

UNITECH

SELECTED PAPERS

VOL. 2025

20-22 NOVEMBER 2025, GABROVO

**25 YEARS OF INTERNATIONAL SCIENTIFIC CONFERENCE
UNITECH IS ORGANIZED IN PARTNERSHIP WITH:**

- ❖ **NPP KOZLODUY EAD**
- ❖ **ADTECH LTD**
- ❖ **BLAZER BULGARIA LTD**
- ❖ **VILLEROY & BOCH BULGARIA LTD**
- ❖ **EXTRAPACK LTD**
- ❖ **ELECTRIC MOTOR COMPANY BULGARIA LTD**
- ❖ **IMPULSE LTD**
- ❖ **COSTAL BULGARIA LTD**
- ❖ **PODEMCRANE LTD**
- ❖ **FANUC BULGARIA LTD**
- ❖ **HAMBERGER BULGARIA LTD**
- ❖ **CERATIZIT BULGARIA LTD**

The Proceedings is included in the National Reference List of modern Bulgarian scientific publications with scientific peer review by National Centre for Information and Documentation.

The papers have been reviewed.

© TECHNICAL UNIVERSITY OF GABROVO, 2025

© UNIVERSITY PUBLISHING HOUSE “VASIL APRILOV” – GABROVO, 2025

ISSN 2603-378X

ORGANIZING COMMITTEE

Chairman: Assoc. Prof. Dragomir Vassilev, PhD
Vice Rector 'Science & Scientific Research'

Members: Assoc. Prof. Plamen Tsankov, PhD
Assoc. Prof. Hristo Hristov, PhD
Assoc. Prof. Goran Goranov, PhD
Assoc. Prof. Vladimir Dunchev, PhD
Assoc. Prof. Svetla Panayotova, PhD

Technical Assistant:
Petya Peneva, MA

PROGRAM COMMITTEE

Chairman: Prof. Iliya Zhelezarov, PhD
Rector of Technical University of Gabrovo, Bulgaria

Members:	
Acad. Prof. D.Sc. Chavdar Rumenin	Bulgaria
Corr. Mem. Prof. D.Sc. Tony Spassov	Bulgaria
Acad. Prof. Dragoljub Mirjanic	Republika Srpska Bosnia and Herzegovina
Prof. DHC Helmut Hopp	Germany
Prof. D.Sc. DHC Yuriy Kuznetsov	Ukraine
Acad. Prof. Tomislav Pavlovic	Serbia
Prof. D.Sc. Ivan Yachev	Bulgaria
Acad. Prof. Dimitar Dimitrov	Bulgaria
Prof. D.Sc. Jordan Maximov	Bulgaria
Prof. D.Sc. Raycho Ilarionov, PhD	Bulgaria
Prof. Nikolaj Ganev	Czech Republic
Prof. Dr. rer. oec. DHC Volker Tolkmitt	Germany
Prof. Dr. Phil. Ludwig Hilmer	Germany
Prof. Lotar Otto	Germany
Prof. Emil Kolev	Germany
Prof. D.Sc. Pylyp Hovorov	Ukraine
Prof. Elena Kovalenko	Ukraine
Prof. D.Sc. Yurii Yaremchuk	Ukraine
Prof. D.Sc. Mihail Prokofiev	Ukraine
Prof. D.Sc. Igor Sazonov	Belarus
Prof. Hilmi Kuscu	Turkey
Prof. D.Sc. Rumen Daskalov	Bulgaria
Prof. Dr.Sc. Vasil Kavardjikov	Bulgaria
Prof. D.Sc. Galya Duncheva	Bulgaria
Prof. D.Sc. Dimitar Dichev	Bulgaria
Prof. Irina Aleksandrova, PhD	Bulgaria
Prof. Zvezditsa Nenova, PhD	Bulgaria
Prof. Nikolay Madzharov, PhD	Bulgaria
Prof. Angel Anchev, PhD	Bulgaria
Prof. Stanimir Sadinov, PhD	Bulgaria
Prof. Toshko Nenov, PhD	Bulgaria
Prof. Todor Todorov, PhD	Bulgaria
Assoc. Prof. Rosen Ivanov, PhD	Bulgaria

TECHNICAL UNIVERSITY OF GABROVO INTERNATIONAL SCIENTIFIC CONFERENCE UNITECH'25

SELECTED PAPER

Address: 5300, Gabrovo, "H. Dimitar" 4 street
University Publishing House "V. Aprilov" – Gabrovo

© TECHNICAL UNIVERSITY OF GABROVO, 2025
© UNIVERSITY PUBLISHING HOUSE "V. APRILOV" – GABROVO, 2025

THEMATIC SESSIONS

- **Electrical Engineering**
- **Electronics and Sensors Technics**
- **Communication Engineering and Technologies**
- **Computer Systems and Technologies**
- **Automation and Robotics**
- **Mechanical engineering technologies,
Machines & Instruments design**
- **Textile Technology and Process Optimization**
- **Advanced Fluid and Heat Engineering**
- **Metrology and Quality management**
- **Social and Economic Sciences**
- **Education Technologies**
- **Mathematics and Informatics**
- **Chemistry, Physics and Ecology**