

# DETAILED PROGRAMME

## III SCIENTIFIC AND TECHNICAL CONFERENCE

### “Autonomous Vehicles - Modern Technologies for National Security”

**Warsaw, 4-5 November 2025**

#### DAY I OF THE CONFERENCE — Tuesday, 4 November 2025

10:00-11:00 — ARRIVAL OF GUESTS (REGISTRATION AND ACCOMMODATION)

11:00-11:30 — Welcome of Guests / Opening of the Conference

1. Col. PhD Eng. Michał Ceremuga — Director, Military Institute of Armoured and Automotive Technology

2. PhD Eng. Karol Zielonka — Director, Łukasiewicz Research Network - Automotive Industry Institute

3. Prof. PhD DSc Eng. Marek Gzik — Secretary of State, Ministry of Science and Higher Education

11:30-12:50 — DISCUSSION PANEL

“A Common Path to Autonomy - Challenges and Opportunities for Military-Civilian Cooperation in the Development of Autonomous Vehicles”

Moderator: Prof. DSc Dariusz Kozerawski — Jagiellonian University

Participants / Representatives:

1. Prof. PhD DSc Eng. Marek Gzik — Secretary of State, Ministry of Science and Higher Education

2. Prof. PhD DSc Eng. Jerzy Małachowski — Director, National Centre for Research and Development

3. Gen. Mieczysław Cieniuch — retired General of the Polish Armed Forces, diplomat, Ambassador of Poland to Türkiye

4. Brig. Gen. Marcin Górka — Director of the Innovation Department, Ministry of National Defence

5. Col. PhD Eng. Michał Ceremuga — Military Institute of Armoured and Automotive Technology

12:50-13:00 — Group photo of conference participants

13:00-13:15 — Coffee break

13:15-14:45 — STATIC DISPLAY OF AUTONOMOUS VEHICLES

14:45-15:45 — Lunch

I PLENARY SESSION

Chair: Prof. DSc Eng. Bogdan Żółtowski — Military Institute of Armoured and Automotive Technology

| No. | Time               | Presentation topic                                                         | Speakers                                                                                                             |
|-----|--------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1   | <b>15:45-16:00</b> | Configurable Autonomous Multi-Purpose Platform KUNA.                       | MSc Eng. Patryk Płochocki — WITPiS<br>MSc Eng. Marcin Wróblewski — Chema DS                                          |
| 2   | <b>16:00-16:15</b> | Special wheels for use with unmanned wheeled ground platforms.             | Prof. DSc Eng. Witold Luty — Łukasiewicz-PIMOT<br>Prof. DSc Eng. Jerzy Jackowski — Military University of Technology |
| 3   | <b>16:15-16:30</b> | Problems of controlling ground platforms by a remote operator.             | Prof. DSc Eng. Andrzej Typiak — Military University of Technology                                                    |
| 4   | <b>16:30-16:45</b> | Path following by an autonomous multi-section vehicle.                     | Prof. DSc Eng. Michał Brzozowski — University of Bielsko-Biala                                                       |
| 5   | <b>16:45-17:00</b> | WRZOS Unmanned Mine-Clearing System.                                       | PhD Eng. Tomasz Wróbel — WITPiS<br>PhD Eng. Piotr Krysiak — Military Institute of Engineer Technology                |
| 6   | <b>17:00-17:15</b> | Radars for the age of autonomous systems (Radars for the age of autonomy). | Mr Eben Frankenberg — President, Echodyne Corp., United States                                                       |
| 7   | <b>17:15-17:30</b> | Coffee break                                                               |                                                                                                                      |

#### II PLENARY SESSION

Chair: DSc Eng. Mirosław Gidlewski, Prof. WAT — Director, Institute of Vehicles and Transport, Faculty of Mechanical Engineering / Łukasiewicz-PIMOT

| No. | Time               | Presentation topic                                                                                                                                               | Speakers                                                                                |
|-----|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1   | <b>17:30-17:45</b> | Methods for locating autonomous platforms under limited sensor fusion conditions. Overview of solutions in a multi-operator environment.                         | MSc Eng. Katarzyna Kijania — Łukasiewicz-PIMOT                                          |
| 2   | <b>17:45-18:00</b> | Concept of a minefield built using autonomous carriers of anti-tank mines.                                                                                       | MSc Eng. Jakub Malewicz — General Tadeusz Kościuszko Military University of Land Forces |
| 3   | <b>18:00-18:15</b> | BLUSZCZ unmanned-manned scatterable mine-laying system.                                                                                                          | PhD Eng. Marek Nowakowski — WITPiS<br>MSc Eng. Krzysztof Kulesza — STEKOP S.A.          |
| 4   | <b>18:15-18:30</b> | Use of sensors for drone detection in autonomous vehicles.                                                                                                       | MSc Łukasz Kobus — Linc Polska Sp. z o.o.                                               |
| 5   | <b>18:30-18:45</b> | ŁUKASIEWICZ-PIAP UGVs in reconnaissance, logistics, training and CASEVAC operations, illustrated by PIAP Hunter, PIAP Ibis Transport and PIAP Mobi Targe robots. | MSc Eng. Rafał Więckowski — Łukasiewicz-PIAP                                            |

| No. | Time        | Presentation topic | Speakers |
|-----|-------------|--------------------|----------|
| 6   | 18:45-19:00 | Discussion         |          |
| 7   | 20:00-00:00 | GALA DINNER        |          |

## DAY II OF THE CONFERENCE — Wednesday, 5 November 2025

07:00-10:00 — BREAKFAST

### III PLENARY SESSION

Chair: DSc Eng. Lech Starczewski, Prof. WITPiS — Military Institute of Armoured and Automotive Technology

| No. | Time        | Presentation topic                                                                                                                    | Speakers                                                                                                       |
|-----|-------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1   | 10:00-10:15 | Laboratory versus reality: the importance of test objects in analysing the effectiveness of obstacle detection by automated vehicles. | MSc Eng. Patryk Sz wajkowski — Łukasiewicz-PIMOT                                                               |
| 2   | 10:15-10:30 | Centre for Autonomy and Autonomisation of Platforms for the Polish Armed Forces.                                                      | PhD Eng. Włodzimierz Kupicz — WITPiS                                                                           |
| 3   | 10:30-10:45 | Battery in an unmanned vehicle.                                                                                                       | Mr Arkadiusz Sumarowski — BTO Sp. z o.o.                                                                       |
| 4   | 10:45-11:00 | Tasks, challenges and operator support for an unmanned ground vehicle.                                                                | Mr Łukasz Sadłowski — Milrem Robotics Sp. z o.o.<br>MSc Eng. Tomasz Mantur — Military University of Technology |
| 5   | 11:00-11:15 | Propulsion and charging systems for unmanned vehicles.                                                                                | MSc Grzegorz Stawicki — Łukasiewicz Institute of Electrical Engineering                                        |
| 6   | 11:15-11:30 | Electromagnetic compatibility of autonomous vehicles and their components.                                                            | MSc Eng. Weronika Zaklika — Łukasiewicz-PIMOT                                                                  |
| 7   | 11:30-11:45 | Presentation of AiQ robotics P.S.A.                                                                                                   | MSc Przemysław Degórski — AiQ robotics P.S.A.                                                                  |
| 8   | 11:45-12:00 | Coffee break                                                                                                                          |                                                                                                                |

### IV PLENARY SESSION

Chair: Col. DSc Eng. Mariusz Wesołowski, Prof. WITPiS — Military Institute of Armoured and Automotive Technology

| No. | Time        | Presentation topic                                                                                                                        | Speakers                                                                                                                                                                                               |
|-----|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 12:00-12:15 | From simulation to reality — the role of FORCEPOL SANLAB platforms in supporting the testing of autonomous vehicles and military systems. | Mr Adam Koteja — FORCEPOL Sp. z o.o.                                                                                                                                                                   |
| 2   | 12:15-12:30 | Research methods and equipment for energy-storage systems exposed to mechanical factors.                                                  | MSc Eng. Maciej Joński — Łukasiewicz-PIMOT                                                                                                                                                             |
| 3   | 12:30-12:45 | ARCOM — Mobile storage and transport systems.                                                                                             | Mr Marcin Szymański — ARCOM Sp. z o.o.                                                                                                                                                                 |
| 4   | 12:45-13:00 | Application of recurrent neural networks to predict road accidents based on driving style.                                                | MSc Eng. Piotr Gnyś — Nobelica Sp. z o.o.                                                                                                                                                              |
| 5   | 13:00-13:15 | Selected aspects of regulation of the autonomous vehicle market.                                                                          | MSc Eng. Jakub Makowski — Łukasiewicz-PIMOT                                                                                                                                                            |
| 6   | 13:15-13:30 | A spatial vehicle-motion dynamics model as support for autonomous-vehicle research and development.                                       | PhD Eng. Tomasz Pusty — WITPiS                                                                                                                                                                         |
| 7   | 13:30-13:45 | 25 years of comprehensive development of autonomous systems on an industrial scale in Poland.                                             | PhD Eng. Dariusz Cieślar — Aptiv Services Poland S.A.<br>Mr Tomasz Miśniakiewicz — Aptiv Services Poland S.A.                                                                                          |
| 8   | 13:45-14:00 | Presentation of CFE Polska.                                                                                                               | MSc Eng. Marcin Goździkowski — CFE Polska Sp. z o.o.                                                                                                                                                   |
| 9   | 14:00-14:15 | Summary — closing of the conference.                                                                                                      | Col. PhD Eng. Michał Ceremuga — Director, Military Institute of Armoured and Automotive Technology<br>PhD Eng. Karol Zielonka — Director, Łukasiewicz Research Network – Automotive Industry Institute |
| 10  | 14:15-15:00 | Lunch — hotel check-out.                                                                                                                  |                                                                                                                                                                                                        |