

# VIII International Scientific Conference

„Environmental Engineering – Through A Young Eye”



Innovations – Sustainability – Modernity – Openness

## CONFERENCE PROGRAM

Bialystok University of Technology

Wiejska Street 45E, 15-351 Bialystok, Poland

### WEDNESDAY 22.05.2019

9.00 - 10.00	REGISTRATION – HALL OF CNK (LIBRARY BUILDING, ZWIERZYNIECKA STREET 16)
10.00 - 12.00	<b>OPENING SESSION AND PLENARY LECTURES</b> <i>Aula CNK, ground floor</i>
1.	<b>Welcome Speech of the Conference Chairwomen</b> Assoc. Prof. Iwona Skoczko, Bialystok University of Technology Assoc. Prof. Dorota Krawczyk, Bialystok University of Technology
2.	<b>Welcome Speech of the Vice-rector of Development at BUT</b> Assoc. Prof. Roman Kaczyński, Bialystok University of Technology
3.	<b>Presentation of Results of VIPSKILLS Erasmus + Project 2016-1-PL01-KA203-026152</b> Assoc. Prof. Dorota Krawczyk, Bialystok University of Technology
4.	<b>VIPSKILLS results through students eyes</b> Agata Witkowska and Bernadetta Wądołowska, Bialystok University of Technology
5.	<b>Impact of VIPSKILLS Project on UCO - partner institution, teachers and students</b> Prof. Antonio Rodero Serrano, University of Cordoba,
6.	<b>Benefits of VIPSKILLS project to Developing Practical Skills of VTDK</b> Lina Sakalauskienė, Vilnius College of Technologies and Design
7.	<b>KEYNOTE TALK: Green solutions for environmental protection-constructed wetlands</b> Assoc. Prof. Wojciech Dąbrowski, Bialystok University of Technology
8.	<b>KEYNOTE TALK: Challenges of Sustainable Buildings Design</b> Assoc. Prof. Violeta Motuzienė, Vilnius Gediminas Technical University
12.00 - 13.00	<b>POSTER SESSION 1, COFFEE BREAK - CNK, HALL ground floor</b> Assoc. Prof. Iwona Skoczko, Assoc. Prof. Dorota A.Krawczyk, Assist. Prof. Anna Siemieniuk
1.	<b>Vilma Baneviciene, Jurgita Malaiskiene, Marija Vaiciene, Renata Boris</b> <i>The possibilities of paper sludge waste (PSw) utilization in cement materials</i>
2.	<b>Rokas Tamasauskas, Jolanta Šadauskienė, Patrikas Mruzgevicius, Dorota A.Krawczyk</b> <i>Evaluation of primary energy factor values of wind turbines</i>
3.	<b>Paulina Roszkowska, Marta Magnuszewska, Dorota Anna Krawczyk</b> <i>VIPSKILLS - Virtual laboratories in engineering analysis</i>
4.	<b>Title Single-Use Paper Cups Circularity Improvement and Environmental Impact Mitigation Measures for Lappeenranta University of Technology Campus</b>
5.	<b>Grzegorz Galko, Danuta Król</b> <i>Experimental research of oily sawdust's air gasification</i>
6.	<b>Ieva Kazulytė</b> <i>Using of recycled materials in packaging to meet the goals of circular economy</i>
7.	<b>Miroslaw Źukowski, Paulina Radzajewska</b> <i>A new method to determine the annual energy output of solar collectors</i>

8.	<b>Katarzyna Gladyszewska-Fiedoruk, Vasyl Zhelykh, Andrii Pushchinskyi</b> Analysis of various ventilation systems due to the quality of indoor air in educational buildings
9.	<b>Katarzyna Gladyszewska-Fiedoruk</b> Indoor air quality in the bedroom of the single-family house - a case study
10.	<b>Edyta Kudlek</b> Influence of the UV irradiation spectra on the formation of micropollutant decomposition by-products during heterogeneous photocatalysis
11.	<b>Agata Witkowska, Dorota Anna Krawczyk, Antonio Rodero</b> Investment costs of a heating system in Poland and Spain – a case study
12.	<b>Dorota Anna Krawczyk, Antonio Rodero, Agata Witkowska Bernadetta Wądołowska, ,</b> The advisability of employment of renewable energy sources in DHW and HVAC systems in the kindergarten, depending on its location – a case study
13.	<b>Juan Mateo, Antonio Rodero, Maria Carmen Garcia</b> Application of LIBS spectroscopy in the study of chloride penetration in construction materials
14.	<b>Anna Justyna Werner-Juszczuk</b> The analysis of use of radiant floor heating as cooling system
15.	<b>Paulina Dawczak, Mariusz Dudziak</b> Evaluation of the effectiveness of the coagulation process in purifying wastewater from the foundry industry
16.	<b>Andrea Moňková, Silvia Vilčeková and Iveta Selecká</b> Life cycle analysis of single family houses and effects of green technologies on environment
17.	<b>Anna Kwarciak-Kozłowska</b> Use of modified biochar to remove pollutants from coke wastewater
18.	<b>Karolina Matej-Lukowicz, Ewa Wojciechowska, Nicole Nawrot, Lidia Dzierzbicka-Glowacka</b> Contribution of nutrients from urban and agricultural watersheds – evaluation of seasonal changes using multivariate statistics approach
19.	<b>Frida Banzzocci, Cecilia Ciacci, Vincenzo Di Naso</b> Optimization of solar shading for Nzeb kindergarten in Florence
20.	<b>Ewa Puszczalo, Anna Marszałek</b> Treatment of wastewater from the confectionery industry using pressure membrane processes
21.	<b>Alicja Siuta-Olcha, Tomasz Cholewa, Kinga Dopieralska-Howoruszko</b> Experimental investigations of energy and exergy efficiencies of a evacuated tube solar collector
22.	<b>Joanna Struk-Sokolowska, Sławomir Miodoński, Mateusz Muszyński-Huhajlo, Kamil Janiak</b> Analysis of chemically assisted primary sedimentation process effects based on COD fractions in wastewater in large WWTPs
23.	<b>Urszula Kępa</b> Analysis of the structure of water demand with the example of selected buildings
24.	<b>Piotr Ofman, Joanna Struk-Sokolowska</b> Artificial neural networks approach to modelling of selected nitrogen forms removal from oily wastewater in anaerobic and aerobic GSBR process phases
25.	<b>Piotr Ofman, Iwona Skoczko</b> Comparison of ΣLMW utilization rate from saline wastewater in SBR reactors with granular and flocculated activated sludge
26.	<b>Zdenka Kovacova, Stefan Dencak, Magdalena Balintova</b> Removal of copper from water solutions by adsorption on spruce sawdust
27.	<b>Ewa Szatylowicz, Iwona Skoczko</b> Magnetic field usage for removal iron by filtration assisted different filter materials
28.	<b>Iwona Skoczko Ewa Szatylowicz</b> Experiments on water stabilization
29.	<b>Łukasz Kolendo, Dorota Anna Krawczyk, Andrzej Kobryń</b> The method of special suitability assessment for the photovoltaics development at municipality scale
30.	<b>Jose Ribeiro, Licinio Ribeiro, Wilson Silva</b> Project: home Air Conditioning system VIPskills
31.	<b>Ane Viana, Antonio Alves, Jose Costa, Rui Marques</b> Nothing is lost, nothing is created, everything is changed with the air conditioning
32.	<b>Joanna Borowska, Natalia Taraszkiewicz</b> Window's structure and its energetic parameters

32.	<b>Natalia Taraszkiewicz</b> Agricultural biogas plant location selection using MCDA methods
33.	<b>Jorge M. Llamas, David Bullejos, Manuel Ruiz de Adana</b> Operation comparison for Parabolic Trough plants with thermal storage. HTF Buffering vs double tank molten salts
34.	<b>Magdalena Łoj-Pilch, Anita Zakrzewska, Ewa Zielewicz</b> Analysis of risk assessment in municipal wastewater treatment plant
35.	<b>Lilia Szaripowa, Kerimzhanova Aishuak , Mehmet Akif Tanrışiki, Maiya Zhanaidarova</b> Heating system of a cottage in Warsaw
36.	<b>Kerimzhanova Aishuak, Sharipova Lilia, Mehmet Akif Tanrışiki, Maiya Zhanaidarova</b> Ventilation System of the house located in Warsaw
13:00 - 14:15	<b>PLENARY SESSION 1 - Aula CNK, ground floor</b> Session Chairs: Prof. Antonio Rodero Serrano, Prof. Mirosław Żukowski, Assoc. Prof. Jolanta Sakalauskiene
1.	<b>Jakub Frankowski</b> Assessment methods of hemp biomass to solid biofuels production
2.	<b>Ana Tejero-González, Dorota A.Krawczyk, F.Javier Rey Martinez, Eloy Velasco Gomez</b> Improved performance of a PV integrated ventilated façade at an existing nZEB
3.	<b>Andrzej Gajewski</b> Energetic efficiency of groundwater source heat pump and ground one in Białystok
4.	<b>Tomasz Cholewa, Alicja Siuta-Olcha</b> On the use of residential thermal stations in different types of buildings
5.	<b>Vilūnė Lapinskienė, Violeta Motuziene, Artur Rogoza</b> The assessment of building energy functionality in the integrated building design
13.00 – 14:15	<b>PLENARY SESSION 2 - Conference room 2/37 CNK, 2nd floor</b> Session Chairs: Assoc. Prof. Valdone Suskevici, Assoc. Prof. Wojciech Dąbrowski, Assis. Prof. Ewa Puszczalo
1.	<b>Marta Wiśniewska</b> Using the Multi Rae Pro gas detector to monitor odour emissions from biogas plants processing municipal waste.
2.	<b>Rasa Tumaševičiūtė</b> Valorisation of anaerobic digestate from biowaste to high value bioproducts
3.	<b>Bartosz Stanisław Bednarz</b> Numerical verification of the thickness of GRP panels for modernization of large-diameter sewage collectors with non-circular cross-sections
4.	<b>Nicole Nawrot, Ksenia Pazdro, Jolanta Walkusz-Miotk, Karolina Madej-Łukowicz, Ewa Wojciechowska</b> Spatial and vertical distribution analysis of heavy metals with potential sources analysis in urban retention tanks sediments: case study of Strzyża Stream
5.	<b>Dominik Terefinko, Anna Patrycka Dzmitrowicz, Paweł Pohl, Piotr Cyganowski, Piotr Jamroz</b> Application of polymeric nanocomposite for catalytic degradation of methylene blue from the wastewaters
14:15 - 14:30	<b>SUMMARY OF A FIRST DAY Aula CNK, ground floor</b>
14:30 - 16:00	<b>LUNCH - RESTAURANT POD HERBEM (WIEJSKA STREET 49)</b>
16:00 - 19:30	<b>BIALYSTOK SIGHTSEEING GUIDED TOUR (START POINT- RESTAURANT)</b>
19:30	<b>DINNER - RESTAURANT IN A CITY CENTER (KAWELIN, LEGIONOWA STREET 10)</b>
<b>THUERSDAY 23.05.2019</b>	
9.00 - 10.00	<b>PZiTS GALA MEETING – results of a competition for the best bachelor and master thesis</b> <b>Aula CNK (LIBRARY BUILDING)</b>
10:00 - 10.30	<b>KEYNOTE TALK Active solar space heating and cooling - innovative solutions</b> Assoc. Prof. Dorota Chwieduk, Warsaw University of Technology

	<b>POSTER SESSION 2</b>
	<b>COFFEE BREAK</b>
<b>10.30 - 11.30</b>	<b>PRESENTATION OF VIPSKILLS INTELLECTUAL OUTPUTS</b>
	<i>Aula CNK, HALL ground floor</i>
	<b>Assoc. Prof. Iwona Skoczko, Assoc. Prof. Dorota Krawczyk, Assist. Prof. Anna Siemieniuk</b>
1.	<b>Dominik Mroczko, Izabela Zimoch</b> <i>The use of zeta potential measurement in surface water coagulation process optimization</i>
2.	<b>Nataliia Olha Kozydra, Mariusz Adamski, Vasyl Zhelykh</b> <i>Methods of calculating the individual heating costs in multi-family buildings in selected countries</i>
3.	<b>Weronika Rogowska</b> <i>Main sources of microplastics pollutants in the water environment</i>
4.	<b>Pawel Kondzior, Damian Tyniecki, Andrzej Butarewicz</b> <i>Influence of color temperature of white LED diodes and illumination intensity on the content of photosynthetic pigments in Chlorella vulgaris algae cells</i>
5.	<b>Piotr Bara, Mariusz Adamski</b> <i>Test results of horizontal axis wind turbine</i>
6.	<b>Anna Lempart, Edyta Kudlek, Mariusz Dudziak</b> <i>Identification of micropollutants occurring in swimming pools</i>
7.	<b>Eliza Hawrylik</b> <i>The use of ultrasounds in improving the sanitary quality of sewage sludge</i>
8.	<b>Kamil Świętochowski</b> <i>Water losses and failure rate in the urban-rural water supply system</i>
9.	<b>Marzena Jędryś-Wolska, Irena Korus</b> <i>Purification of colored aqueous solutions in the adsorption process on magnetite modified with polymers</i>
10.	<b>Aneta Szymajda, Grażyna Łaska</b> <i>The effect of moisture and ash on the caloric value of cow dung biomass</i>
11.	<b>Iwona Barszczewska</b> <i>Methods of calculations of water systems.</i>
12.	<b>Magdalena Dolżyńska, Sławomir Obidziński, Małgorzata Kowczyk-Sadowy, Małgorzata Krasowska, Krzysztof Karczewski, Dorota Jóźwiak, Radosław Buczyński</b> <i>Pressure agglomeration process of bakery industry waste</i>
13.	<b>Paweł Puzowski, Iwona Skoczko</b> <i>Water treatment systems in small cities</i>
14.	<b>Maciej Mrowiec, Emil Kuliński, Tomasz Herczyk</b> <i>The effects of pressure control and meteorological parameters on the failure rate of a water - pipe network</i>
15.	<b>Michał Adamczak, Gabriela Kamińska, Jolanta Bohdziewicz</b> <i>Application of waste polymers as raw material for ultrafiltration membranes preparation</i>
16.	<b>Aleksandra Świecka, Agnieszka Środa, Violetta Kozik, Andrzej Bąk, Krzysztof Barbusiński, Adam Smoliński</b> <i>Electrochemical corrosion monitoring in low conductive fluid: Pilot-scale study on sulfolane corrosion potential</i>
17.	<b>Paulina Zielinko, Dorota Anna Krawczyk</b> <i>Indoor Air Quality in the antenatal classes – a case study</i>
18.	<b>Agnieszka Środa</b> <i>The use of advanced and innovative methods of removing pharmaceuticals from wastewater in order to effectively protect aquatic ecosystems</i>
19.	<b>Monika Wysocka</b> <i>Examination of particulate matter concentration in an apartment in a multi-family building</i>
20.	<b>Patrycja Parnicka, Adrianna Zaleska-Medyńska</b> <i>The effect of the metal type on luminescence and photocatalytic properties of lanthanide-organic frameworks-modified titania</i>
21.	<b>Dawid Łapiński, Józefa Wiater</b> <i>Comparison of chemical composition of natural fertilizers and organic waste</i>
22.	<b>Wioleta Saczko, Małgorzata Krasowska</b> <i>The concept of garden management with backyard hydrophyte sewage treatment plant</i>

23.	<b>Kacper Jermacz, Andrzej Gajewski</b> <i>Indoor air quality in an auto repair shop-case study</i>
24.	<b>Joanna Oksiuta</b> <i>Systems of waste water treatment on rural areas.</i>
25.	<b>Patrycja Sobczak, Agata Rosińska</b> <i>Simultaneous quantification of chosen organic micropollutants in drinking water</i>
27	<b>VIPSKILLS project students</b> <i>PRESENTATION OF RESULTS OF SUMMER SCHOOL -TEAM 1, TEAM 2, TEAM 3, TEAM 4, TEAM 5, TEAM 6, TEAM 7, TEAM 8</i>
11.30 - 13.00	<b>PLENARY SESSION 3 - Aula CNK, ground floor</b> Session Chairs: Assoc. Prof. Siuta-Olcha, Assoc. Prof. Violeta Motuziene, Assoc. Prof. Elżbieta Wolejko
1.	<b>Jolanta Kozak, Maria Włodarczyk-Makula</b> <i>The use of sodium percarbonate in the modified Fenton reaction</i>
2.	<b>Kamil Rawski</b> <i>Greener planning for improvement of urban air quality – a review</i>
3.	<b>Emilia Stańkowska, Agnieszka Włodyka-Bergier, Dominika Gajewska</b> <i>Quality of swimming pool water in the context of hygienic behaviour of swimming pool users</i>
4.	<b>Sara Sebastianik, Andrzej Gajewski</b> <i>Carbon dioxide emissions of ground heat pump for a detached house</i>
5.	<b>Magdalena Stolarska</b> <i>Problems with indoor air quality in multifamily buildings</i>
11.30 - 13.00	<b>PLENARY SESSION 4 - Conference room 2/37 CNK, 2nd floor</b> Session Chairs: Prof. Rafal Milaszewski, Prof. Assos. Edyta Kudlek, Assoc. Prof. Dariusz Andraka
1.	<b>Gracja Fijalkowska, Małgorzata Wiśniewska, Katarzyna Szewczuk-Karpisz</b> <i>Studies of the cationic polyacrylamide adsorption on the montmorillonite surface in the presence of lead(II) ions</i>
2.	<b>Grzegorz Jarnuszewski</b> <i>Assessment of the water environment quality in a small agricultural catchment (Gowienica Miedwińska)</i>
3.	<b>El Khalil Cherif, Farida Salmoun, Nordine Nouayti</b> <i>Sources of Bathing Water Pollution in the West Coast of Tangier, Morocco: Effects of Industrial Zones</i>
4.	<b>Marek Król, Mariusz Dudziak</b> <i>Determination of organic micropollutants in water using gas chromatography-mass spectrometry</i>
5.	<b>Kamil Suder, Karol Plesiński, Artur Radecki-Pawlik</b> <i>Three-dimensional velocity measurements of water flow along the large-pool pass on Trzebuńska stream</i>
6.	<b>Patrycja Wilczewska, Aleksandra Bielock-Gieldoń, Agnieszka Fiszka-Borzyńska, Aleksandra Pieczyńska, Ewa Maria Siedlecka</b> <i>Influence of ionic liquids assisted synthesis on morphology and photocatalytic properties of Bi<sub>4</sub>O<sub>5</sub>Br<sub>2</sub></i>
13.00 - 13.30	<b>CLOSING CEREMONY</b>
13.45	<b>LUNCH</b>



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