



2022
IMEA

SCIENTIFIC PROGRAM

INTERNATIONAL SCIENTIFIC CONFERENCE

**“INFORMATICS, MATHEMATICS,
EDUCATION AND THEIR
APPLICATIONS”**

23–25 NOVEMBER 2022 • PAMPOROVO, BULGARIA

Organizer

Faculty of Mathematics and Informatics
Paisii Hilendarski University of Plovdiv

23.11.2022 ► HALL A**17:00 - 17:15 ► Official opening of the conference****17:15 - 17:30 ► Anniversaries****17:30 - 17:45 ► Anniversaries****24.11.2022 ► HALL A****09:00 - 09:15 ►** Vesselin Kyurkchiev, Anton Iliev, Asen Rahnev, Nikolay Kyurkchiev, LIENARD SYSTEM WITH FIRST KIND CHEBYSHEV'S POLYNOMIAL-CORRECTION IN THE LIGHT OF MELNIKOV'S APPROACH. SIMULATIONS AND POSSIBLE APPLICATIONS**09:15 - 09:30 ►** Evgenia Angelova, Valia Arnaudova, Todorka Terzieva, Anna Malinova, INVESTIGATIONS ON A DIFFERENTIAL SYSTEM WITH CORRECTION OF ZERNIKE-TYPE RADIAL POLYNOMIALS. SIMULATIONS**09:30 - 09:45 ►** Maria Vasileva, COMMENTS ON A NEW EXPONENTIAL-X FAMILY AND APPLICATIONS TO ACTUARIAL SCIENCES**09:45 - 10:00 ► BREAK****10:00 - 10:30 ► Invited talk:** Gregory Makrides, THE STEAME SCHOOL AND LEARNING OF THE FUTURE**10:30 - 11:00 ► Invited talk:** Mohamed Elomari, NON COMPACTNESS METHOD TO STUDY PSI-CAPUTO FRACTIONAL ÉVOLUTION PROBLEMS WITH NONDENSE DOMAINE**11:00 - 11:30 ► Invited talk:** Dalibor Dobrilovic, APPROACH IN USING OPEN-SOURCE HARDWARE IN TEACHING SOLAR-POWERED IOT NODE DEVELOPMENT**11:30 - 12:00 ► Invited talk:** Jagan Mohan Jonnalagadda, POSITIVE SOLUTIONS FOR NABLA FRACTIONAL PERIODIC BOUNDARY VALUE PROBLEMS

12:00 - 14:00

LUNCH BREAK

Sava Grozdev, Veselin Nenkov, Tatiana Madjarova, RELATIONSHIP BETWEEN PONCELET THEOREM AND EULER FORMULAE FOR DISTANCES IN THE TRIANGLE

14:00 - 14:15

14:15 - 14:30

Todorka Glushkova, Anna Malinova, Sava Grozdev, BUILDING KEY DIGITAL COMPETENCES IN STEAM EDUCATION AT SCHOOL

14:30 - 14:45

Rosen Nikolaev, Tanka Milkova, SOME PEDAGOGICAL APPROACHES TO TEACHING MATHEMATICS TO ECONOMISTS

14:45 - 15:00

Krista Mehandzhiyska, POSSIBILITIES OF MATH INTEGRATION IN COMPUTER MODELING AND INFORMATION TECHNOLOGIES LESSONS

15:00 - 15:15

Todorka Terzieva, Ventsislav Dilyanov, Asen Rahnev, Angel Uriiski, SOME ASPECTS IN DESIGNING STRUCTURE AND CONTENT OF EDUCATIONAL RESOURCES FOR TRAINING IN A DIGITAL ENVIRONMENT

15:15 - 15:45

BREAK

15:45 - 16:00

Atanas Ilchev, Boyan Zlatanov, USE OF COMPUTER ALGEBRA SYSTEMS FOR SOLVING OF INDEFINITE INTEGRALS OF PROPER RATIONAL FUNCTIONS

16:00 - 16:15

Temenuzhka Peneva, RECENT PROGRESS IN THE DISTRIBUTION OF HARDY-LITTLEWOOD NUMBERS

16:15 - 16:30

Petar Kopanov, CONVERGENCE IN DISTRIBUTION AND DISTRIBUTIONAL CHARACTERISTIC GROUP

16:30 - 16:45

Vilislav Radev, CREATING EDUCATIONAL GAMES FOR MATHEMATICS CLASSES USING INFORMATION TECHNOLOGY

24.11.2022 ► HALL B

- 09:00 - 09:15 Eleni Adamidi, MEDICAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE
- 09:15 - 09:30 Rumen Mihaylov, Vladimir Valkanov, Hristo Hristov, MODEL OF ROAD JUNCTIONS FOR TRAFFIC MEASUREMENT
- 09:30 - 09:45 Maria Dobрева, Nikolay Pavlov, Asen Rahnev, ROW-LEVEL SECURITY MODEL
- 09:45 - 10:00 **BREAK**
- 10:00 - 10:30 **Invited talk:** Ljubica Kazi, SOFTWARE QUALITY IN UNIVERSITY TEACHING
- 10:30 - 11:00 **Invited talk:** Preslav Nakov, DETECTING THE “FAKE NEWS” BEFORE IT WAS EVEN WRITTEN, MEDIA LITERACY, AND FLATTENING THE CURVE OF THE COVID-19 INFODEMIC
- 11:00 - 11:15 Simeon Monov, Nikolay Pavlov, Asen Rahnev, IMPROVING EFFICIENCY OF ROUTING TRANSPORTATION EQUIPMENT USING TABU SEARCH
- 11:15 - 11:30 Pavel Kyurkchiev, Georgi Spasov, Angel Urilski, ARCHITECTURE FOR INTEGRATION OF A WEB APPLICATION WITH AN EXTERNAL SYSTEM FOR IDENTITY RECOGNITION AND VALIDATION
- 11:30 - 11:45 Emil Delinov, Ivanka Marasheva-Delinova, Anita Stoyanova, AN EXAMPLE OF AN IT INFRASTRUCTURE AUDIT
- 11:45 - 12:00 Rosen Hristev, Magdalena Veselinova, Angel Golev, Kristiyan Kolev, CRYPTO-RANSOMWARE ATTACKS ON LINUX SERVERS: A DATA RECOVERY METHOD
- 12:00 - 14:00 **LUNCH BREAK**

14:00 - 14:15

Veneta Tabakova-Komsalova, Asya Stoyanova-Doycheva, Lyubka Dukovska, Stanimir Stoyanov, THE PROJECT “DIGITAL BULGARIA IN PROLOG”

14:15 - 14:30

Veneta Tabakova-Komsalova, Stanimir Stoyanov, Asya Stoyanova-Doycheva, Lyubka Dukovska, DIAGNOSTIC EXPERT SYSTEMS FOR INTELLIGENT AGRICULTURE

14:30 - 14:45

Ivan Stoyanov, Emil Doychev, Atanas Dukovski, Laska Kostadinova-Tsankova, A PERSONAL ASSISTANT FOR SMART FARMING

14:45 - 15:00

Laska Kostadinova-Tsankova, Stanimir Stoyanov, Asya Stoyanova-Doycheva, Veneta Tabakova-Komsalova, MODEL AND ARCHITECTURE OF A SUPPLY CHAIN

15:00 - 15:15

Stanimir Stoyanov, Ivan Stoyanov, Veneta Tabakova-Komsalova, Pencho Malinov, CREATION AND APPLICATION OF AN EVENT MODEL

15:15 - 15:45

BREAK

15:45 - 16:00

Emil Doychev, Atanas Terziiski, Stoyan Tenev, Asya Stoyanova-Doycheva, Aleksandar Petrov, REGIONAL DATA CENTRE ARCHITECTURE FOR SMART CROP PRODUCTION IN PLOVDIV REGION

16:00 - 16:15

Asya Stoyanova-Doycheva, Emil Doychev, Vanya Ivanova, Pencho Malinov, USE OF ONTOLOGIES IN SMART AGRICULTURE

16:15 - 16:30

Konstantin Rusev, Todorka Glushkova, DEVELOPMENT OF A COMPONENT FOR CONTEXT-AWARE MODELING IN VIRTUAL-PHYSICAL SPACE

16:30 - 16:45

Stefan Stavrev, Dimitar Ginchev, IMPLEMENTATION OF A SYSTEM FOR MONITORING BIO-PHYSIOLOGICAL DATA OF PILOTS VIA A FLIGHT SIMULATOR

16:45 - 17:00

Stefan Stavrev, Galateya Ushanova, A MODERN INSTRUMENT FOR GAME-BASED LEARNING OF ENGLISH WORDS

25.11.2022 ► HALL A

10:00 - 10:15

Yanica Chukanska, Gergana Koleva, Todorka Terzieva, ADAPTIVE TOOLS FOR TEACHING NOTE DURATIONS TO VISUALLY IMPAIRED STUDENTS

10:15 - 10:30

Valya Arnaudova, USING DYNAMIC WEB SYSTEMS TO CREATE EDUCATIONAL TOURIST INFORMATION CENTERS

10:30 - 10:45

Ivelina Velcheva, Deyana Peykova, DIGITAL TOOLS USED FOR COLLECTING AND PRESENTING INFORMATION IN STUDENTS AND TEACHERS' TRAINING

10:45 - 11:00

Vera Shopova, Ivelina Velcheva, Ivan Dimitrov, INNOVATIVE PRACTICES IN TEACHING AND LEARNING IN LOWER SECONDARY EDUCATION

25.11.2022 ► HALL B

10:00 - 10:15

Anton Iliev, Nikolay Kyurkchiev, Asen Rahnev, Todorka Terzieva, FURTHER INVESTIGATIONS ON HARRIS ALGORITHM

10:15 - 10:30

Rosen Hristev, Magdalena Veselinova, Kristiyan Kolev, AUTOMATED CONFIGURATION OF DISK ARRAYS FOR CLUSTER NODES IN LINUX

10:30 - 10:45

Kremena Stefanova, Veselina Naneva, Vesselin Kyurkchiev, Application of Data Analysis Expressions for Complex Custom Calculations



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- ▶ Scientific Project FP21-FMI-002 “Intelligent Innovative ICT in Research in Mathematics, Informatics and Pedagogy of Education” of the Scientific Research Fund of the Paisii Hilendarski University of Plovdiv;
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„OK - Марков“ ЕООД
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Clarification:

Hall A is the big conference hall on Floor 1.
Hall B is the small conference hall on Floor 5 next to Lobby.