

PROGRAM

FDIBA: 35 Years Innovating the Future

DAY 1 – 26.11.2025

Official Opening: 13.45 – 14.00

Prof. DSc Marin Marinov

SESSION 1.1: 14.00 – 16.00

SESSION CHAIR: Vladislav Ivanov

14:00-14:15

Assessing Forest Conservation Effectiveness of Natura 2000 Zones in Bulgaria, Including Vitosha and Vrachanski Balkan Nature Parks: A Remote Sensing and GIS Approach

Eleonora Mitkova, RST-TTO, Sofia, Bulgaria

14:15-14:30

Optically Clear Adhesives dependency to display white and black homogeneity

Vergil Djamiykov, Vasil Galabov, Technical University of Sofia, Sofia, Bulgaria

14:30-14:45

Students' Opinions about Needed University Platforms

Svetla Vassileva, Technical University of Sofia, Sofia, Bulgaria

14:45-15:00

Modeling and System Identification of an Inverted Pendulum for Educational Applications in Control Engineering

Aleksandar Marinchev, Borislav Georgiev, Technical University of Sofia, Sofia, Bulgaria

15:00-15:15

Advanced Control Systems and Industrial Automation in Integrated Gasification Combined Cycle (IGCC) Plants: Enabling Efficiency, Flexibility, and Decarbonization in Modern Power Generation

Borislav Georgiev, Asen Todorov, Technical University of Sofia, Sofia, Bulgaria

15:15-15:30

Dynamic Model Predictive Control (DMPC) for Cross-Subsystem Optimization in IGCC Plants: Achieving Enhanced Thermal Efficiency and Rapid Load-Following

Borislav Georgiev, Asen Todorov, Technical University of Sofia, Sofia, Bulgaria

15:30-15:45

Procedural Mesh Manipulation for Virtual Pottery Simulation

Ivan Petrov, David Ivanov, Zlatka Uzunova, Valentina Taneva, Dimo Chotrov, Research and Development and Innovation Consortium, Sofia, Bulgaria

Coffee break: 15.45 – 16.30

SESSION 1.2: 16:30-17:30

SESSION CHAIR: Vladislav Ivanov

16:30-16:45

Key competencies and emotional intelligence: Implications for engineering studies and management

Emilia Staneva, Technical University of Sofia, Sofia, Bulgaria

16:45-17:00

Innovations of Artificial Intelligence in Transportation and Logistics

Kristina Jakimovska, University “St. Cyril and Methodius” in Skopje, Olivera Petrovska, University “Mother Theresa” in Skopje, Sanel Purgic, Technical University of Sofia, Sofia, Bulgaria

17:00-17:15

Introducing a possible common currency for the BRICS-countries

Georgi Chankov, UNWE, Sofia, Bulgaria, Nikolaj Hinov, Technical University of Sofia, Sofia, Bulgaria, Fu Haiwei, Ningbo University of technology, China

17:15-17:30

Transformation regionaler Bildungsnetzwerke WE-DU MINT als Modell für nachhaltige MINT-Kompetenzentwicklung im Ruhrgebiet

Christoph Hohoff, Anja Krumme, FOM Hochschule für Oekonomie & Management gGmbH, Essen, Germany

DAY 2 – 27.11.2025

PLENARY SESSION 9:00-10:30

Assoc. Prof. Eng. Adelina Aleksieva

Coffee break: 10.30 – 11.00

SESSION 2 - Youth Scientists: 11:00-12:00

SESSION CHAIR: Arakel Bohosyan

11:00-11:15

Bias Propagation in Large Language Models: A Theoretical Analysis of Sources, Mechanisms, and Social Impacts on Accuracy and Decision-Making

Magdalina Nikolaeva, Technical University of Sofia, Sofia, Bulgaria

11:15-11:30

Einfluss mechanischer Systemparameter auf ein Feder-Masse-System beim Wandstoß – Simulation mit Python

Biliana Dimova, Martin Kirilov, Teodor Poryazov, Technical University of Sofia, Sofia, Bulgaria

11:30-11:45

FEM-basierte vergleichende Analyse des mechanischen Verhaltens poröser Magnesiumlegierungen

Biliana Dimova, Vesselin Tsonev, Nikolay Arabadzhiev, Technical University of Sofia, Sofia, Bulgaria

11:45-12:00

Rätsel gelüftet die Schwäche der gesinterten Zahnräder und Anwendung für Selective Laser Melting Zahnräder

Arakel Bohosyan, Technical University of Sofia, Sofia, Bulgaria

Closing: 12.00 – 12.30

Dr. Thomas Muecke, Siemens

Assoc. Prof. Dr. Vladislav Ivanov

CONFERENCE VENUE: Center for International Meetings Helmut Böhme at the Technical University of Sofia