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SCIENTIFIC PROGRAM

ANNIVERSARY INTERNATIONAL
SCIENTIFIC CONFERENCE
**“COMPUTER TECHNOLOGIES
AND APPLICATIONS”**

15 – 17 April 2026, Pamporovo, Bulgaria

Dedicated to the 30th Anniversary
of the Department of Computer Technologies
at the Faculty of Mathematics and Informatics,
Paisii Hiledarski University of Plovdiv

Organiser

Faculty of Mathematics and Informatics
Paisii Hilendarski University of Plovdiv

SCIENTIFIC PROGRAM

15.04.2026 • HALL A

16:00 - 16:20 Official opening

16:20 - 16:40 **Anniversaries:** Asen Rahnev, Evgeniya Angelova, Anton Iliev, 30 YEARS DEPARTMENT OF COMPUTER TECHNOLOGY

16:40 - 17:00 **Plenary talk:** Sava Grozdev, TILING THE PLANE WITH IDENTICAL CONVEX POLYGONS

17:00 - 17:20 **Plenary talk:** Nedyu Popivanov, "NAVIER-STOKES EQUATIONS" – A MILLENNIUM PROBLEM FOR US \$ 1 MLN

16.04.2026 • HALL A

09:30 - 09:45 **NOT DELIVERED (online)** Ivanka Vasileva, IMPACT OF THE INNOVATIVE EDUCATIONAL ENVIRONMENT ON THE DEVELOPMENT OF STUDENTS' MATHEMATICAL AND DIGITAL COMPETENCIES

09:45 - 10:00 **(online)** Zornitza Kaneva, DEVELOPMENT OF EMOTIONAL INTELLIGENCE IN THE CONTEXT OF PROJECT-BASED LEARNING

10:00 - 10:15 **(online)** Aleksandr Lukankin, TASKS OF THE EDUCATION SYSTEM IN THE 21ST CENTURY

10:15 - 10:30 Maya Stoeva, FROM ENTERPRISE TO CLASSROOM: ENHANCING WEB DESIGN AND UI/UX CURRICULA THROUGH AI-DRIVEN WORKFLOWS AND TOOLS

10:30 - 11:00 **Coffee Break**

11:00 - 11:15 Maria Vasileva, Georgi Penchev, INVESTIGATION ON LOGISTIC GROWTH MODELS IN SOFTWARE RELIABILITY

11:15 - 11:30 Ivan Shotlekov, HUMAN-AI COLLABORATIVE INSTRUCTIONAL DESIGN FOR CLIL IN COMPUTER SCIENCE: A DUAL-RUBRIC EVALUATION OF ESP MATERIALS FOR SOFTWARE ENGINEERING UNDERGRADUATES

11:30 - 11:45 Elena Todorova, Todorka Terzieva, FORMATION OF REFLECTIVE SKILLS IN THE PROFESSIONAL DEVELOPMENT OF STUDENT, FUTURE TEACHERS

11:45 - 12:00 Nikola Valchanov, Todorka Terzieva, BUILDING LANGUAGE-AGNOSTIC EDUCATIONAL MATERIALS FOR SOFTWARE ENGINEERING COURSES WITH LLM

12:00 - 14:00 **Lunch Break**

14:00 - 14:15 Panka Lazarova, Ivan Dimitrov, AI PEDAGOGY: NEW SKILLS FOR TEACHERS

14:15 - 14:30 Ventsislav Dilyanov, Todorka Terzieva, APPLICATION OF MOTIVATIONAL DESIGN IN THE EDUCATION OF COMPUTER SCIENCE STUDENTS

14:30 - 14:45 Nina Ignatova-Todorova, Todorka Glushkova, BUILDING DIGITAL COMPETENCES IN HIGH SCHOOL STEM EDUCATION: A COMPARATIVE ANALYSIS OF THE DIGCOMP 2.2 AND DIGCOMP 3.0 FRAMEWORKS

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- 14:45 - 15:00 Ivelina Velcheva, Desislava Voynikova, USING NOTEBOOKLM TO ENHANCE STUDENT MOTIVATION AND ENGAGEMENT
- 15:00 - 15:15 Denitsa Mineva, Kosta Garov, INTRODUCTION TO STEM EDUCATION THROUGH THE USE OF 3D TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE
- 15:15 - 15:30 Veneta Tabakova-Komsalova, Stanimir Stoyanov, EDUCATIONAL PLATFORM FOR SYMBOLIC AI

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- 09:30 - 09:45 Viktor Matanski, EVOLUTION OF GENERATIVE ART SYSTEMS: METHODS, MILESTONES AND OPEN PROBLEMS
- 09:45 - 10:00 Bozhidar Samokovski, FROM SIGNAL GENERATION TO REACTION ANALYSIS: A REVIEW OF SOFTWARE TOOLS AND AI MODELS IN AUDIO STIMULATION RESEARCH
- 10:00 - 10:15 Pavel Kyurkchiev, Anton Iliev, Asen Rahnev, Viktor Matanski, COMPARATIVE ANALYSIS OF PERFORMANCE AND SEMANTIC ACCURACY IN TEXT EMBEDDING ARCHITECTURES VIA C# AND ONNX
- 10:15 - 10:30 Kristiyan Kolev, Vesselin Kyurkchiev, DECLARATIVE GITOPS-BASED AUTOMATED DEPLOYMENT AND MANAGEMENT OF HTTP GATEWAY SERVICES
- 10:30 - 11:00 **Coffee Break**
- 11:00 - 11:15 Nikolay Pavlov, Yuri Yanakiev, Veselina Naneva, WEB-BASED SYSTEM FOR CHILD DEVELOPMENT MONITORING
- 11:15 - 11:30 Stanimir Stoyanov, Ivan Stoyanov, Veneta Tabakova-Komsalova, SPECIALIZED PERSONAL ASSISTANT TO THE HEAD OF THE NATIONAL GENBANK
- 11:30 - 11:45 Konstantin Rusev, Todorka Glushkova, CONTEXT-AWARE MODELING OF AI ASSISTANT FOR SMART HOME ENERGY MANAGEMENT AND SUSTAINABILITY OPTIMIZATION
- 11:45 - 12:00 Todorka Glushkova, APPLICATION OF MARION'S THEOREM FOR OPTIMIZATION OF RESOURCES IN INTELLIGENT PASTURE CATTLE FARMING
- 12:00 - 14:00 **Lunch Break**
- 14:00 - 14:15 Simeon Monov, Denis Bechiragich, TERRAIN-AWARE INFRASTRUCTURE PLANNING: AUTOMATED PLACEMENT OF RELIABLE GATEWAYS FOR LARGE-SCALE IOT NETWORKS
- 14:15 - 14:30 Simeon Monov, Emre Myumyun, DETERMINISTIC EDGE CONTROL FOR AI AGENTS VIA MODEL CONTEXT PROTOCOL OVER MQTT
- 14:30 - 14:45 Simeon Monov, Hristo Karaperev, A MULTIVARIATE APPROACH TO PREDICTING WHOLESALE FRESH PRODUCE WASTE

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14:45 - 15:00 Simeon Monov, Zlatomila Mincheva, Nikolay Pavlov, Maria Dobreva, TIME SERIES FORECASTING IN THE INSURANCE SECTOR: A COMPARATIVE ANALYSIS OF FOUNDATION MODELS AND DEEP LEARNING

15:00 - 15:15 Simeon Monov, Nikolay Pavlov, Miglena Dodleva, DATA EXTRACTION FROM HETEROGENEOUS INSURANCE POLICIES USING MULTIMODAL LLMS

15:15 - 15:30 Simeon Monov, Detelinka Trifonova, Nikolay Pavlov, ADAPTING LARGE LANGUAGE MODELS FOR BULGARIAN CLINICAL DIETETICS: A MULTI-STAGE TRAINING APPROACH

15:30 - 16:00 **Coffee break**

16:00 - 18:30 **PhD Seminar “Computer Technologies and Application”**

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09:30 - 09:45 Cvetoslava Trayanova, Gergana Koleva, Yanitsa Chukanska, TOOL FOR ADAPTING THE CURRICULUM FOR BULGARIAN LANGUAGE AND LITERATURE IN THE EARLY STAGES OF INCLUSIVE EDUCATION

09:45 - 10:00 Veselina Naneva, Kremena Stefanova, DATA SECURITY IN MICROSOFT POWER BI

10:00 - 10:15 Angel Urilski, Rosen Hristev, Dzhanev Mehmed, SECURITY OF CLUSTER SYSTEMS FOR E-LEARNING IN THE CONTEXT OF NIS2

10:15 - 10:30 Angel Urilski, Rosen Hristev, Dzhanev Mehmed, CONTAINERIZATION AND VIRTUALIZATION IN CLUSTER ARCHITECTURES FOR FACILITATING E-LEARNING SYSTEMS

With the financial support of the scientific projects:

FP25-FMI-010 “Innovative interdisciplinary research in informatics, mathematics and educational pedagogy” of the Scientific Fund of the Paisii Hilendarski University of Plovdiv;

MUPD25-FMI-013 “Innovative Research and Technological Solutions in the Field of ICT” of the Scientific Fund of the Paisii Hilendarski University of Plovdiv;

SP25-FMI-008 “Research and implementation of modern language models and artificial neural networks for automated processing, forecasting, and structuring of data and texts in specific application domains” of the Scientific Fund of the Paisii Hilendarski University of Plovdiv.

Sponsored by:

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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.