

Ministry of Education and Science of Ukraine
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University
Vinnytsia National Technical University
Kamianets-Podilskyi Ivan Ohiienko National University
Ivan Franko National University of Lviv
Ukrainian State Dragomanov University
Poltava V.G. Korolenko National Pedagogical University
Jan Kochanowski University of Kielce (Poland)
Polytechnic University of Madrid (Spain)



IV International Scientific and Practical Internet Conference
«*Mathematics and Informatics in Science and*
***Education: Challenges of Modernity*»**

(dedicated to the 90th anniversary of the Department of
Mathematics and Informatics)

May 25-26, 2023, Vinnytsia, Ukraine

CONFERENCE PROGRAM

Vinnytsia – 2023

Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Faculty of Mathematics, Physics and Computer Science, Ostrozkoho str., 32, building № 3, Vinnytsia, 21001. E-mail: kafmathinf@vspu.edu.ua. The conference website <https://fmft.vspu.edu.ua/mainen/>.

SCIENTIFIC COMMITTEE

Natalia Lazarenko (*chair*, Vinnytsia, Ukraine), **Alla Kolomiets** (*vice-chair*, Vinnytsia, Ukraine), **Sergiy Bak** (Vinnytsia, Ukraine), **Tetiana Barbolina** (Poltava, Ukraine), **Mykola Bokalo** (Lviv, Ukraine), **Oleh Buhrii** (Lviv, Ukraine), **Volodymyr Fedorchuk** (Kamianets-Podilskyi, Ukraine), **Roman Hurevych** (Vinnytsia, Ukraine), **Iryna Khomyuk** (Vinnytsia, Ukraine), **Vitalii Klochko** (Vinnytsia, Ukraine), **Mariana Kovtonyuk** (Vinnytsia, Ukraine), **Ivan Konet** (Lutsk, Ukraine), **Grzegorz Łysik** (Kielce, Poland), **David Luengo** (Madrid, Spain), **Volodymyr Mykhalevych** (Vinnytsia, Ukraine), **Vira Petruk** (Vinnytsia, Ukraine), **Mykola Pratsiovytyi** (Kyiv, Ukraine).

ORGANIZING COMMITTEE

Mariana Kovtonyuk (*chairman*, Vinnytsia, Ukraine), **Sergiy Bak** (*vice-chairman*, Vinnytsia, Ukraine), **Galyna Kovtonyuk** (*conference secretary*, Vinnytsia, Ukraine), **Ivanna Leonova** (*conference secretary*, Vinnytsia, Ukraine), **Vitaliy Polishchuk** (*technical support of the conference website*, Vinnytsia, Ukraine), **Nataliya Zakharchenko** (Vinnytsia, Ukraine), **Svitlana Kyrylashchuk** (Vinnytsia, Ukraine), **Oksana Klochko** (Vinnytsia, Ukraine), **Olena Kosovets** (Vinnytsia, Ukraine), **Yaroslav Krupskyi** (Vinnytsia, Ukraine), **Volodymyr Mykhalevych** (Vinnytsia, Ukraine), **Olena Soia** (Vinnytsia, Ukraine), **Oksana Turzhanska** (Vinnytsia, Ukraine), **Oleksandr Tymoshenko** (Vinnytsia, Ukraine), **Viktor Shchyrba** (Kamianets-Podilskyi, Ukraine).

CONFERENCE PROGRAM

Thursday, May 25, 2023, PLENARY SESSION

10:00 – 11:00 **Registration / Connection**

11:00 – 11:40 **Opening of the Conference**

11:40 – 13:20 **Plenary talks**

Friday, May 26, 2023, SECTION SESSIONS

9:00 – 10:00 Registration / Connection

10:00 – 13:15 Section talks

13:15 – 14:00 Lunch break

14:00 – 14:30 Closing of the Conference

There will be plenary talks (duration 20 min.) and section talks (duration 15 min., i.e. 10 min. talk + 5 min. questions).

PLENARY SESSION
Thursday, May 25, 2023

mixed format:

offline (Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University,
Ostrozko str., 32, building № 1, Educational Hub «NotBox»)
and **online** (Google Meet connection <https://meet.google.com/man-evmd-nju>)

Chair Natalia Lazarenko, Dr. Sc.

Vice-chair Alla Kolomiets, Dr. Sc.

Secretary Yaroslav Krupskyi, Ph. D.

1. 11:00– **Natalia Lazarenko, Dr. Sc.**, rector of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:05 WELCOME SPEECH TO THE PARTICIPANTS OF THE CONFERENCE
2. 11:05– **Alla Kolomiets, Dr. Sc.**, vice-rector for scientific work of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:10 WELCOME SPEECH TO THE PARTICIPANTS OF THE CONFERENCE
3. 11:10– **Stanislav Podolianchuk, Ph. D.**, dean of the Faculty of Mathematics, Physics and Computer Science, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:15 WELCOME SPEECH TO THE PARTICIPANTS OF THE CONFERENCE
4. 11:15– **Mariana Kovtonyuk, Dr. Sc.**, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:25 90 YEARS FROM THE CREATION TO THE ESTABLISHMENT AND DEVELOPMENT OF THE DEPARTMENT OF MATHEMATICS AND INFORMATICS
5. 11:25– **Sergiy Bak, Dr. Sc.**, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:40 SCIENTIFIC ACHIEVEMENTS OF THE DEPARTMENT OF MATHEMATICS AND INFORMATICS
6. 11:40– **Mykola Pratsiovytyi, Dr. Sc., Olha Bondarenko, Iryna Lysenko, Ph. D., Sofiia Ratushniak, Ph. D.**, Ukrainian State Dragomanov University, Institute of Mathematics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine
12:00 INFINITE-SYMBOLIC Φ -IMAGE OF THE FRACTIONAL PART OF A REAL NUMBER IN THE PROBLEMS OF FUNCTION THEORY, PROBABILITY THEORY AND FRACTAL ANALYSIS
7. 12:00– **Volodymyr Derech, Ph. D., Alla Barkovska**, Vinnytsia National Technical University, Vinnytsia, Ukraine
12:20 ON FINITE STRUCTURALLY UNIFORM SEMIGROUPS
8. 12:20– **Volodymyr Fedorchuk, Dr. Sc.**, Kamianets-Podilskyi Ivan Ohienko

- 12:40 National University, Kamianets-Podilskyi, Ukraine
SIMULATION OF ONE-DIMENSIONAL NONLINEAR OBJECTS
WITH DISTRIBUTED PARAMETERS BASED ON THE
APPLICATION OF REVERSIBLE COMPUTER MODELS
9. 12:40– **Oleksandr Mosiuk, Ph. D.**, Zhytomyr Ivan Franko State University,
13:00 Zhytomyr, Ukraine
THE CREATION AND VISUALIZATION OF 3D MODELS
PRACTICE: AS ONE OF THE IMPORTANT ASPECTS OF
TRAINING DIGITAL TECHNOLOGY SPECIALISTS
10. 13:00– **Mariana Kovtonyuk, Dr. Sc., Olena Kosovets, Ph. D., Olena Soia,**
13:20 **Ph. D.**, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical
University, Vinnytsia, Ukraine
FORESIGHT MODELLING OF THE UNIVERSITY'S
SYNERGISTIC EDUCATIONAL ENVIRONMENT

SECTION 1. MODERN PROBLEMS OF MATHEMATICS

Friday, May 26, 2023, online (Google Meet connection)

<https://meet.google.com/uhw-cboi-amd>

Chair **Sergiy Bak, Dr. Sc.**

Secretary **Galyna Kovtonyuk, Ph. D.**

1. 10:00– *Sergiy Bak, Dr. Sc., Galyna Kovtonyuk, Ph. D.*, Vinnytsia Mykhailo
10:15 Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
ON EXISTENCE OF SOLITARY TRAVELING WAVES IN FERMI-
PASTA-ULAM TYPE SYSTEMS ON 2D-LATTICE
2. 10:15– *Kateryna Heseleva, Ph. D.*, Kamianets-Podilskyi Ivan Ohienko
10:30 National University, Kamianets-Podilskyi, Ukraine
COLLOCATION-ITERATIVE METHOD OF SOLVING ONE TYPE
OF INTEGRO-FUNCTIONAL EQUATION
3. 10:30– *Andrii Hromyk, Ph. D.*, Higher educational institution «Podillia State
10:45 University», Kamianets-Podilskyi, Ukraine; *Ivan Konet, Dr. Sc.*, Lesya
Ukrainka Volyn National University, Lutsk, Ukraine; *Tetiana
Pylypiuk, Ph. D.*, Kamianets-Podilskyi Ivan Ohienko National
University, Kamianets-Podilskyi, Ukraine
PARABOLIC BOUNDARY VALUE PROBLEMS OF
MATHEMATICAL PHYSICS IN PIECEWISE HOMOGENEOUS
WEDGE-SHAPED CYLINDRICAL-CIRCULAR LAYERS
4. 10:45– *Uliana Hudyma, Ph. D., Vasyl Gnatyuk, Ph. D.*, Kamianets-Podilskyi
11:00 Ivan Ohienko National University, Kamianets-Podilskyi, Ukraine
THE PROBLEM OF FINDING OF GENERALIZED STEINER'S
POINT FOR THE SEVERAL CLOSED BALLS IN SOME
POLYNORMED SPACE RELATIVELY THE SET OF THES SPACE

5. 11:00– *Mariana Khoma, Oleh Buhrii, Dr. Sc., Ivan Franko National University of Lviv, Lviv, Ukraine*
11:15 STOKES SYSTEM WITH DEPENDING OF TIME VARIABLE EXPONENTS OF NONLINEARITY
6. 11:15– *Marta Kvetsko, Taras Goy, Ph. D., Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine*
11:30 NEW COMBINATORIAL IDENTITIES INVOLVING BALANCING NUMBERS
7. 11:30– *Halyna Lopushanska, Dr. Sc., Ivan Franko National University of Lviv, Lviv, Ukraine; Olga Myaus, Ph. D., Lviv Polytechnic National University, Lviv, Ukraine; Olena Pasichnyk, Ph. D., Ivan Franko National University of Lviv, Lviv, Ukraine*
11:45 SOURCE FRACTIONAL INVERSE PROBLEM
8. 11:45– *Zoriana Novosad, Ph. D., Lviv University of Trade and Economics, Lviv, Ukraine*
12:00 THE CONDITIONS OF TOPOLOGICALLY MIXING OF WEIGHTED BACKWARD SHIFTS

SECTION 2. MODERN PROBLEMS OF COMPUTER SCIENCE

SECTION 3. MATHEMATICAL AND COMPUTER MODELING

Friday, May 26, 2023, Google Meet connection

<https://meet.google.com/ntm-gwzu-wmr>

Chair Volodymyr Mykhalevych, Dr. Sc.

Secretary Olena Kosovets, Ph. D.

1. 10:00– *Tetiana Barbolina, Dr. Sc., Poltava V.G.Korolenko National Pedagogical University*
10:15 COMPARISON OF ALGORITHMS OF THE POLYNOMIAL METHOD FOR SOLVING OF UNCONSTRAINED LINEAR FRACTIONAL OPTIMIZATION PROBLEM ON ARRANGEMENTS
2. 10:15– *Yurii Dobraniuk, Ph. D., Anastasiia Vasylynych, Maxym Shvets', Vinnytsia National Technical University, Vinnytsia, Ukraine*
10:30 APPLICATION OF THE COMPUTER MATHEMATICS SYSTEM MAPLE FOR CALCULATING FIGURE'S AREA BOUNDED A CIRCLE AND A CARDIOID
3. 10:30– *Vitalii Klochko, Dr. Sc., Vinnytsia National Technical University, Vinnytsia, Ukraine*
10:45 VISUALISATION OF THE CONCEPTS OF HIGHER MATHEMATICS COURSE AS A NECESSARY REQUIREMENT FOR THEIR SYSTEMATISATION
4. 10:45– *Volodymyr Korolskyi, Dr. Sc., Yana Mykhailova, Kryvyi Rih State*

- 11:00 Pedagogical University, Kryvyi Rih, Ukraine
CREATING A SELECTION OF TASKS BASED ON A GEOMETRIC MODEL AND A COMBINATION OF NUMERICAL SERIES $\sum_{n=1}^{\infty} \frac{1}{n} \mid \sum_{n=1}^{\infty} \frac{1}{2^n}$
5. 11:00–11:15 *Ihor Kutsevol, Oleh Buhrii, Dr. Sc.*, Ivan Franko National University of Lviv, Lviv, Ukraine
CONTINUOUS TIME NEURAL NETWORKS
6. 11:15–11:30 *Volodymyr Mykhalevych, Dr. Sc.* Vinnytsia National Technical University, Vinnytsia, Ukraine, *Viktor Matviychuk, Dr. Sc.*, *Andrii Shtuts, Ph. D.*, Vinnitsa National Agrarian University, Vinnytsia, Ukraine
MODEL OF MATERIAL DEFORMABILITY WHEN UPSETTING OUTER FLANGES ON TUBULAR BLANKS WITH A CONICAL ROLL
7. 11:30–11:45 *Oleksii Mykhalevych*, Kyiv National Economic University named after Vadym Hetman, Kyiv, Ukraine
THE TASK OF DETERMINING POTENTIAL PAYERS OF MOBILE APPLICATIONS
8. 11:45–12:00 *Oleksandr Nych*, Torkiv branch gymnasium, Torkiv, Ukraine
AT THE CROSSROADS OF CHALLENGES AND PROBLEMS OF THE DEVELOPMENT OF INFORMATICS IN UKRAINE
9. 12:00–12:15 *Oleksii Panasenko, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
PREDICTIVE POWER ANALYSIS OF THE HIGUCHI DIMENSION OF TIME SERIES
10. 12:15–12:30 *Sergiy Polozhayenko, Dr. Sc.*, *Alexander Fomin, Dr. Sc.*, *Valentyn Krykun, Ph.D.*, *Andrii Orlov, Ph.D.*, *Andrii Prokofiev, Ph.D.*, Odessa Polytechnic National University, Odessa, Ukraine
USE OF DYNAMIC NEURAL NETWORKS FOR MODELLING NONLINEAR OBJECTS WITH SIGNIFICANT NONLINEARITY
11. 12:30–12:45 *Viktor Shchyrba, Ph. D.*, *O. Furtel*, Kamianets-Podilskyi Ivan Ohienko National University, Kamianets-Podilskyi, Ukraine
OPTIMISATION OF CALCULATIONS IN THE STUDY OF SPARSE MODELS OF HIGH DIMENSIONALITY
12. 12:45–13:00 *Fedir Sokhatskyi, Dr. Sc.*, *Vasyl' Stus* Donetsk National University, Vinnytsia, Ukraine
IMPROVEMENT OF KNOWN ALGORITHMS
13. 13:00–13:15 *Olena Vilchynska, Ph. D.*, Vinnytsia Educational and Scientific Institute of Economics of the West Ukrainian National University, Vinnytsia, Ukraine
FEATURES OF THE USE OF ECONOMETRIC METHODS IN MARKETING RESEARCH

Poster talks

14. *Nataliya Dobrovolska, Ph. D.*, Vinnytsia Institute of Trade and

Economics of State University of Trade and Economics, Vinnytsia, Ukraine

MODEL FOR ASSESSING THE USEFULNESS OF AN INSURANCE CONTRACT

15. *Vitalii Kovalchuk*, Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine

USE OF PSEUDO-RANDOM NUMBER GENERATORS IN SOLVING PROBLEMS OF SIMULATING USER BEHAVIOR IN COMPUTER GAMES

16. *Mykola Mykhalenych*, *Igor Guran*, Ph. D., Ivan Franko National University of Lviv, Lviv, Ukraine

DYNAMIC SCHEMES OF VORONOI

SECTION 4. CREATION OF EDUCATIONAL ENVIRONMENT IN MATHEMATICS AND COMPUTER SCIENCE IN HIGHER EDUCATION
SECTION 5. MONITORING OF THE QUALITY OF EDUCATION: TOOLS AND TECHNOLOGIES

Friday, May 26, 2023, Google Meet connection

<https://meet.google.com/oxg-dbeh-hos>

Chair Mariana Kovtonyuk, Dr. Sc.

Secretary Oksana Turzhanska, Ph. D.

1. 10:00– *Olena Fonariuk*, Ph. D., Zhytomyr Ivan Franko State University, 10:15 Zhytomyr, Ukraine
DIGITIZATION OF THE EDUCATIONAL ENVIRONMENT IN HIGHER EDUCATION
2. 10:15– *Iryna Klieopa*, assistant, Vinnytsia National Technical 10:30 University, Vinnytsia, Ukraine
TEACHING HIGHER MATHEMATICS IN TECHNICAL INSTITUTIONS OF HIGHER EDUCATION DURING DISTANCE EDUCATION
3. 10:30– *Alona Kolomiiets*, Ph. D., *Nadaya Dubova*, Vinnytsia National 10:45 Technical University, Vinnytsia, Ukraine
DISTANCE EDUCATION IN HIGHER TECHNICAL SCHOOL: PROBLEMS AND SEARCH FOR SOLUTIONS
4. 10:45– *Maryana Kovtonyuk*, Dr. Sc., Vinnytsia Mykhailo Kotsiubynskyi State 11:00 Pedagogical University, Vinnytsia, Ukraine
MODELING OF THE EDUCATIONAL DISCIPLINE IN THE EDUCATIONAL SPACE OF THE BACHELOR OF MATHEMATICS

5. 11:00– 11:15 *Anna Melnyk, Ph. D.*, Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine
USE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN TEACHING INFORMATICS
6. 11:15– 11:30 *Tetiana Poveda, Ph. D.*, Kamianets-Podilskyi National Ivan Ohiienko University, Kamianets-Podilskyi, Ukraine; *Ruslan Poveda, Ph. D.*, Kamianets-Podilskyi National Ivan Ohiienko University, Kamianets-Podilskyi, Ukraine
DEVELOPING MENTOLITY OF STUDENTS IN THE PROCESS OF ANALYSIS AND EVALUATION OF SIMPLIFICATIONS IN PHYSICS PROBLEMS
7. 11:30– 11:45 *Olena Smalko, Ph. D.*, Kamianets-Podilskyi Ivan Ohiienko National University, Kamianets-Podilskyi, Ukraine
DEVELOPMENT OF SOFT SKILLS OF FUTURE IT SPECIALISTS IN COMPETENCY-BASED TRAINING
8. 11:45– 12:00 *Yelyzaveta Verkhovska, Oleksandr Kryvonos, Ph. D.*, Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine
HOW THE APPLICATION OF PROGRAMMING LANGUAGES IN EDUCATION WILL IMPROVE LIFE IN THE FUTURE
9. 12:00– 12:15 *Nataliia Zakharchenko, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
THEORETICAL ASPECTS OF TEACHING DISCRETE MATHEMATICS TO FUTURE IT TEACHERS

Poster talks

10. *Zlata Bondarenko, Ph.D.*, Vinnytsia National Technical University, Vinnytsia, Ukraine; *Svitlana Kyrylashchuk, Ph.D.*, Vinnytsia National Technical University, Vinnytsia, Ukraine; *Galyna Chernovolyk, Ph.D.*, Vinnytsia National Technical University, Vinnytsia, Ukraine
METHODOLOGICAL ASPECTS OF ASSESSING THE QUALITY OF INFORMATION COMPETENCIES OF BACHELOR MANAGERS
11. *Iryna Khomyuk, Dr. Sc.*, *Victor Khomyuk, Ph. D.*, *Svitlana Kyrylashchuk, Ph. D.*, Vinnytsia National Technical University, Vinnytsia, Ukraine
EXPERIENCE IN THE IMPLEMENTATION OF THE INFORMATION AND COMMUNICATION EDUCATIONAL ENVIRONMENT FOR TEACHING HIGHER MATHEMATICS AT THE VINNYTSIA NATIONAL TECHNICAL UNIVERSITY
12. *Kateryna Rumyantseva, Ph. D.*, Vinnytsia Educational and Scientific Institute of Economics West Ukrainian national university, Vinnytsia, Ukraine
FEATURES OF THE FORMATION OF MATHEMATICAL THINKING IN STUDENTS OF ECONOMIC HIGH SCHOOLS
13. *Tetiana Zhyrova, Ph. D.*, *Nataliia Kotenko, Ph. D.*, *Artem Bikmayev*, State University of Trade and Economics, Ukraine

ACCESSIBILITY SOFTWARE AS A STEP TOWARD CREATING
AN INCLUSIVE UNIVERSITY ENVIRONMENT

SECTION 6. MODERN COMPUTER TECHNOLOGIES IN TEACHING

MATHEMATICS AND COMPUTER SCIENCE

Friday, May 26, 2023, Google Meet connection

<https://meet.google.com/gmy-ypms-qjc>

Chair Olena Soia, Ph. D.

Secretary Ivanna Leonova

1. 10:00– *Larysa Antoniuk, Ph. D., Vinnytsia Mykhailo Kotsiubynskyi State*
10:15 *Pedagogical University, Vinnytsia, Ukraine*
APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE
EDUCATIONAL PROCESS
2. 10:15– *Oksana Dmytriienko, Ph. D., Poltava V.G. Korolenko National*
10:30 *Pedagogical University, Poltava, Ukraine*
CREATION OF ELECTRONIC TUTORIALS FOR DISTANCE
LEARNING
3. 10:30– *Sergii Galetskyi, Ph. D., The National University of Ostroh Academy,*
10:45 *Ostroh, Ukraine, Tetiana Biloshytska, Ph. D., Zhytomyr Ivan Franko*
State University, Zhytomyr, Ukraine, Natalya Topishko, Ph. D., The
National University of Ostroh Academy, Ostroh, Ukraine, Tetiana
Galetska, Ph. D., The National University of Ostroh Academy, Ostroh,
Ukraine
FEATURES OF MULTIMEDIA SUPPORT OF THE
EDUCATIONAL PROCESS
4. 10:45– *Andrii Kalashnyk, Poltava V. G. Korolenko National Pedagogical*
11:00 *University, Poltava, Ukraine*
DIDACTIC MATERIALS IN THE WORK OF A MODERN
TEACHER
5. 11:00– *Olena Kosovets, Ph. D. Vinnytsia Mykhailo Kotsiubynskyi State*
11:15 *Pedagogical University, Vinnytsia, Ukraine, Vitalina Biakovska,*
Municipal Institution "Vinnytsia Lyceum № 21", Vinnytsia, Ukraine
USING WEBQUESTS WITH ELEMENTS OF AUGMENTED
REALITY IN LESSONS OF COMPUTER SCIENCE
6. 11:15– *Olga Kravchuk, Ph. D., Yana Madiar, Lesya Ukrainka Volyn National*
11:30 *University, Lutsk, Ukraine*
MODERN COMPUTER TECHNOLOGIES IN TEACHING OF
MATHEMATICS AND COMPUTER SCIENCE
GeoGebra
7. 11:30– *Volodymyr Mykhalevych, Dr. Sc., Iryna Turzhanska, Daria*

- 11:45 *Nemyrovska*, Vinnytsia National Technical University, Vinnytsia, Ukraine
JOINT USE OF CHATGPT, MAPLE AND MAXIMA IN TEACHING MATHEMATICS AND COMPUTER SCIENCE
8. 11:45– *Anastasiia Smirnova*, QS Games, Vinnytsia, Ukraine
12:00 MATH AND COMPUTER SCIENCE LEARNING BY BASICS GAME DESIGN AND COMPUTER GAMES
9. 12:00– *Olena Soia, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine, *Olha Kolomiets*, Center for professional development of pedagogical workers of the Kalynivka city council of the Vinnytsia region, Kalynivka, Ukraine
12:15 SCREENCASTING AS A CURRENT TREND IN THE USE OF VISUALIZATION TOOLS IN EDUCATIONAL INSTITUTIONS
10. 12:15– *Oksana Turzhanska, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
12:30 TRAINING SIMULATOR FOR FINDING THE EXTREMUM OF A FUNCTION OF TWO VARIABLES IN MATHCAD
- Poster talks**
11. *Olha Chorna*, Kremenchuk Mykhailo Ostrohradskyi National University, Kremenchuk, Ukraine
DEVELOPMENT OF A METHOD OF FUNCTIONING OF A SOFTWARE APPLICATION FOR EFFECTIVE ASSESSMENT OF STUDENTS' KNOWLEDGE USING TESTS
12. *Yaroslav Krupskyi, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine, *Oksana Tytyynnyk, Ph. D.*, Vinnytsia National Technical University, Vinnytsia, Ukraine
APPLICATION OF SCM MAPLE IN MATHEMATICS LESSONS DURING THE STUDY OF THE SECTION "EQUATION OF TANGENT TO THE GRAPH OF A FUNCTION"
13. *Ivanna Leonova*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
UTILIZING MATH EDITORS IN HIGHER EDUCATION
14. *Maryna Miastkovska, Ph. D.*, Kamianets-Podilskyi Ivan Ohienko National University, Ukraine, Kamianets-Podilskyi, Ukraine, *Sofiia Dembitska, Dr. Sc.*, Vinnytsia National Technical University, Vinnytsia, Ukraine, *Inna Shtyka*, Kamianets-Podilskyi Ivan Ohienko National University, Ukraine, Kamianets-Podilskyi, Ukraine
COMPARISON OF ONLINE SERVICES FOR EDUCATION OF COMPUTER SCIENCE

SECTION 7. METHODS OF TEACHING MATHEMATICS AND COMPUTER SCIENCE IN SECONDARY EDUCATION

Friday, May 26, 2023, Google Meet connection

<https://meet.google.com/nzy-orpx-bwy>

Chair Yaroslav Krupskyi, Ph. D.

Secretary Alina Klimishyna, Ph. D.

1. 10:00– *Oleksandr Khvostetskiy*, Rakov gymnasium of the Tomashpil settlement council, Vinnytsia region, Ukraine
10:15 THE USE OF DIGITAL COMMUNICATION TECHNOLOGIES IN THE CONDITIONS OF DISTANCE LEARNING IN INSTITUTIONS OF GENERAL SECONDARY EDUCATION
2. 10:15– *Alina Klimishyna, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine, lyceum of the village of Ivaniv, Ukraine
10:30 APPLICATION OF QUEST TECHNOLOGIES DURING THE STUDY OF MATHEMATICS IN GENERAL SECONDARY EDUCATION INSTITUTIONS
3. 10:30– *Olena Korolyuk, Ph. D.*, Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine
10:45 STEM-EXCURSIONS IN EDUCATION OF MATHEMATICS
4. 10:45– *Oleksandr Mamon, Ph. D.*, *Olena Hulii*, Poltava National Pedagogical University named after V.G. Korolenko, Poltava, Ukraine
11:00 USING OF INTERNET SERVICES DURING STUDYING CERTAIN TOPICS OF THE SCHOOL COURSE OF INFORMATICS
5. 11:00– *Diana Mudrak, Oksana Klochko, Dr. Sc.*, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
11:15 METHODOLOGICAL FUNDAMENTALS OF TEACHING STUDENTS TO CREATE MULTIMEDIA PRESENTATIONS IN INFORMATION LESSONS IN SECONDARY EDUCATION INSTITUTION
6. 11:15– *Christina Myshkovska*, State University «Uzhhorod National University», Uzhhorod, Ukraine
11:30 THE PECULIARITIES OF DEVELOPING OLYMPIAD TASKS IN INFORMATION TECHNOLOGIES
7. 11:30– *Yuriy Smorzhevsky, Ph. D.*, Kamianets-Podilskyi National Ivan Ohiienko University, Kamianets-Podilskyi, Ukraine
11:45 ON THE USE OF LEVEL PHYSICAL PROBLEMS WHEN STUDYING THE POWER FUNCTION IN THE COURSE OF ALGEBRA AND BEGINNINGS OF ANALYSIS FOR THE 10TH

CLASS

8. 11:45– *Olha Sprynchak*, Odesa “European” Lyceum, Odesa, Ukraine;
12:00 *Yaroslav Krupskyi, Ph. D.*, Vinnytsia Mykhailo Kotsiubynskyi State
Pedagogical University, Vinnytsia, Ukraine
METHODOLOGICAL FEATURES OF CONDUCTING
INTEGRATED IT LESSONS
9. 12:00– *Daria Tkach*, Odesa secondary school No. 26 I-III degrees, Odesa,
12:15 Ukraine; *Yaroslav Krupskyi, Ph. D.*, Vinnytsia Mykhailo
Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine
APPLICATION OF GAME FORMS OF WORK IN COMPUTER
SCIENCE LESSONS
10. 12:15– *Yuliia Venhryn*, Yuriy Fedkovych Chernivtsi National University,
12:30 Chernivtsi, Ukraine
METHODOLOGICAL FEATURES OF THE USE OF
INTERACTIVE METHODS IN CONDUCTING LESSONS AND
ASSESSING STUDENTS’ KNOWLEDGE OF MATHEMATICS
IN HIGH SCHOOL

Poster talks

11. *Larisa Chernykh, Ph. D., Kateryna Shchur*, Kryvyi Rih State
Pedagogical University, Kryvyi Rih, Ukraine
ANALYSIS OF THE PROBLEM OF THE DEVELOPMENT OF
STUDENTS' COMPUTING CULTURE
12. *Tetiana Dumanska, Ph. D.*, Kamianets-Podilskyi Ivan Ohienko
National University, Kamianets-Podilskyi, Ukraine
THE PROBLEM OF INCREASED COMPLEXITY AS A MEANS
OF FORMING THE RESEARCH AND COGNITIVE ACTIVITI
OF EDUCATION ACQUISITIONS

14:00 – 14:30 **Closing of the Conference**, Google Meet connection

<https://meet.google.com/man-evmd-nju>

IV International Scientific and Practical Internet Conference
«*Mathematics and Informatics in Science and Education: Challenges of Modernity*»

(dedicated to the 90th anniversary of the Department of Mathematics and
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Compiled by Sergiy Bak