

INFORMATION FOLDER

3rd International
Young Researchers Conference



Ideas
Research
Training



Faculty of Electrical Engineering
Białystok University of Technology

June 9-11, 2026, Białystok

ACCOMODATION

Hotel 3TRIO
Hurtowa 3 Street
15-399 Białystok, Poland
+48 85 745 40 50



IMPORTANT INFORMATION

- Check-in begins at 03:00 p.m. on the day of arrival and ends at 12:00 p.m. on the day of departure.
- Parking at the hotel is free of charge.
- Breakfast is served between 06:30 a.m. and 10:00 a.m.
- Please take your luggage with you on Thursday check-out.
- A luggage storage area will be prepared at the conference venue.

HOW TO GET THERE

From Białystok Train station, you can get there directly by the bus number **11** (direction **Stadion Miejski/Pętla**) or number **2** (direction **Transportowa/Pętla**) from bus stop **Kolejowa/Dworzec PKP(596)** and leave at **Składowa/Hurtowa** bus stop next to the hotel.

From hotel to Białystok University of Technology campus you can get there by the bus number **11**, **17** and **8** from **Składowa/Hurtowa** bus stop and leave at **Wiejska/Pogodna(525)** or **Wiejska/Pogodna(535)** bus stop.

You can buy tickets in the bus using ticket machine, **card payment only**.

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AGENDA

Tuesday, 09.06.2026

from 03:00 p.m. Check-in in the 3 Trio Hotel

06:30 p.m. - 12:00 a.m. Team building and dinner

Wednesday, 10.06.2026

09:00 a.m. - 09:30 a.m. Registration (Faculty of Electrical Engineering, ground floor)

09:30 a.m. - 09:45 a.m. Opening of the conference (Lecture hall III)

09:45 a.m. - 10:15 a.m. Polish National Agency of Academic Exchange,
MSCA Polish National Contact Point Presentation

10:15 a.m. - 12:00 p.m. Oral presentations:
session 1a (Lecture Hall III)
session 1b (Room 029)

12:00 p.m. - 12:30 p.m. Coffee break

12:30 p.m. - 02:15 p.m. Oral presentations:
session 2a (Lecture Hall III)
session 2b (Room 029)

02:15 p.m. - 03:45 p.m. Training session (Lecture Hall III)

03:45 p.m. - 04:30 p.m. Lunch

04:30 p.m. - 07:00 p.m. Free time

07:00 p.m. - 10:00 p.m. Dinner

Thursday, 11.06.2026

06:30 a.m. - 09:45 a.m. Breakfast and hotel check-out

10:15 a.m. - 12:15 p.m. Oral presentations
session 3a (Lecture Hall III)
session 3b (Room 109)

12:15 p.m. - 12:30 p.m. Horizontal Contact Point Eastern Poland

12:30 p.m. - 01:00 p.m. Coffee break

01:00 p.m. - 02:30 p.m. Poster session (Foyer outside Lecture Hall III)

02:30 p.m. - 03:00 p.m. Award ceremony and closing of the conference
(Lecture Hall III)

03:00 p.m. - 04:00 p.m. Lunch



ORAL PRESENTATION SESSIONS

Assoc. Prof. Monika Kalinowska, DSc, PhD

Asoc. Prof. Jolanta Piekut, DSc, PhD

Assoc. Prof. Janina Piekutin, DSc, PhD

Oral presentations - session 1a (10.06.2026, Lecture Hall III, 10:15 a.m. - 12:00 p.m.)

Title	Author
Investigation of the structural properties, chemical reactivity, cytotoxicity, and antimicrobial potential of herbicides derived from picolinic acid	Natalia Kowalczyk
Rutin–metal complexes: structural insights and antioxidant potential of calcium and magnesium systems	Maciej Kozłowski
Integration of electroactive particles in electrorheological elastomers: a study of their viscoelastic and mechanical properties	Arun Kumar
Analiza wpływu częstości odczytów podzłazników na rzetelność rozliczeń kosztów ogrzewania w budownictwie wielorodzinnym	Leszek Bargłowski
Wpływ wybranych czynników ekologicznych na brio florę subborealnych lasów bagiennych – wstępne wyniki oraz koncepcja dalszych badań	Daniel Skowron

Coordinator: Ewelina Gołębiewska, MSc Eng.

Prof. Jolanta Pauk, DSc, PhD, Eng.

Assoc. Prof. Joanna Mystkowska, DSc, PhD, Eng.

Assoc. Prof. inż. Piotr Mrozek, DSc, PhD, Eng.

Oral presentations - session 1b (10.06.2026, Room 029, 10:15 a.m. - 12:00 p.m.)

Title	Author
Preliminary assessment of the cathelicidin-derived peptide FK-16 on HeLa cervical cancer cell viability under different serum conditions	Idalia Błażejczyk
Analiza parametrów układu sterowania antropomorficznego biomanipulatora dłoni	Paweł Kordziukiewicz
Analiza parametrów układu sterowania aktywnej ortozy stawu łokciowego wykorzystującej sygnał sEMG	Gabriela Przybysz
Właściwości kompozytów PCL z krzemianem/fosforanem wapnia	Paulina Dziemiańczyk
Analiza numeryczna systemów amortyzujących w hełmach balistycznych służących do ograniczania urazów głowy	Martyna Witkowska
Spersonalizowany model wieloczłonowy ludzkiego kręgosłupa do symulacji biomechanicznych	Szymon Saternus

Coordinator: Dominika Nowińska, MSc Eng.

ORAL PRESENTATION SESSIONS

*Prof. Marcin Kochanowicz, DSc, PhD, Eng.
Assoc. Prof. Mirosław Świercz, DSc, PhD, Eng.
Assoc. Prof. Bogusław Butryło, DSc, PhD, Eng.*

Oral presentations - session 2a (10.06.2026, Lecture Hall III, 12:30 p.m. - 02:15 p.m.)

Title	Author
Evolution of Real-Time Object Detection: A Comparative Analysis of YOLOv26s and YOLOv26m Architectures for Rotary Tedder Tooth Damage Detection	Kamil Felter
Dual BP Neural Network-Based Adaptive Computed Torque Control for 2-DOF Manipulators with Variable Payload	Arkadiusz Nieciecki
Adaptive Neural Gain Control Concept for a Flexible Link Manipulator: Precision and Energy Efficiency Analysis	Mateusz Zalewski
Reinforcement Learning-Based Adaptive Control Barrier Function Regulation for Safe Mobile robot Navigation	Suleiman Diabat
Ograniczanie zanieczyszczenia światłem w obszarach leśnych poprzez konwersję temperatury barwowej najbliższej istniejącej instalacji oświetlenia LED	Piotr Bałdyga

Coordinator: Mateusz Sumorek, MSc Eng.

*prof. Joanicjusz Nazarko, DSc, PhD, Eng.
prof. Elżbieta Szymańska, DSc, PhD
Assoc. Prof. Agnieszka Malinowska, DSc, PhD, Eng.*

Oral presentations - session 2b (10.06.2026, Room 029, 12:30 p.m. - 02:15 p.m.)

Title	Author
Time-Dependent Explainability in Survival Analysis: A Comparison of Random Survival Forests and Deep Learning Models Using SurvSHAP(t)	Adrian Jabłoński
Effects of Dataset Preparation on Handwritten Signature Verification	Mateusz Siebiatyński
Evaluation of the potential of ozone as a tool for microbial contamination management and quality preservation in fermented cheeses	Karolis Paskačimas
Evaluating the Activities of Science and Technology Parks: A Tenant Firm Perspective	Bartłomiej Użyński
Rola lidera zespołu w budowaniu zaufania organizacyjnego w przedsiębiorstwach branży IT – wyniki badań jakościowych	Elżbieta Wiśniewska

Coordinator: Agnieszka Sakowicz, MSc Eng.

ORAL PRESENTATION SESSIONS

Prof. Michał Kuciej, DSc, PhD, Eng.
Dr.-Ing. Habil. Małgorzata Kopycińska-Müller
Barbara Balon, PhD, Eng.

Oral presentations - session 3a (11.06.2026, Lecture Hall III, 10:15 a.m. - 12:15 p.m.)

Title	Author
A new concept of a microalgae bioreactor	Ewa Borucińska-Parfieniuk
Molten Salt Pyrolysis for Waste Valorisation	Nazire Merve Akbaş Güney
Developing a Mathematical Framework of Joining Dissimilar Materials with Micro Mechanical Interlocking	Mehmet Aladag
Shifting the Surge Line: How system volume changes stability limits in centrifugal compressors	Abdul Basit
Machine Learning in the Context of Experimental Research on Thermoplastic Materials	Jakub Polkowski
High Strain-Rate Characterization of rHDPE/rGFRP Composites Using a Modified Split Hopkinson Pressure Bar	Maciej Jan Sychała
Badania właściwości mechanicznych tworzywa PEEK	Maciej Grudnik

Coordinator: Michał Falkowski, MSc Eng.

Prof. Katarzyna Zabielska-Adamska, DSc, PhD, Eng.

Prof. Michał Bołtryk, DSc, PhD, Eng.

Katarzyna Kalinowska-Wichrowska, PhD, Eng.

Oral presentations - session 3b (11.06.2026, Room 109, 10:15 a.m. - 12:15 p.m.)

Title	Author
CO ₂ Mineralization and Utilization in Concrete for Mass and Hydro-Engineering Structures: Properties, Durability, and Practical Application	Marie-Lou D'Ercole
Effect of Microbars Addition on Selected Mechanical Properties of the Concrete	Rafał Kostro
Pionowe deformacje drewnianych konstrukcji szkieletowych: Przegląd aktualnej problematyki i proponowana metodologia badań	Michał Dzun
Koncepcja wykorzystania zużytych elementów łopat turbin wiatrowych jako deskowanie tracone w mostowych obiektach zespolonych	Piotr Wysocki
Zbrojenie kompozytowe FRP w konstrukcjach betonowych: właściwości materiałowe, metodologia obliczeń i aspekty wdrożeniowe	Jan Klimasara
Ocena relacji między kosztami inwestycyjnymi i operacyjnymi statków w procesie transformacji w kierunku niskoemisyjnej żeglugi z wykorzystaniem alternatywnych nośników energii	Sonia Maria Rudzińska

Coordinator: Natalia Kowalczyk, MSc Eng.

POSTER SESSION

Prof. Marek Krętowski, DSc, PhD, Eng.
Assoc. Prof. Jacek Mariusz Żmojda, DSc, PhD, Eng.
Assoc. Prof. Marek Drużdżel, DSc, PhD, Eng.

Poster session (11.06.2026, Foyer outside Lecture Hall III, 01:00 p.m. - 02:30 p.m.)

No.	Title	Author
1	Enhancing RSSI Datasets with Polynomial Regression and Stochastic Models	Mateusz Sumorek
2	Pole Based Stability of the Commensurate Fractional-Order Proportional-Integral-Derivative Delayed Control Systems	Dawid Ostaszewicz
3	Metrological Supervision and Intermediate Checks of Zener-Diode-Based DC Voltage Standards.	Krzysztof Mieczkowski
4	Zawartość Informacyjna Indeksu Ryzyka Geopolitycznego: Dynamiczne Podejście Entropijne	Dawid Toczydłowski
5	Goniospektrometria jako kluczowe narzędzie weryfikacji parametrów technicznych źródeł SSL	Błażej Gajewski
6	The cost of precision. Computational cost vs predictive quality in Transformer-based media bias detection on large-scale social media data.	Sylwia Snarska
7	Independence Assessment with Convolutional Neural Networks for Bivariate Normal Distributions	Kasper Jan Seweryn
8	Energy harvesting and vibration of plate-like structures with additively manufactured supports	Maciej Rećko
9	Correlation of EDM process parameters with microhardness, surface roughness, and machining time	Ewa Wójcicka
10	Revisit the static responses evaluation of shafts with surface discontinuity: An experimental and numerical study	Błażej Bartoszewicz
11	Sposób zbierania i zapisywania danych z detali za pomocą kamer	Wiktoria Szyluk
12	Dry air as an insulating medium for an outdoor medium voltage switch disconnecter in a closed housing with an integrated electromechanical drive	Michał Szymański
13	The Role of Light in Plant Physiology Measurements	Roksana Wasilczuk
14	Diagnostyka maszyn wirnikowych z uwzględnieniem pęknięcia i wyboczenia wału	Mateusz Kaczmarek
15	Badania eksperymentalne i numeryczne drgań wałów wirujących	Michał Falkowski

Coordinator: Anna Falkowska, MSc Eng.

POSTER SESSION

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Poster session (11.06.2026, Foyer outside Lecture Hall III, 01:00 p.m. - 02:30 p.m.)

No.	Title	Author
16	Project of innovative countertops with enhanced wear resistance: An overview of current solutions	Adam Tołstoj
17	Biodegradable PLA-based composite filaments with nano-iron powder and polyethylene glycol for medical applications	Dominika Nowińska
18	Quantitative and qualitative validation of a finite element model of alveolar bone remodeling around a tooth using CT data	Anna Falkowska
19	Cyfrowe wspomaganie rehabilitacji zaburzeń równowagi u osób starszych z zastosowaniem technologii mobilnych	Kacper Snarski
20	Advanced Gel Materials for the Oral Mucosal Environment	Joanna Niewęglowska
21	Automated Segmentation of the Equine Temporomandibular Joint from Computed Tomography Images: Improvement of Preliminary Used Deep Convolutional Neural Networks	Julia Żuk
22	Influence of Environmental Conditions on the Degradation Kinetics of Selected Biopolymers	Stanisław Dzietak
23	Czynniki ryzyka wypadków na przejściach dla pieszych w Polsce	Julia Koleśnik
24	Zastosowanie technologii BIM przy realizacji inwestycji budowlanych	Jakub Ej dys
25	The impact of Fisher-Tropsch wax addition on the rheological properties of bitumens	Biruh Alemayehu Seyoum
26	Innowacyjne rozwiązania kompozytów betonowych	Krzysztof Duch
27	Application of geosynthesis in road construction	Yin Myo Myat Htet
28	Application of geosynthesis in road construction	Aung Pyaye Phy
29	Influence of Lateral Wind Velocity on Cover Crop Seed Dispersion from Two UAV-Based Seeding Platforms	Jonas Balčiūnas
30	Experimental Investigation of Vertical Droplet Distribution from a Robot-Sprayer under Varying Lateral Wind Velocities	Tadas Jomantas

Coordinator: Anna Falkowska, MSc Eng.

POSTER SESSION

Prof. Marek Krętowski, DSc, PhD, Eng.
Assoc. Prof. Jacek Mariusz Żmojda, DSc, PhD, Eng.
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Poster session (11.06.2026, Foyer outside Lecture Hall III, 01:00 p.m. - 02:30 p.m.)

No.	Title	Author
31	Systematic Review of Predicted vs. Measured Thermal Flux in Residential Foundations	Jakub Kropiewnicki
32	Rola bakterii probiotycznych w ograniczaniu toksyczności zanieczyszczeń środowiskowych obecnych w żywności	Emilia Ramatowska
33	Ocena potencjału biogazowego wybranych odpadów organicznych powstających w gospodarstwach domowych	Aneta Ignaciuk
34	Ecotoxicity of Endocrine Disrupting Chemicals	Marta Bolińska
35	Metody badania aktywności adsorpcyjnej biomateriałów	Kamila Koronkiewicz
36	Reducing the flammability of glass/polyester laminates using L-arginine pentaborate	Adriana Dowbysz
37	Investigation of site-specific tillage effects on soil physical properties and operational performance	Simas Sokas
38	Quercetin–Metal Complexes: Synthesis Methods, Reaction Conditions and Coordination Mechanisms	Ewelina Gołębiewska
39	Sustainable Development Goals determinants - implementation at Polish universities	Agnieszka Sakowicz
40	Regional Logistics Maturity Model	Mateusz Kucharczyk
41	Kierunki badań nad autonomicznymi pojazdami	Natalia Zazulka
42	Corporate Sustainability and Corporate Social Responsibility: The Perspective of the Young Generation	Angelika Kłoczko
43	Barriers to sustainability reporting in SMEs	Paulina Grabowska
44	Intelligent transportation system technologies applied in TSL sector companies	Natalia Sturgulewska
45	Innovations in Warehousing: Current Trends and Future Directions	Wojciech Tarasiuk
46	Perspektywy rozwoju elektromobilności w Polsce do roku 2050	Miłosz Małecko-Dobrogowski

Coordinator: Anna Falkowska, MSc Eng.

TRAINING SESSION



*Dr. -Ing. Habil. Małgorzata Kopycińska-Müller
Fraunhofer Institute for Ceramic Technologies
and Systems IKTS*

10.06.2026, Lecture Hall III

Introduction to Good Scientific Practice

Good Scientific Practice is a set of principles that guide scientists in conducting their research. High expectations are associated with being a scientist; it requires a special kind of person. Scientists must fulfil high research and intellectual standards. Scientists must meet rigorous research and intellectual standards, and their ethics and professionalism must be beyond reproach.

In addition, scientists must possess strong communication skills and be able to build collaborations at both national and international levels. Ultimately, the goal of scientific endeavor is to benefit society.

In many ways, scientists are expected to be both saints and superheroes at the same time. Good Scientific Practice can help you find a balance between these expectations and the realities of everyday research.

Storytelling in Scientific Publications

A scientific paper or presentation is a report on your study. It includes facts, numerical data, descriptions of your experiments, data analysis, and conclusions supported by the findings of others.

However, we want our work to be meaningful. We want others to find our results compelling and impactful. A purely factual or “dry” report may fall short in this regard, as our audience ultimately consists of individuals. Incorporating elements of storytelling can help increase audience engagement.

When used effectively, storytelling can enhance understanding, improve knowledge retention, and leave a lasting impression. Some may argue that storytelling is merely a marketing tool. However, if it helps to communicate and disseminate scientific knowledge more effectively, it becomes much more than just presentation—it becomes an essential part of scientific communication.



IMPORTANT PLACES

Tuesday team-building and dinner:



M7 Bilard Club
Icchok Malmed 7 Street

dress code: smart casual



Conference:



Faculty of Electrical Engineering
Lecture hall III, Room 029
Wiejska 45D Street

dress code: business formal



Wednesday dinner:



3 Trio Hotel
Hurtowa 3 Street

dress code: business formal



CONTACT



Adriana Dowbysz

Chairwoman of the Organizing Committee

tel.: +48 668 672 575, e-mail: irt@pb.edu.pl

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Conference Organizers:



Conference Coordinators:



Szkoła Doktorska
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