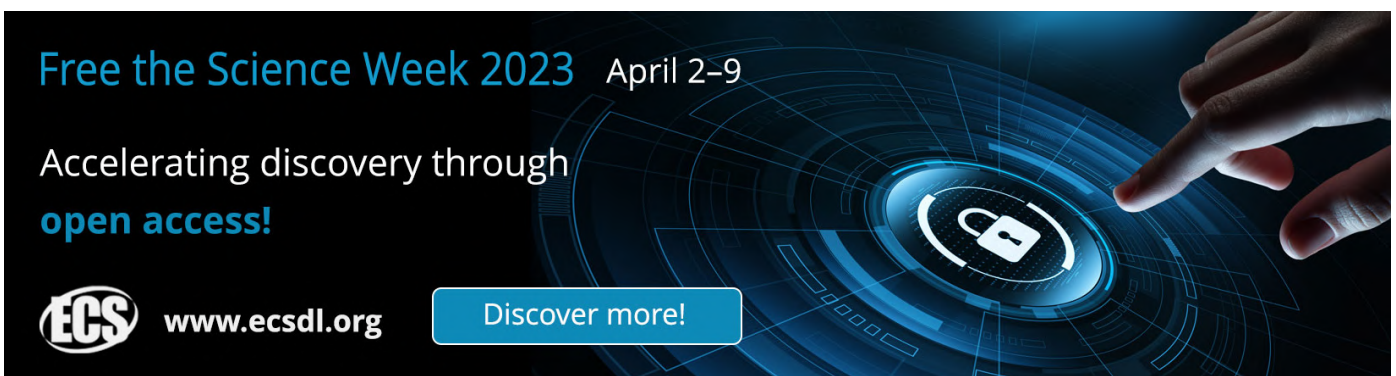
9th International Scientific Conference on Sustainability in Energy and Environmental Science

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9th International Scientific Conference on Sustainability in Energy and Environmental Science

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Abstract. This paper represents a preface to the Proceedings of the 9th International Scientific Conference on Sustainability in Energy and Environmental Science (ISCSEES 2022) held worldwide on June 22–24 2022. Background information and the organizational structure of the meeting, program committee, and acknowledgments of the contributions of the many people who made the conference a success are presented.

1. Background

The **9th International Scientific Conference on Sustainability in Energy and Environmental Science (ISCSEES)** is a peer-reviewed international conference, which covers research on Sustainability in Energy and Environmental Science, including sustainable development, sustainable and efficient use of energy, natural resource, renewable, smart and green energy development, environmental management, science and technology, environmental restoration, ecological engineering, eco-technology, agriculture and environment sustainability, green enterprise development, modeling and regional environmental assessments, risk management in energy, Earth and environment systems, measuring, forecasting and monitoring sustainability, global threats, disaster and mitigation (figure 1).

The 9th International Scientific Conference on Sustainability in Energy and Environmental Science (ISCSEES 2022) is an event addressed to scientists and professional engineers from all over the world. The conference aims to give the opportunity to present and publish their work, discuss, exchange ideas and knowledge as well as network for future collaborations. The conference covers a broad range of on Sustainability in Energy and Environmental Science related topics.

2. Conference overview

Conference presentations are grouped into 7 tracks (figures 2, 3):





Figure 1. ISCSEES 2022 (<https://iscsees.nung.edu.ua/>) organizers.

- Sustainable development of renewable, smart and environmentally friendly energy [1–8]
- Science and technology in the field of environment [9–11]
- Environmental restoration, environmental engineering, eco-technology and sustainable development of agriculture and environment [12–18]
- Management in a circular economy [19–30]
- Measurement, forecasting and monitoring of infrastructure facilities stability, and risk management in energy, Earth and environment systems [31–35]
- Global and regional challenges for the development of communities and territories [36–45]
- Global threats, catastrophes, pandemics and emergency measures [46–48]



Figure 2. Conference highlights, part 1.

This volume contains the papers presented at ISCSEES 2022: 9th International Scientific Conference on Sustainability in Energy and Environmental Science. The spread of the coronavirus that causes COVID-19 and the ongoing Russian invasion of Ukraine has changed the conference organization. Therefore, the conference held on June 22-24, 2022 in a mixed format (full-time and part-time).

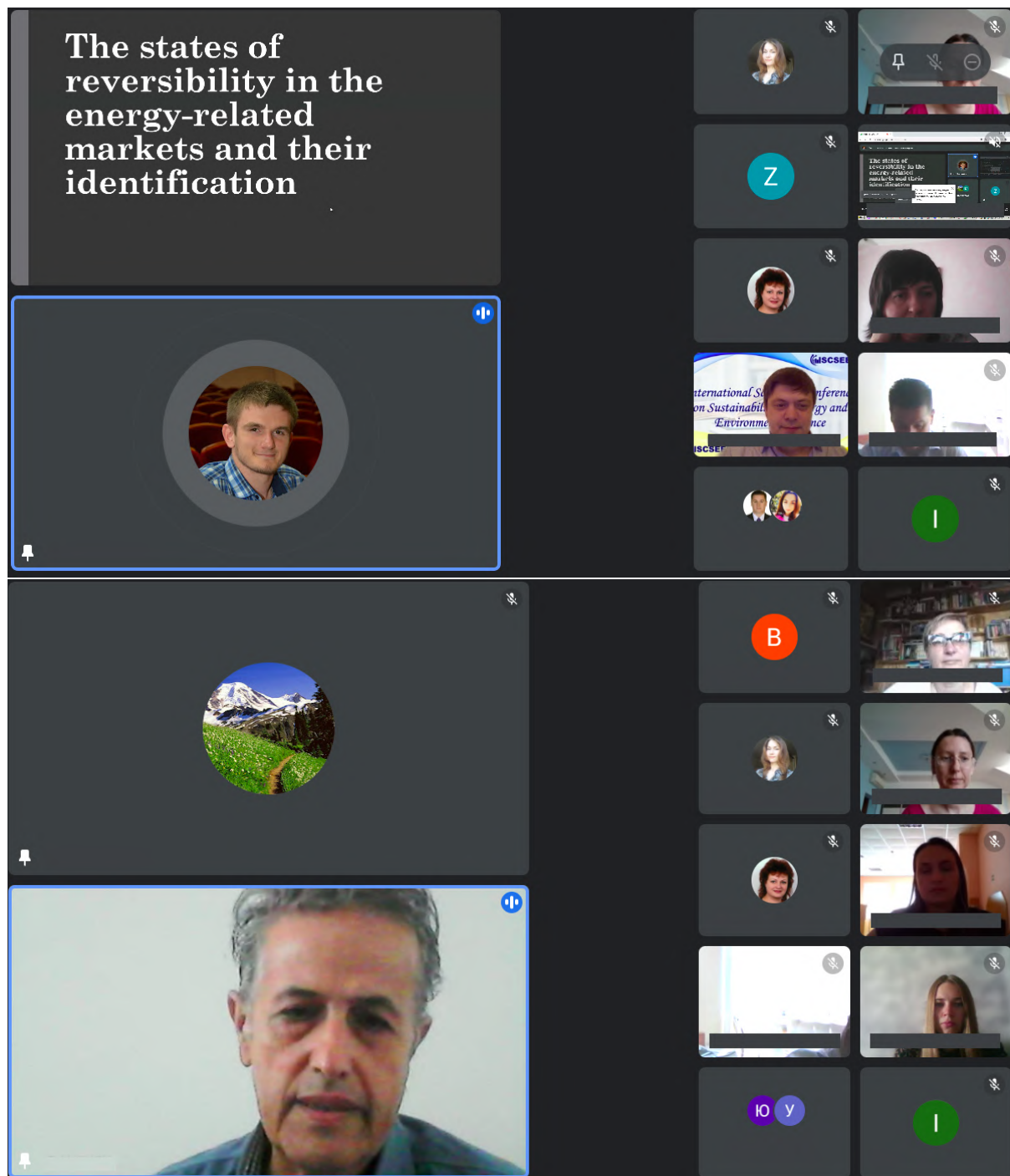


Figure 3. Conference highlights, part 2.

Authors were invited to submit full research papers including surveys, tutorials, perspective/colloquia articles in conference topics of interest (<https://www.morressier.com/call-for-papers/620bb7a0b4fa1600137d1ffc>). There were 75 submissions received. Each submission was reviewed by at least 2 program committee members. The committee decided to accept 48 papers.

More than 200 attendees from 18 countries are joined to ISCSEES 2022 using Zoom. The

presentation slots were defined as follows:

- invites talks (30 min): 20 min presentation, 10 min question answering and discussion,
- other talks (15 min): 10 min presentation and 5 minutes question answering and discussion.

The full program is available at the https://iscsees.nung.edu.ua/files/conference_program_iscsees_2022.pdf where details of the sessions, usually headed by one or more invited presentations. Video records of talks are available at the *New Trends in Economy* YouTube channel (<https://www.youtube.com/@user-vu7ic9jy7z>).

3. ISCSEES 2022 committees

3.1. Organizing committee

- *Olena Tretiak*, Director of NGO Cultural initiative
- *Ihor Chudyk*, Doctor of Technical Sciences, Professor, Vice-rector for research of Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine [49]
- *Oleh Novomlynets*, Doctor of Technical Sciences, Professor, rector of Chernihiv Polytechnic National University, Ukraine [50]
- *Liliana Horal*, Doctor of Economics Sciences, Professor, Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine [51]
- *Inesa Khvostina*, Associated Professor of Applied Economics Department, Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine [52]
- *Serhii Hushko*, Vice-rector for scientific and pedagogical, educational work and international affairs, State University of Economics and Technology, Ukraine [53]
- *Victoria Solovieva*, Assoc. Prof. PhD, State University of Economics and Technology, Ukraine [54]

3.2. Science committee

- *Victoria Prokhorova*, Doctor of Economics, Professor, Ukrainian Engineering Pedagogic Academy, Ukraine [55]
- *Valentyna Protsenko*, Doctor of Economics, Professor, Vice-Rector of Odessa National Medical University, Ukraine [56]
- *Vladimir N. Soloviev*, Doctor of Physical and Mathematical Science, Kryvyi Rih State Pedagogical University, Ukraine [57]
- *Serhiy Semerikov*, Doctor of Pedagogical Science, Professor of Computer Science and Educational Technology, Kryvyi Rih State Pedagogical University, Ukraine [58]
- *Viktoriya Margasova*, Doctor of Economics, Professor, Chernihiv National University of Technology, Ukraine [59]
- *Andriy Matviychuk*, Doctor of Economics, Professor, Kyiv National Economic University named after Vadym Hetman, Ukraine [60]
- *Myroslava Polutrenko*, Doctor of Technical Science, Professor, Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine [61]
- *Nazariy Popadynets*, Doctor of Economics Sciences, Senior Researcher, Lviv Polytechnic National University, Ukraine [62]
- *Hanna Kucherova*, Doctor of Economics, Professor, State University Of Economics and Technology, Kryvyi Rih, Ukraine [63]
- *Iuliia Kostynets*, Doctor of Economics, Associate Professor, Kyiv National University of Technologies and Design, Ukraine [64]

3.3. Program committee

- *Michael Radin*, Rochester Institute of Technology, USA [65]
- *Szabolcs Nagy*, University of Miskolc, Hungary [66]
- *Olha Prokopenko*, University of the Third Age, Poland [67]
- *Badri Gechbaia*, Georgian Academy of Business Sciences, Georgia [68]
- *Andriy Matviychuk*, Kyiv National Economic University named after Vadym Hetman, Ukraine [69]
- *Valentyna Lukyanova*, Khmelnytskyi National University, Ukraine [70]
- *Władysława Luczka*, Poznań University of Life Science, Poland [71]
- *Bård Borch Michalsen*, UiT The Arctic University of Norway, Norway [72]
- *Ramesh Chandra Rath*, Einstein Academy of Technology and Management, India [73]
- *Nadiia Shmygol*, Poznań University of Life Science, Poland [74]
- *Sofia Kafka*, National Technical University of Oil and Gas, Ukraine [75]
- *Ketevan Goletiani*, Batumi Navigation Teaching University, Georgia [76]
- *Giuseppe T. Cirella*, University of Gdansk, Poland [77]
- *Abdukhakim Mamanazarov*, Founder of the Center of Economic Culture Development, Uzbekistan [78]
- *Pankaj Srivastava*, FATER Academy of India, India [79]
- *Ewa Matuska*, Pomeranian University in Slupsk, Poland [80]
- *Olena Panukhnyk*, Ternopil Ivan Puluj National Technical University, Ukraine [81]
- *Małgorzata Sidor-Rzadkowska*, Warsaw University of Technology, Poland [82]
- *Vladimir N. Soloviev*, Kryvyi Rih State Pedagogical University, Ukraine [83]
- *Włodzimierz Strelcow*, Pomeranian University, Poland [84]
- *Victoria Solovieva*, State University Economics of Technology, Ukraine [85]
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- *Oleg Pursky*, Kyiv National University of Trade and Economics, Ukraine [91]
- *Arnold Kiv*, Ben-Gurion University of the Negev, Israel [92]
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- *Iluta Arbidane*, Rezekne Academy of Tehnologies, Latvia [94]
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- *Serhiy Semerikov*, Kryvyi Rih State Pedagogical University, Ukraine [97]
- *Jozef Zaťko*, European institute of further education, Slovakia [98]
- *Abdel-Badeeh M. Salem*, Ain Shams University, Egypt [99]
- *Iveta Mietule*, Rezekne Academy of Technologies, Latvia [100]
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- *James Cochran*, University of Alabama, USA [103]

- *Borys Yazlyuk*, West Ukrainian National University, Ukraine [104]
- *Viacheslav Dzhedzhula*, Vinnytsia national technical university, Ukraine [105]
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4. Conclusion

Balancing the current mankind needs and protecting future generations' interests make up an important component of the society development, and the search for alternative and innovative approaches in the economy management is extremely relevant to ensure the balanced and sustainable development of a healthy society. Today, sustainable development is one of the promising modern ideologies, and one of the concepts of this ideology is innovatics. Increasing the dynamics of the external environment demands an adequate response from modern businesses, which is expressed in the formation of a new modern management paradigm – the management of organizational changes. Change management deserves special attention in the context of ensuring the business entities development in the post-crisis economy, as the goal of any improvement is the transition to a new stage of functioning.

National policy coherence calls for appropriate decisions in the economic sphere as well as clearly defined short- and long-term goals for the development of the social sphere, the labor market, and education. The issue of building up a sustainable development policy and its implementation requires solving urgent tasks related to: Sustainability in Energy and Environmental Science, including sustainable development, sustainable and efficient use of energy, natural resource, renewable, smart and green energy development, environmental management, science and technology, environmental restoration, ecological engineering, eco-technology, agriculture and environment sustainability, green enterprise development, modeling and regional environmental assessments, risk management in energy, earth and environment systems, measuring, forecasting and monitoring sustainability, global threats, disaster and mitigation.

IX International Scientific Conference on Sustainability in Energy and Environmental Science was a forum which united scientists from all over the world to talk about the sustainable development of territories, about ecological, economic and national security. Achieving the conference goal was being decided in discussions and materials provided by the participants.

Based on the conference results, a collection of scientific articles was created, which you can look through now. Among the large number of articles sent to the conference, those that best corresponded to the conference topic, had elements of scientific novelty, were developed using economic-mathematical and statistical-empirical research methods, and were based on the well-known scientists' teachings on the subject under study were selected.

Dear readers, by getting to know the articles' content, you will be able to deepen your knowledge on the sustainable economy development, in particular, find answers to questions that have bothered the scientific community in recent years, namely:

- What are the structural changes in electricity generation to reduce CO₂ emissions?
- What methodology is used for forecasting environmental problems arising because of oil and gas industry and for assessing the sustainable development of administrative-territorial units?
- What is happening to land management with self-sown forests in Ukraine and what are the main factors influencing forecasting agricultural business development in crisis situations?
- What are new concepts for carbon dioxide elimination from combustion plants flue gases as well as many other engaging topics?

The organizing committee is grateful for the support in publishing the conference materials to the IOP Publishing.

We invite all readers to participate in the upcoming X anniversary conference.

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