

**Ministry of Education and Science of Ukraine
Ivano-Frankivsk National Technical University
of Oil and Gas**



with participation of



**Academy of Pomorska in Slupsk (Poland), Ariel University (Israel),
South East European University (Macedonia), BA School of Business and
Finance (Latvia), Science center Garuda AI B.V. (Netherlands),
Lviv Polytechnic National University, Kryvyi Rih Economic Institute of
Kyiv National Economic University named after Vadym Hetman
V. N. Karazin Kharkiv National University**



PROGRAM

of the 2019 7th International Conference

**Modeling, Development and Strategic
Management of Economic System**

MDSMES-2019

mdsmes.nung.edu.ua

**October 24-25, 2019 Ivano-Frankivsk,
Polyanytsia village (TC Bukovel) Ukraine**

Dear colleagues!

We invite you to participate in **7th International Conference on Modeling, Development and Strategic Management of Economic System**.

The conference will take place on **October 24-25, 2019**
in Ivano-Frankivsk and Polyanytsia village (TC Bukovel).

We invite scientists, practitioners, teachers of educational institutions, doctoral students and graduate students to participate in the conference.

The purpose of the Conference:

Exchange of experience and sharing the results of scientific research,
generalization and development of policy recommendations
based on the strategic management of economic systems;
development partnerships for future collaboration

Conference topics:

1. Mathematical methods, models, information systems and technologies in economics, accounting and finance
2. Monitoring, modeling, forecasting and prevention of crisis phenomena in socio-economic systems
3. Development and strategic management of sectoral and regional economic systems
4. Innovative modeling of economic systems
5. Models of risk management in economic systems

Conference language: English.

Schedule of the conference

October 24, 2019.

Arrival and registration at Tavel Hotel TC Bukovel.
Opening of the conference. Plenary session. Work in tracks.

October 25, 2019.

Work in tracks. Concluding commenta.
Closing of the conference.

SCHEDULE OF THE CONFERENCE

October 24-25, 2019

Date	Time	Action / Sunset
24.10.19	11.00	Arrival of conference participants
	11.00 – 12.45	Registration of conference participants
	13.00 – 14.00	Lunch
	14.30	Opening of the conference. Plenary meeting
	15.30 – 18.00	Work in sessions
	19.00	Dinner
25.10.19	9.00 – 11.00	Breakfast
	11.00 – 13.00	Work in sessions
	13.00 – 13.30	Summing up and closing of the conference
	14.00	Departure of the conference participants

SPEAKERS



Dr. Prof. Valeriy Heyets

**State Organization “Institute for
Economics and Forecasting of NAS of
Ukraine”, Ukraine**



Dr. Giuseppe T. Cirella

**Faculty of Economics, University of
Gdansk, Sopot, Poland**



Dr. Prof. Liliana Horal

**Ivano-Frankivsk National Technical
University of oil and gas, Ukraine**



Dr. Prof. Ewa Matuska

**Academy of Pomorskaya in Slupsk,
Poland**



Dr. Prof. Oleh Syniuk

**Khmelnitskyi National University,
Ukraine**



Dr. Artur Voronych

**Ivano-Frankivsk National Technical
University of Oil and Gas, Ukraine**

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Liliana Horal

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Associated Professor of Applied Economics Department,
Ivano-Frankivsk National Technical University of Oil and Gas (Ukraine)

Oleh Yatsiuk

Assistant of Professor of Economics and Management Theory Department,
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Kyiv National Economic University named after Vadym Hetman, Ukraine
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Ben-Gurion University of the Negev
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Ariel University
- **Dr. Prof. Serhiy Semerikov**
Kryvyi Rih State Pedagogical University
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National University of science and Technology
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- **Dr. Prof. Vladimir Soloviev**
Kryvyi Rih State Pedagogical University, Ukraine
- **Dr. Zoriana Matsuk**
Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine

PLENARY SESSION

Congratulations to Participants of the 7th International Conference on Modeling, Development and Strategic Management of Economic System

Yevstakhii Kryzhanivskyi, Ivano-Frankivsk National
Technical University of Oil and Gas, Ukraine

Modern Trends in the World and Domestic Economy

Valeriy Heyets, State Organization "Institute for Economics
and Forecasting of NAS of Ukraine", Ukraine

Competencies in VUCA Reality

Ewa Matuska, Academy of Pomorskaya in Slupsk, Poland

Sustainable Economics

Giuseppe T. Cirella, University of Gdansk, Sopot, Poland

Prospects and Ways of Science Development in Ukrainian Higher Education Institutions in Modern Realities

Oleh Syniuk, Khmelnytskyi National University, Ukraine

Innovative Development of Economic System: EU Experience

Artur Voronych, Ivano-Frankivsk National
Technical University of Oil and Gas, Ukraine

Scientific Analysis of State Managing of Oil and Gas Sector of Ukraine

Liliana Horal, Marta Shkvaryliuk, Ivano-Frankivsk National
Technical University of Oil and Gas, Ukraine

SESSION 1

MATHEMATICAL METHODS, MODELS, INFORMATION SYSTEMS AND TECHNOLOGIES IN ECONOMICS, ACCOUNTING AND FINANCE

CO-HEADS

Dr. Inese Mavlutova, Latvia

Dr. Prof. Oleh Dzoba, Ukraine

1	Valentina Orlova, Sofiia Kafka, Iryna Hryniuk and Orest Boichuk	Current capital optimization by the mathematical modelling of interconnections between its components
2	Nadiia Reznik, Anna Slobodianyuk, Valentyna Panasiuk and Anna Ivanova	Improvement of financing system of technological development on ukrainian agricultural machine-building enterprises
3	Roman Rohatynskiy, Natalia Garmatiy, Halyna Humeniuk and Nataliia Marynenko	Development of Model for Assessing the Level of Multipurpose Water Use and Protection by Economic-Mathematical Modeling
4	Inesa Khvostina, Andriy Matviychuk, Svitlana Savina and Oleh Yatsiuk	Analysis of the Dependence of the Performance of the Ensemble on the Accuracy of its Individual Models

5	Ruslan Volchek	Methodological aspects of estimation of value of specialized property of enterprises
6	Uliana Vytvytska, Yaroslav Vytvytsky and Igor Andriichuk	Capitalization of Resources of Oil and Gas Fields
7	Tetiana Dolishnia, Iryna Medvid, Olga Stepanyuk and Yuliia Stakhmych	Substantiation of the Approach to Selecting the Depreciation Method for Property, Plant, and Equipment
8	Nataliia Spasiv, Iryna Fadyeyeva, Vasyl Kozyk, Uliana Berezhnytska and Marta Shkvaryliuk	On Development of Finance Management Models in United Territorial Communities Under Budget Risk Conditions
9	Inese Mavlutova and Tatjana Volkova	Competencies In Financial Sector In The Era Of Digitalization
10	Olga Kneysler, Inna Zhurba, Nataliia Spasiv and Nataliia Hrechanyk	Economic and Mathematical Modeling of Demand for Recreational Forest Management in Ukraine
11	Lidiia Horoshkova, Ievgen Khlobystov, Volodymyr Volkov, Olha Holovan and Svitlana Markova	Asymptotic Methods in Optimization of Inventory Business Processes

SESSION 2

MONITORING, MODELING, FORECASTING AND PREVENTION OF CRISIS PHENOMENA IN SOCIO-ECONOMIC SYSTEMS

CO-HEADS

Dr. Iryna V. Lendel, USA

Dr. Prof. Iryna Fadyeyeva, Ukraine

1	Viktor Ievdokymov, Dymytrii Grytsyshen, Tetiana Tarasova and Kateryna Polyak	System development for generating information on the consequence influence of emergency situations on the safety of economic activities of enterprises in Ukraine
2	Nadiia Reznik, Anna Slobodianyk, Oksana Sydorenko and Mykola Horlachuk	Prospects of the exchange future market in the development of the agrarian economic system of Ukraine
3	Yevstakhii Kryzhanivskiy, Liliana Horal, Vira Shyiko, Oleksii Holubchak and Nataliia Mykytiuk	Economic and Mathematical Modelling for Evaluation of Potential Recreational Forest Utilization
4	Oleksiy Holubchak, Svitlana Korol, Ivanna Melnychuk and Mykola Prykhodko	Optimization of forest ecosystem recreational services formation in conditions of decentralization in Ukraine

5	Romana Matskiv, Tetiana Topolnytska, Olha Romanko and Irina Savchyn	Methodology of assessment of the level of social responsibility of oil and gas enterprises in Ukraine
6	Liudmyla Arkhypova, Natalia Fomenko, Irina Kinash and Olena Golovnia	Territorial recreational systems and sustainable development
7	Svitlana Shults, Maksym Maksymchuk, Liliia Simkiv and Liliya Marynychak	Problems of Strategic Development of Regions of Ukraine Using Smart Specialization Concept
8	Vladimir Soloviev, Viktoria Solovieva, Anna Tuliakova and Margaryta Ivanova	Construction of crisis precursors in multiplex networks
9	Vladimir Soloviev, Olexandr Serdiuk, Serhiy Semerikov and Oksana Kohut-Ferens	Recurrence entropy and financial crashes
10	Horoshkova Lidiia, Khlobystov Ievgen, Filipishyna Liliya and Bikulov Damir	Distribution of local expenditure for sustainable development of united territorial communities (economic and mathematical approach)
11	Svitlana Onyshchenko, Oleksandra Maslii and Bogdan Ivanyuk	The Impact of External Threats to the Economic Security of the Business

SESSION 3

DEVELOPMENT AND STRATEGIC MANAGEMENT OF SECTORAL AND REGIONAL ECONOMIC SYSTEMS

CO-HEADS

Dr. Fitim Deari, Republic of North Macedonia

Dr. Prof. Alla Polyanska, Ukraine

1	Olena Uhodnikova, Nataliia Bogdan, Iryna Segeda and Oleksandr Yevdokimov	State management strategic principles of tourism industry development
2	Halyna Voznyak, Olena Panukhnyk, Hryhoriy Khymych and Nazariy Popadynets	Development of regional economic systems under the impact of financial decentralization: display, challenges and new opportunities
3	Ghandir Hatem, Mark Liuty, Sviatoslav Kis and Oleh Yatsiuk	Modelling of Socially Responsible Pareto-Effective Stakeholders Interaction Formation under the Mass Media Influence
4	Iryna Hobyр, Vitalina Babenko, Oksana Savko and Yuliia Bui	Optimization of arranging of repair works at oil and gas enterprises through use of simulation modeling tools
5	Kateryna Slyusarenko, Iryna Vasylychuk and Maryna Sadovenko	Impact investing: world trends and the problems of its implementation in Ukraine

6	Iryna Stankovska, Alla Polyanska, Taras Stankovskiy and Svitlana Savchuk	The Process Approach on the Base of Digitalization as a Technology to Ensure the Efficiency of Enterprise's Management
7	Valentyna Lukianova, Yuliya Shutyak and Valentyna Polozova	Expert assessment method in socio-economic research and Scales transformations
8	Nataliia Gavkalova, Yuliia Lola, Svitlana Prokopovych and Daria Mykhailenko	Influence of the Country's Information Level on Its Economic Development
9	Halyna Zelinska, Irina Fedorovych, Uliana Andrusiv and Nataliia Yurchenko	Modeling of the Gas Transmission Reliability as a Component of Economical Security of Ukrainian Gas Transmission System
10	Oleh Dzoba, Ivanna Zapukhliak, Oleksandra Romashko and Tetiana Semeniutina	The Performance of Activity Diversification Efficiency for Ukrainian Gas Transportation Enterprises
11	Mykola Prykhodko, Nataliia Havadzyn, Liliana Horal, Ivanna Melnychuk and Mariia Berlous	Ecosystem services in the management system of ecological safety of territorial units
12	Iryna Perevozova, Oleh Dzoba, Zoriana Krykhovetska and Nadiia Daliak	Labour motivation of financial inspectors of agricultural enterprises
13	Liudmyla Boldyrieva, Halyna Zelinska, Valentyna Krapkina and Anna Komelina	Problems and Solutions of Transport Logistics
14	Vasyl Kozyk, Khrystyna Zalutska and Oleg Tovkan	The formation of a sustainable development strategy of the region
15	Olha Komelina, Inna Miniailenko, Anna Komelina and Andriy Pluzhnyk	Methodical and Practical Aspects of the Spatial Development of Ukrainian Regions, Based on Smart-specializations
16	Liliana Horal, Nadiia Pysar, Viktor Oliinyk and Galyna Bodnar	Development of the Energy Potential of the National Economy in the Context of Geopolitical Challenges
17	Olena Bulatova, Tetiana Shabelnyk, Yurii Chentukov and Tetyana Marena	Modeling of the Control System of Business Processes of Management of Region as an Economic Entity
18	Valentyna Yakubiv, Iryna Hryhoruk, Yuliia Maksymiv and Nazariy Popadynets	Strategic analysis of the potential of bioenergy: outlook for Ukraine

19	Maryna Makarenko, Roman Ustynov, Olenaa Sienko and Marina Babachenko	Creating the approach for the evaluation level of the efficiency of the organizational culture of the sea port
20	Lyudmila Oleynikova, Valentyna Helman, Iryna Halushchak and Yuriy Chuchuk	The rationale for optimization of higher education institutions' allocation of available resources
21	Olha Komelina, Svetlana Shcherbinina and Maryna Korsunska	Enterprise Economic Potential Estimation Model
22	Svitlana Matsyura, Viktoriia Radko and Zhanna Breher	Economic Evaluation of the Prospects for Bioenergy Development of Ukraine in Conditions of Globalization
23	Lyudmila Oleynikova, Valentyna Helman, Vasyl Brych, Lilya Mykhailyshyn and Roman Kravchuk	Methodological Approaches to Funding tertiary Education Institutions Given the Relationship between GDP and Budget Expenditure on Education
24	Valentuna Stadnyk, Galyna Sokoliuk, Andriy Goncharuk and Olha Matviets	Institutional Factors of Competitiveness and Development of the National Economy

SESSION 4

INNOVATIVE MODELING OF ECONOMIC SYSTEMS

CO-HEADS

Dr. Prof. Abdel-Badeeh M. Salem, Egypt

Dr. Uliana Berezhnytska, Ukraine

1	Liudmyla Bezuhla, Iryna Kinash, Uliana Andrusiv and Olena Dovgal	Attracting Foreign Direct Investment as an Economic Challenge for Ukraine in the Context of Globalization
2	Kateryna Holubchak, Yuriy Chuchuk, Tetiana Savchuk and Inna Negrych	The phenomenon of creative economy in Ukraine and defining its place in the architectural space
3	Olena Uhodnikova, Kostiantyn Viatkin, Sergiy Kobzan and Ruslan Sheludko	Formation of innovative models of urban planning system development by ensuring the competitiveness of construction enterprises
4	Natalia Korzh, Iryna Semeniuk, Natalia Makhnachova and Vitalii Sharko	Creating an Innovative Environment for Industrial Companies Internationalization in Ukraine: Prospects and Riskf
5	Vitalina Babenko, Oleg Boichenko, Andrii Gusliev and Yelyzaveta Koniaieva	Increase of Innovative Susceptibility of Personnel in Industrial Enterprises
6	Uliana Berezhnytska	Innovative Model of SME Development

7	Zoriana Matsuk, Vira Shyiko, Iryna Danyiuk-Chernykh and Lidiia Tryshak	Rating of Investments Funds Using the Capital Asset Pricing Model: Experience of Ukraine
8	Mykola Danyiuk, Vitalina Babenko, Nataliia Krykhivska and Tetiana Oryshchyn	Forming An Innovative Exopreneurship Model To Achieve Strategic Goals
9	Iryna Metoshop, Alexandra-Anna Metoshop, Ludmila Voitkiv and Natalia Yashcheritsyna	The Scientific and Technical Evaluation of the Effectiveness of the Results of Research and Development Works
10	Iryna Koshkalda, Alona Riasnianska, Olha Dankeyeva and Olena Dombrovska	Innovative development of agricultural enterprises as an economic system
11	Hanna Matukova, Natalia Bahashova and Liliya Korchevska	Innovative project management: theoretical and practical aspects
12	Alla Cherep, Olexandr Cherep, Iryna Mendela, Alexey Hostryk and Hanna Moskaliuk	Methodological Approach to Determining the Strategy Efficiency of the Economic Mechanism Development for Innovation Implementation at Engineering Enterprises
13	Liudmyla Nikolaieva, Oleksandr Haichenia, Taras Omelchenko and Victoriia Kozlova	Tools for rating evaluation of human resources as the main factor for providing the innovation development of the sea ports
14	Vladyslav Onishchenko, Hanna Kalinina, Anna Gurenko and Evelina Kamyshnykova	Creating the system of management of human resources innovation activity in the sea ports
15	Svitlana Bessonova, Irina Mayorova and Oleg Klenin	Interaction and Links of Technologies Life Cycle and Life Cycle of Innovations of an Industrial Enterprise
16	Olha Prokopenko, Nataliia Biloshkurska, Mykola Biloshkurskyi, Vitaliy Omelyanenko and Olena Garmatiuk	Multiplicative Dynamic Model of Technological Progress Factor Impact on Economy Sectors Innovation Development
17	Alla Cherep, Olexandr Cherep, Vasyl Brych, Olha Hryhoriv and Oksana Vasylyk	Methodological Approaches to Assessment of the Innovation Efficiency Level at Engineering Enterprises

SESSION 5

MODELS OF RISK MANAGEMENT IN ECONOMIC SYSTEMS

CO-HEADS

Dr. Prof. Arnold Kiv, Israel

Dr. Sofia Kafka, Ukraine

1	Valeriy Heyets, Mariya Skrypnychenko and Svitlana Shumska	Population Aging and Economic Dynamics in Ukraine: Models of Endogenous Growth Theory and Empirical Estimates of Current Challenges
2	Iryna Fadyeyeva, Oksana Gryniuk, Ilona Mandryk and Svitlana Korol	Fuzzy Approach to Risk-Controlling in Oil and Gas Company Management
3	Hanna Kucherova, Anastasiia Didenko and Olena Kravets	Modeling information transparency of economic entities under uncertainty
4	Lesia Zaburanna, Yulia Yarmolenko, Myroslav Kozak and Tetiana Artyukh	Modeling of regional clusters considering sustainable development
5	Mykhaylo Voynarenko, Viktoriya Hurochkina, Olena Kovalenko and Olena Menchynska	Modeling the impact of innovation policy on the level of development and economic security of the country
6	Igor Posokhov, Yulia Zhadan, Myroslava Korin and Hanna Obruch	Developing Risk Management Framework at Fat-and-Oil Industry Enterprises

7	Svitlana Kalinina, Lilya Mykhailyshyn, Yurii Korovchuk and Olga Kushnarenko	Monitoring of international labor migration in the context of the world economy labor resources providing problems
8	Svitlana Nesterenko, Liliia Martynova and Andrii Martynov	Application of Tools for Assessment of Risks of Economic Activity of Enterprises in the System of State Regulation of Grain Product Subcomplex in Ukraine
9	Mikhail Gorbiychuk, Olga Bila, Marian Slabinoha and Taras Humeniuk	Optimization natural gas pumping units operation by the economic criterion in the conditions of uncertainty
10	Yevhen Revtiuk and Maksym Bielawski	Estimation of losses from the use of volume units to account for natural gas for households in Ukraine
11	Inesa Khvostina, Viktor Oliinyk, Artem Heinrich Wiebe and Tetiana Panevnyk	Modeling the optimal distribution of profits for risk management of oil and gas enterprises
12	Larysa Batiuk, Nataliia Birchenko, Olena Lutsenko and Liudmyla Polyvana	Investigation of influence factors on agricultural enterprises technological processes management

VENUE

**Tavel Hotel, Polyanytsia village, Yaremche district,
Ivano-Frankivsk Region,
Ukraine**

TAVEL HOTEL



The conference will be held in Tavel Hotel, TC Bukovel.

This establishment will be able to offer a huge conference room, stocked with all the necessary equipment for a conference of this level, as well as offer comfortable conditions for conference participant recreation and relaxation.



The complex is located at Polyanitsa village, 94 kilometers from Ivano-Frankivsk. Transfer to both sides is provided by the conference organizers.

You will be able to work effectively, expand your scientific horizons and have a good rest!

**Thank you very much to our patrons and
sponsors for supporting the conference!**



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