

RAILWAY FORUM CRACOW 2026

5-6 November 2026 | Qubus Hotel, Krakow, Poland



Resilience meets Technology New Challenges for European Railways

Digitalisation Automation and AI in Railway Infrastructure and Rolling Stock

1. Organisers

Role	Organisation
Official Organiser	UEEIV (Union of European Railway Engineering and Infrastructure Organisations)
Local Host	SITK – Railway Division (Polish Association of Railway Engineers)

2. Introduction

The world has been changing dramatically over the last ten years. The fragile equilibrium of the past is over. Every industry must prepare for new challenges. Artificial Intelligence, cybercrimes, sabotage, climate change – life is no longer predictable.

In Europe, railways play a key role in the transportation system. That is why their resilience is becoming more and more important. But resilience cannot be achieved by strategy alone – it needs solid engineering, intelligent technology, and fresh minds.

The Railway Forum Cracow 2026 brings both worlds together:

Classic Railway Engineering:

High speed rail, track superstructure, ERTMS, FRMCS, CBTC, EULYNX, interlocking, condition monitoring, rolling stock, ATP/ATO, animal protection system, turnout heating, and integrated solutions.

New Challenges:

Climate resilience of infrastructure, cybersecurity for signalling systems, AI-based condition monitoring, sabotage protection, and strategic resilience planning.

A special focus is placed on the young generation. Young engineers will not be an appendix at the end of the conference. They will take the stage on Day 1, right after the keynote – because they bring new energy, new wind to European railways.

The Forum will gather the academic society, engineering practitioners, railway enthusiasts, and – above all – the next generation of railway engineers. During presentations and discussions you will find new ideas, solutions to old problems, and fantastic networking within the international rail community.

We believe: Technology alone is not enough. Resilience alone is not enough. But technology, resilience, and young minds together – that is the future.

Welcome to Cracow 2026!

3. Timeline Overview

Day	Start	End	Venue
4 th November (Pre-conference Evening)	17:30	approx. 22:00	Cracow University of Technology
5 th November	09:30	17:30	Qubus Hotel
5 th November Evening	19:00	open	Networking Dinner
6 th November	08:30	18:00	Qubus Hotel
7 th November	09:00		Optional Excursion

4. Detailed Conference Program

4TH NOVEMBER – PRE-CONFERENCE EVENING

Venue: Cracow University of Technology

Time	Session	Topic / Details	Duration
Strategic Evening at Cracow University of Technology			
17:00 – 17:10	Evening Opening	Welcome address by UEEIV President & SITK President	10'
17:10 – 17:30	Cracow University of Technology info to research on European Railway systems	Welcome address by the Rector of the Cracow University of Technology – Prof. Andrzej Szarata	20'
17:30 -17:50	Overview of the perspective and challenges of cross border connections between German – Poland – Baltic States	Jürgen Murach	20'
17:50 – 18:00	Realization of TEN-T in Poland from European perspective	Jan Steinkohl tbc	10'
18:00 – 18:10	Break		10'
18:10 – 18:50	Political Strategy Block 3 speakers + moderator	Panel Discussion: Integration, Expansion and Modernization of Railway Lines between Poland, Germany, the Baltic States, Czech Republic and Austria Topics: - Planned Polish High Speed Rail network "Y-Project" (Warsaw-Łódź-Poznań/Wrocław with extension to Germany and Czech Republic) - Rail Baltica	40'



- CMK extension Warsaw – Katowice – Ostrava – Vienna
- Coordination of vehicle procurement and train control systems

Panelists:

1. Jürgen Murach
2. Olaf Scholz-Knobloch (moderator)
3. Andrzej Massel
4. Zbigniew Szafrński (tbc)
5. Andrzej Szarata

Media:

- Film by Hermann Schmidtendorf
- Report Rynek Kolejowy

18:50 – 19:00	Evening Closing	Short summary & outlook to Day 1	10'
19:00 – 22:00	Networking Get-together	Informal evening La Strada Catering	Min 120'

**5TH NOVEMBER – RESILIENCE & NEW CHALLENGES**

Venue: Qubus Hotel Krakow

Time	Session	Topic / Details	Duration
09:30 – 09:35	Opening	Welcome address by UEEIV (official organizer) – Olaf Scholtz-Knobloch	5'
09:35 – 09:40	Opening	Welcome address by SITK (local organizer) Wawrzyniec Wychowański	5'
09:40 – 10:00	Opening / Greetings	Greetings by dignitaries	20'
10:00 – 10:15	Keynote	Speaker: tbc: Dr hab. Inż. Andrzej Massel – Railway Institute Warsaw Director Prof. Andrzej Szarata – Cracow University of Technology Rector	15'

BLOCK 1: “NEW GENERATION WIND” YOUNG ENGINEERS**Moderator: Sabri Ekrem – Demühder, Turkey**

10:15 – 10:25	Block 1a	Vision of future Railway Condition Monitoring System Track Tec Przemysław Stanisławski –	10'
10:25 – 10:35	Block 1b	Numerical Modeling for Modern Rail Infrastructure Track Tec Piotr Piech	10'
10:35 – 10:45	Block 1c	Track me if you can: BIM & Digital Twins in railway infrastructure Track Tec Radosław Rybiński	10'



10:45 – 10:55	Block 1d	Designing Methods for Railway Sleepers and Their Optimization Track Tec Elżbieta Fiedorowicz	10'
10:55 – 11:30	Block 1 panel discussion	Panelists: Sabri Ekrem, Piotr Piech, Radosław Rybiński, Elżbieta Fiedorowicz Moderator: Przemysław Stanisławski	35'
11:30 – 12:00	Coffee Break		30'
BLOCK 2 RESILIENCE			
Moderator: tbc			
12:00 – 12:15	Block 2a: Climate Resilience I	Bio regulated adaptive switch point heating system AREX - Zbigniew Chyliński	15'
12:15 – 12:30	Block 2b: Climate Resilience II	Animal protection systems – industry presentation NEEL – Dorota Bartoszek Majewska	15'
12:30 – 12:45	Block 2c Structural Resilience	An Invisible Shield and Unidirectional Fortification: Hardware Physical Separation as a Foundation for the Network Resilience of Railway Infrastructure Control 2S Security Systems dr hab. Jarosław Cymerski, ORCID, Colonel, State Protection Service (SOP)	15'
12:45 – 13:45	Lunch Break		60'
13:45 – 14:00	Block 2d: Structural Resilience	Sensonic Security Application Distributed Acoustic Sensing - Track Monitoring Sensonic - Yannick Maier (tbc)	15'

14:00 – 14:15	Block 2e: Cybersecurity Resilience	Secure interlocking & EULYNX – industry presentation Kombud (tbc)	15'
14:15 – 14:30	Block 2f: Sabotage Resilience	Physical protection of infrastructure – industry presentation Speaker tbc	15'
14:30 – 14:45	Block 2g: Cybersecurity Resilience	Railway cybersecurity in practice – from IEC PT 63452 requirements to anomaly detection in rolling stock and signaling NASK - Dr. Piotr Wulgaris	15'
14:45 – 15:45	Block 2 panel discussion	Moderator: Dr hab. Jarosław Cymerski (tbc) Panelists: Zbigniew Chyliński, Dorota Bartoszek-Majewska, Yannick Maier, Piotr Wulgaris	60'
15:45 – 16:15	Coffee Break		30'

BLOCK 3: TRAFFIC OPTIMIZATION AND MONITORING

Moderator: Giorgio Spadi – CIFI, Italy

16:15 – 16:30	Bloc 3a Traffic optimization	ATO and TMS as a optimization tool of railway traffic Autonomous vehicles Czech Technical University in Prague Prof. Michał Matowicki	15'
16:30 – 16:45	Block 3b Integrated solutions	Highly integrated turnouts Voestalpine Signalling tbc	15'
16:45 – 17:45	General discussion on railway resilience	Moderator: Giorgio Spadi Panelists: Michał Matowicki, tbc	60'



17:45 – 17:50	Day 1 Closing	Summary by UEEIV / SITK	5'
19:00 – 22:00	Evening Event	Networking dinner – City of Cracow	3h



6TH NOVEMBER – CLASSIC RAILWAY ENGINEERING (DEEP DIVE)

Venue: Qubus Hotel Krakow

Time	Session	Topic / Details	Duration
08:30 – 08:35	Day 2 Opening	Welcome & recap by SITK / UEEIV	5'
BLOCK 4: INFRASTRUCTURE – RESILIENCE FACTOR			
Moderator: Dermot Kelly – RailEl, United Kingdom			
08:35 – 08:50	Block 4a: HSR Infrastructure	Development of Prefabricated Elements for Railway Infrastructure – Current Solutions and Future Directions KZN Biezanów Dr. Dorota Błasziewicz	15'
08:50 – 09:00	Block 4b: HSR Infrastructure	A Geodetic Layer of Trust for Resilient AI-Assisted Condition Monitoring of Railway Infrastructure AGH University of Krakow Prof. Michał Strach	10'
09:00 – 09:10	Block 4c: Track superstructure	New approach to lifecycle hazard analysis and risk assessment Track Tec Jacek Paś	10'
09:10 – 09:25	Block 4d: Track superstructure	Eliminating hanging sleepers: Cost-Efficient, Intelligent Rail Solutions KamPa BV Paul Kampfraath	15'
09:25 – 09:40	Block 4e: Track superstructure	mPOM - Absolute Positioning and Automated Work Documentation for Track Maintenance Machines	15'

Rhomborg Sersa Rail Group Yorick Teeuwen			
09:40 – 10:15	Coffee Break		35'
10:15 – 10:30	Block 4f: Track superstructure	On Ballast or on Slab? Comparing Modern Track Systems Cracow University of Technology Dr. Łukasz Chudyba	15'
10:30 – 11:15	Block 4g: Track Solutions	Block system reimagined – EBS New Generation Edilon Sedra Ryan Stolpmann	45'
11:15 – 11:30	Block 4h: Operational Intelligence	Operational Intelligence for Railways: A Reference Architecture for Decision-Centric Railway Operations Incremental Solutions Limited Tim Flower	15'
11:30 – 11:45	Block 4i: Track solutions	Balastless Track – Tines for High Speed Rail Aneta Borowiec-Barchuk	15'
11:45 – 12:00	Block 4j: Track solutions	Lateral Track Stability under Climate Change - Influence of Environmental Factors on the Behaviour of Lateral Track Resistance University of Innsbruck Lukas Niedermair	15'
12:00 – 12:15	Block 4k: Track solutions	Future-Proof Railway Infrastructure: Slab Track Austria, BIM and Digital Innovation from Construction to Operations Porr Michał Kościelniak Santanu Biswas	15'

12:15 – 13:00	Block 4: Panel discussion on superstructure	Panelists: Dorota Błasziewicz, Łukasz Chudyba, Krzysztof Downar, Tim Flower, Lukas Niedermair, Aneta Borowiec-Barchuk Moderator: Jacek Paś	45'
13:00 – 14:00	Lunch break		60'
BLOCK 5: COMMAND & CONTROL, RAILWAY AUTOMATION			
Moderator: Andrzej Cholewa – SITK, Poland			
14:00 – 14:15	Block 5a: Command & Control	ETCS Level 1 Limited Supervision: Accelerating ERTMS Deployment Across Central and Eastern Europe Kombud Group Eng. Dobromir Jasiński, ETCS Project Manager	15'
14:15 – 14:30	Block 5b	ETCS Limited Supervision industry presentation Siemens Rafael Herok / Markus Heusermann	15'
14:30 – 14:45	Block 5c	Level crossing – industry presentation MONAT Janusz Okrój	15'
14:45 – 15:00	Block 5d	Railway Institute in Warsaw Prof. Andrzej Toruń (tbc)	15'
15:00 – 15:15	Coffee Break		15'

BLOCK 6 : MODERN ROLLING STOCK

Moderator: Olaf Scholz-Knobloch – UEEIV President, Germany

15:15 - 15:30	Block 6a: Rolling Stock	New generation rolling stock & High speed trains – industry presentation NEWAG Group Józef Michalik	15'
15:30– 15:45	Block 6b: Rolling Stock	Assessing the economic feasibility of the hydrogen-powered locomotive conversion using real railway operational data Prof. Mine Sertsöz Eskişehir Technical University, Turkey	15'
15:45 – 16:00	Block 6c: Rolling Stock	PESA - tbc	15'
16:00 – 16:15	Block 6d: Rolling Stock	tbc	15'
16:15 – 17:00	Panel discussion on resilience in rolling stock	Panelists: Józef Michalik, Mine Sertsöz, tbc Moderator: Olaf Scholz-Knobloch	45'
17:00 – 17:15	Farewell	Closing remarks by UEEIV & SITK, announcement of Railway Forum 2027	15'



7th November – Optional Excursion

Time	Session	Topic / Details	Duration
09:00 – 12:00	Excursion	MPK Kraków (Mariusz Szalkowski)	180'
