



Міністерство  
фінансів  
України



STATE  
TAX  
UNIVERSITY

# ПРОГРАМА

## МІЖНАРОДНОГО КРУГЛОГО СТОЛУ

**"The Role of Mathematics in the Modern World: Education, Research and Applications"**

М. ІРПІНЬ  
20 ТРАВНЯ 2026 РОКУ



MAX PLANCK INSTITUTE  
FOR DYNAMICS OF COMPLEX  
TECHNICAL SYSTEMS  
MAGDEBURG



UNIVERSITÄT  
KLAGENFURT



uniform

## Online

09:00-09:50

### Participant Registration

Online: via Zoom

[https://us02web.zoom.us/j/86458050361?](https://us02web.zoom.us/j/86458050361?pwd=AWxawamUtJW9O89srefehaTbjLhOAl.1)

[pwd=AWxawamUtJW9O89srefehaTbjLhOAl.1](https://us02web.zoom.us/j/86458050361?pwd=AWxawamUtJW9O89srefehaTbjLhOAl.1)

10:00-10:30

### Conference Opening and Welcome Remarks



#### Moderator: Darya TERMENZHY

PhD in Pedagogical Sciences, Associate Professor,  
Department of Higher and Applied Mathematics,  
Faculty of Finance and Digital Technologies, State  
Tax University

10:30-13:30

### Plenary Session

13:30-15:30

### Closing Remarks and Conclusions

#### Rules:

Plenary presentation: up to 10 minutes

Discussion and Q&A: up to 5 minutes

## WELCOMING REMARKS



**Vasyl LUTSYK**

Vice-Rector for Research, State Tax University,  
PhD in Law, Associate Professor, Senior Researcher



**Nadiia DAVYDENKO**

Dean of the Faculty of Finance and Digital  
Technologies, State Tax University, Doctor of  
Economics, Professor

## WELCOMING REMARKS



**Alexander ZUYEV**

Prof., Dr. Hab., Senior Scientist,  
Max Planck Institute for Dynamics of Complex  
Technical Systems, Magdeburg, Germany



**Olha TROFYMENKO**

PhD in Physical and Mathematical Sciences, Master of  
Applied Financial Mathematics, Assistant Professor,  
University of Connecticut, USA



**Maryna PETRANOVA**

PhD in Applied Mathematics,  
Manual QA Engineer, Uniform Company

## PLENARY SESSION



10:30—10:40

### QUANTITATIVE METHODS IN CORPORATE ANALYTICS: HOW MATHEMATICS STRUCTURES CHAOS



**Yuliia DZIHORA**

Master of Mathematics, Business Analysis Department  
Analyst, Commercial Department of Expansia LLC

10:40—10:50

### EVOLUTIONARY COMPUTATION AS A MATHEMATICAL APPROACH TO OPTIMIZATION AND PROBLEM SOLVING



**Viacheslav MUNISTER**

student of the Faculty of Finance and Digital  
Technologies, State Tax University

10:50—11:00

### GEOMETRY OF HARMONY: THE MATHEMATICS OF THE GOLDEN RATIO IN PHOTOGRAPHY



**Kateryna KOLESNIK**

student of the Faculty of Finance and Digital  
Technologies, State Tax University

## PLENARY SESSION



11:00—11:10

**FUZZY SETS AND FUZZY LOGIC IN ECONOMIC MODELING**



**Oleksandra ANISTRATENKO**

student of the Faculty of Taxation, Accounting and  
Audit, State Tax University

11:10-11:20

**MATHEMATICS AS THE FOUNDATION OF IT:  
IMPLEMENTING INTERDISCIPLINARY CONNECTIONS IN THE  
LEARNING PROCESS**



**Mykyta CHUBATOV**

student of the Faculty of Finance and Digital  
Technologies, State Tax University

11:20-11:30

**FROM NUMBERS TO NOTES: THE MATHEMATICS OF  
MUSICAL HARMONY**



**Nadiia RATUSHYNSKA**

student of the Educational and Scientific Institute of  
Economic Security and Customs Affairs, State Tax  
University

## PLENARY SESSION

11:30-11:40

### THE ONE-SHEET HYPERBOLOID: BRIDGING GEOMETRY AND STRUCTURAL EFFICIENCY IN ARCHITECTURE



**Yelyzaveta TYSHCHENKO**

student of the Faculty of Finance and Digital Technologies, State Tax University

11:40-11:50

### MERCATOR PROJECTION AND THE MATHEMATICS OF DISTORTION: RETHINKING COUNTRY SIZE COMPARISONS



**Ihor PRAIS**

student of the Faculty of Finance and Digital Technologies, State Tax University

11:50-12:00

### MATHEMATICS IN AEROSPACE ENGINEERING: FROM TRAJECTORIES TO ORBITS



**Oleksandr PAPINKO**

student of the Faculty of Taxation, Accounting and Audit, State Tax University

12:00-12:10

### BIG DATA IN ECONOMICS AND FINANCE: A MATHEMATICAL PERSPECTIVE



**Oksana YAROVA**

PhD in Physical and Mathematical Sciences, Head of the Department of Higher and Applied Mathematics, Faculty of Finance and Digital Technologies, State Tax University

## PLENARY SESSION



12:10-12:20

### MATHEMATICAL MODELING AND FORECASTING BASED ON BIG DATA



**Lilia SKASKIV**

Associate Professor of the Department of Higher and Applied Mathematics, Faculty of Finance and Digital Technologies, State Tax University

12:20-12:30

### GRAPH THEORY AND SOCIAL NETWORKS: UNDERSTANDING HUMAN CONNECTIONS



**Maksym SOLUK**

student of the Faculty of Finance and Digital Technologies, State Tax University

12:30-12:40

### GAME THEORY AND DECISION-MAKING IN THE MODERN WORLD



**Daryna BILOSHYTSKA**

student of the Educational and Scientific Institute of Economic Security and Customs Affairs, State Tax University

12:40-12:50

### FROM IMAGINARY ROOTS TO REAL-WORLD IMPACT: THE EVOLUTION AND APPLICATIONS OF COMPLEX NUMBERS



**Diana PROKOPENKO**

student of the Faculty of Finance and Digital Technologies, State Tax University