

PROGRAM

Science and Innovations for Sustainable Development

Day 1 - 30.11.2023

Official opening: 14.00 – 14.30

Session Chair: Assist. Prof. Dr. Mladen Mladenov

Prof. Dr. Lidia Galabova – Technical University of Sofia, Bulgaria

Prof. Dr. Thomas Heupel – Hochschule für Ökonomie und Management, Essen, Germany

Session 1: 14.30 – 16.15

Session Chair: Assist. Prof. Dr. Mladen Mladenov

14.30 – 14.45

Optimizing the conference management process in a digital environment

Georgi Nenov, Technical University of Sofia, Sofia, Bulgaria

(georgi.nenov@fdiba.tu-sofia.bg)

14.45 – 15.00

Research into technologies and processes in development of mobile applications for educational institutions

Maria Georgieva, Technical University of Sofia, Sofia, Bulgaria

(maria.georgieva@fdiba.tu-sofia.bg)

15.00 – 15.15

Research about the general terms and conditions for using mobile applications in education

Magdalena Nikolaeva, Technical University of Sofia, Sofia, Bulgaria

(magdalena.nikolaeva@fdiba.tu-sofia.bg)

15.15 – 15.30

Exploring indicators for digital advertising 2.0 in education

Tsvetomira Petkova, Technical University of Sofia, Sofia, Bulgaria

(tsvetomira.petkova@fdiba.tu-sofia.bg)

15.30 – 15.45

Extracurricular Learning Experiences in Part-Time Studies. Demands and Potentials for a Digital Advancement of „Learning Readiness“

Stephanie Pietsch, Joanna Waldmann, Oliver Linssen, Oliver Koch, Julianne Wawerda, Thomas Kantermann, FOM University of Applied Sciences, Essen, Germany

(thomas.kantermann@fom.de)

15.45 – 16.00

Artificial Intelligence and Technical Innovations for Optimizing the Development of Weekly Schedules

Rostislav Dimov, Technical University of Sofia, Sofia, Bulgaria

(rostislav.dimov@fdiba.tu-sofia.bg)

16.00 – 16.15**Research and analysis of algorithms supporting the development process of weekly timetables**

Nikolay Mihov, Technical University of Sofia, Sofia, Bulgaria

[\(nikolay.mihov@fdiba.tu-sofia.bg\)](mailto:nikolay.mihov@fdiba.tu-sofia.bg)**Coffee break: 16.15 – 16.45****Session 2: 16.45 – 18.30****Session Chair: Assist. Prof. Dr. Mladen Mladenov****16.45 – 17.00****Application of intelligent control systems for liquid level process-control**

Aleksandar Marinchev, Technical University of Sofia, Sofia, Bulgaria

[\(amar@tu-sofia.bg\)](mailto:amar@tu-sofia.bg)**17.00 – 17.15****Development of STK-23 - gripper machine with a mechanism for vertical movement and right-angle rotation**

Shtiliana Kirova, Technical University of Sofia, Sofia, Bulgaria

[\(kirova.k.st@gmail.com\)](mailto:kirova.k.st@gmail.com)**17.15 – 17.30****Novel passive microfluidic mixer utilizing porous medium**

Emil Grigorov, Vassil Galabov, Technical University of Sofia, Sofia, Bulgaria

[\(egrigorov@FDIBA.tu-sofia.bg\)](mailto:egrigorov@FDIBA.tu-sofia.bg)**17.30 – 17.45****Redefining Customer Co-Design for Individualized Products Using Virtual Reality**

Angel Bachvarov, Technical University of Sofia, Sofia, Bulgaria

17.45 – 18.00**Integration of convenient parking**

Desislava Mehandzhiyska, Binka Aleksandrova, Technical University of Sofia, Sofia, Bulgaria

18.00 – 18.15**Review of vibration-based test methods for production processes**

Vergil Djamiykov, Technical University of Sofia, Sofia, Bulgaria

[\(vergil9203@gmail.com\)](mailto:vergil9203@gmail.com)**18.15 – 18.30****Distributed Fiber Optic Acoustic Sensing - Scope and Machine Learning Based Data Modeling Techniques - an Overview**

Dimitre Trendafilov Bachvarov, Technical University of Sofia, Sofia, Bulgaria

[\(dimitre_trendafilov@tu-sofia.bg\)](mailto:dimitre_trendafilov@tu-sofia.bg)

Day 2 - 01.12.2023

Session 1: 09.00 – 10.45

Session Chair: Assist. Prof. Dr. Mladen Mladenov

09.00 – 09.15

Design considerations for cooperative trajectory planning in human-machine systems

Julian Schneider, Sören Hohmann, Karlsruhe Institute of Technology, Karlsruhe, Germany

(julian.schneider@kit.edu)

09.15 – 09.30

Design and Implementation of an Indoor PM Concentration Measurement and Mapping System

Andrey Ivanov, Stefan Hensel, Marin Marinov, Borislav Ganev, Technical University of Sofia, Sofia, Bulgaria, Offenburg University of Applied Sciences, Offenburg, Germany

(andrivanov@tu-sofia.bg, mbm@tu-sofia.bg, b_ganev@tu-sofia.bg, stefan.hensel@hs-offenburg.de)

09.30 – 09.45

Mapping of Indoor Environments Using UAVs

Andrey Ivanov, Technical University of Sofia, Sofia, Bulgaria

(andrivanov@tu-sofia.bg)

09.45 – 10.00

Potentials and challenges through secondary use of health data

Dominik Schrahe, Velko Iltchev, Thomas Städter, FOM University of Applied Sciences, Essen, Germany, Technical University of Sofia, Sofia, Bulgaria

(dominik.schrahe@fom-net.de, velko.iltchev@fdiba.tu-sofia.bg, thomas.staedter@fom.de)

10.00 – 10.15

114 Increasing the degree of application of the OECD's automatic exchange of information through selective expansion of the XML file

Vedat Kanat, Technical University of Sofia, Sofia, Bulgaria

(peter.lang@fom.de, velko.iltchev@fdiba.tu-sofia.bg)

10.15 – 10.30

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Svetla Lukanova, Technical University of Sofia, Sofia, Bulgaria

10.30 – 10.45

Economic Ports for Optimal Operation of Networked AC Microgrids

Pol Jane Soneira, Mihailo Dikic, Sören Hohmann, Karlsruhe Institute of Technology, Karlsruhe, Germany

(pol.soneira@kit.edu)

Coffee break: 10.45 – 11.00

Session 2: 11.00 – 13.00**Session Chair: Assist. Prof. Dr. Mladen Mladenov****11.00 – 11.15****Assessment of Authentication- and Access Control Issues of IoT in Context of Security**

Elior Vila, University of Elbasan “Aleksander Xhuvani”, Elbasan, Albania

[\(elior.vila@uniel.edu.al\)](mailto:elior.vila@uniel.edu.al)**11.15 – 11.30****A Review of Embedded Systems for E Waste Recognition**

Dimitar Iliev, Technical University of Sofia, Sofia, Bulgaria

[\(dimitar.iliev@fdiba.tu-sofia.bg\)](mailto:dimitar.iliev@fdiba.tu-sofia.bg)**11.30 – 11.45****Comparative techno-economic analysis of lignite coal gasification technologies**

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

asssent@tu-sofia.bg, b_georgiev@tu-sofia.bg**11.45 – 12.00****Management of coal gasification products and waste treatment**

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

b_georgiev@tu-sofia.bg, bgasssent@tu-sofia.bg**12.00 – 12.15****Renewable Electroenergetics Efficiency, Green Economy, Sustainable Development**

Zwetelina Gankova – Ivanova, Technical University of Gabrovo, Gabrovo, Bulgaria

[\(zwetelina_gankova_7@yahoo.de\)](mailto:zwetelina_gankova_7@yahoo.de)**12.15 – 12.30****Supply Chain Resilience and Digitalization: A multi-theory lens for driving future research**

Florian Stöfer, FOM Hochschule, Essen, Germany, Universidad Católica San Antonio de Murcia

(UCAM), Murcia, Spain

[\(fpstofer@alu.ucam.edu\)](mailto:fpstofer@alu.ucam.edu)**12.30 – 12.45****Study and analysis of indicators for measuring the results of the business relationships between a customer and a sub-supplier**

Evgeni Ivanov, Technical University of Sofia, Sofia, Bulgaria

12.45 – 13.00**The Consequences of the DABUS Case**

Mladen Mladenov, Technical University of Sofia, Sofia, Bulgaria

[\(mladenov@tu-sofia.bg\)](mailto:mladenov@tu-sofia.bg)

Closing: 13.00 – 13.30**Assoc. Prof. Dr. Vasil Galabov – Technical University of Sofia****Prof. Dr. Stefan Stefanov – Technical university of Sofia****Assist. Prof. Dr. Mladen Mladenov – Technical university – Sofia****Lunch: 13.30 – 14.00****VIDEO CALL LINK for 2023 FDIBA Conference "Science and Innovations for Sustainable Development" November 30 – December 01, 2023:** <https://meet.google.com/ncg-dfbk-zwv>**CONFERENCE VENUE: Center for International Meetings Helmut Böhme at the Technical University of Sofia**