

**TECHNICAL UNIVERSITY – SOFIA  
PLOVDIV BRANCH**



**14-TH INTERNATIONAL SCIENTIFIC  
CONFERENCE  
“ENGINEERING, TECHNOLOGIES AND SYSTEMS”  
PROGRAM**



***TECHSYS 2025***  
*15-17 May, Plovdiv, Bulgaria*

# TECHNICAL UNIVERSITY - SOFIA, PLOVDIV BRANCH

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## TIME SCHEDULE

|             |               |                                                                                                                                                                           |                        |                        |
|-------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|
| 15 MAY 2025 | 13:00-14:00   | <b>REGISTRATION</b><br><br>The conference will be held at Technical<br>University of Sofia,<br>Plovdiv Branch<br>25, Tsanko Dyustabanov Street, Plovdiv<br>4000, Bulgaria |                        |                        |
| 15 MAY 2025 | 14:00-14:30 h | <b>TECHSYS 2025</b><br><b>Opening Ceremony - AULA</b>                                                                                                                     |                        |                        |
|             | 14:30-15:00 h | Plenary Session - AULA                                                                                                                                                    |                        |                        |
|             | 15:00-15:30 h | Coffee Break                                                                                                                                                              |                        |                        |
|             | 15:30-18:30 h | Section 1<br>Hall 4327                                                                                                                                                    | Section 2<br>Hall 4325 | Section 3<br>Hall 4425 |
|             |               | Section 4<br>Hall 4326                                                                                                                                                    | Section 5<br>Hall 4328 | Section 6<br>Hall 4422 |
|             | 19:00-22:00 h | Conference Dinner at Imperial Hotel Plovdiv                                                                                                                               |                        |                        |
| 16 MAY 2025 | 09:30-13:00 h | Online sessions by sections                                                                                                                                               |                        |                        |

### TECHSYS 2025 Sections

**SECTION 1** - Automation, Control Systems and Robotics

**SECTION 2** - Electrical Engineering and Electronics

**SECTION 3** - Computer Engineering, Informatics and Communications

**SECTION 4** - Mechanical Engineering

**SECTION 5** - Automotive and Aeronautical Engineering

**SECTION 6** - Materials Science

## OPENING CEREMONY ACTIVITIES

**15 MAY 2025**

**14:00 – 15:00 h**

*I. Opening ceremony of “Science Days of Technical University - Sofia” 2025*

*II. Opening of 14th International Scientific Conference “TechSys 2025” – ENGINEERING, TECHNOLOGIES AND SYSTEMS*

*III. Plenary Session*

### **Metal AM in Tool Optimization**

***Prof. Ing. Miroslav Zetek, PhD*** - Expert in machining technology and metal additive manufacturing, University of West Bohemia in Pilsen, Czech Republic

Metal additive manufacturing is fundamentally changing the approach to tooling design, enabling geometries that are unattainable with traditional methods. A key advantage is the ability to integrate conformal cooling channels directly into the body of cutting tools and plastic injection moulds. This presentation will focus on critical aspects of the design and manufacture of such tools - from the proper design of internal structures and selection of suitable materials to the limitations of the SLM technology, to the necessary post-processing.

Specific applications will be used to demonstrate how productivity and tool life can be increased with 3D printing capabilities, as well as where the technological and economic limitations lie. The presentation will provide practical guidance on how to think about tooling design in a completely new way defined by additive manufacturing.