

VIII International Scientific Conference



„Environmental Engineering – Through A Young Eye”

Innovations – Sustainability – Modernity – Openness

CONFERENCE PROGRAM

Białystok University of Technology
Wiejska Street 45E, 15-351 Białystok, Poland

WEDNESDAY 22.05.2019

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| WEDNESDAY 22.05.2019 | |
| 9.00 - 10.00 | REGISTRATION – HALL OF CNK (LIBRARY BUILDING, ZWIERZYŃECKA STREET 16) |
| 10.00 - 12.00 | OPENING SESSION AND PLENARY LECTURES <i>Aula CNK, ground floor</i> |
| 1. | Welcome Speech of the Conference Chairwomen Assoc. Prof. Iwona Skoczko, Białystok University of Technology Assoc. Prof. Dorota Krawczyk, Białystok University of Technology |
| 2. | Welcome Speech of the Vice-rector of Development at BUT Assoc. Prof. Roman Kaczyński, Białystok University of Technology |
| 3. | Presentation of Results of VIPSKILLS Erasmus + Project 2016-1-PL01-KA203-026152 Assoc. Prof. Dorota Krawczyk, Białystok University of Technology |
| 4. | VIPSKILLS results through students eyes Agata Witkowska and Bernadetta Wądołowska, Białystok University of Technology |
| 5. | Impact of VIPSKILLS Project on UCO - partner institution, teachers and students Prof. Antonio Rodero Serrano, University of Cordoba, |
| 6. | Benefits of VIPSKILLS project to Developing Practical Skills of VTDK Lina Sakalauskiene, Vilnius College of Technologies and Design |
| 7. | KEYNOTE TALK: Green solutions for environmental protection-constructed wetlands Assoc. Prof. Wojciech Dąbrowski, Białystok University of Technology |
| 8. | KEYNOTE TALK: Challenges of Sustainable Buildings Design Assoc. Prof. Violeta Motuziene, Vilnius Gediminas Technical University |
| 12.00 - 13.00 | POSTER SESSION 1, COFFEE BREAK - CNK, HALL ground floor Assoc. Prof. Iwona Skoczko, Assoc. Prof. Dorota A.Krawczyk, Assist. Prof. Anna Siemieniuk |
| 1. | <u>Vilma Baneviciene</u>, Jurgita Malaiskiene, Marija Vaiciene, Renata Boris <i>The possibilities of paper sludge waste (PSw) utilization in cement materials</i> |
| 2. | Rokas Tamasauskas, Jolanta Šadauskienė, Patrikas Mruzgevičius, Dorota A.Krawczyk <i>Evaluation of primary energy factor values of wind turbines</i> |
| 3. | Paulina Roszkowska, Marta Magnuszewska, Dorota Anna Krawczyk <i>VIPSKILLS - Virtual laboratories in engineering analysis</i> |
| 4. | <u>Valdone Suskevici</u> <i>Title Single-Use Paper Cups Circularity Improvement and Environmental Impact Mitigation Measures for Lappeenranta University of Technology Campus</i> |
| 5. | <u>Grzegorz Galko, Danuta Król</u> <i>Experimental research of oily sawdust's air gasification</i> |
| 6. | <u>Ieva Kazulytė</u> <i>Using of recycled materials in packaging to meet the goals of circular economy</i> |
| 7. | <u>Mirosław Żukowski, Paulina Radzajewska</u> <i>A new method to determine the annual energy output of solar collectors</i> |

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

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

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

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| 23. | <u>Kacper Jermacz, Andrzej Gajewski</u> <i>Indoor air quality in an auto repair shop-case study</i> |
| 24. | <u>Joanna Oksiuta</u> <i>Systems of waste water treatment on rural areas.</i> |
| 25. | <u>Patrycja Sobczak, Agata Rosińska</u> <i>Simultaneous quantification of chosen organic micropollutants in drinking water</i> |
| 27 | <u>VIPSKILLS project students</u> <i>PRESENTATION OF RESULTS OF SUMMER SCHOOL</i> <i>-TEAM 1, TEAM 2, TEAM 3, TEAM 4, TEAM 5, TEAM 6, TEAM 7, TEAM 8</i> |
| 11.30 - 13.00 | PLENARY SESSION 3 - Aula CNK, ground floor Session Chairs: Assoc. Prof. Siuta-Oлча, Assoc. Prof. Violeta Motuziene, Assoc.Prof. Elżbieta Wolejko |
| 1. | <u>Jolanta Kozak, Maria Włodarczyk-Makula</u> <i>The use of sodium percarbonate in the modified Fenton reaction</i> |
| 2. | <u>Kamil Rawski</u> <i>Greenery planning for improvement of urban air quality – a review</i> |
| 3. | <u>Emilia Stańkowska, Agnieszka Włodyka-Bergier, Dominika Gajewska</u> <i>Quality of swimming pool water in the context of hygienic behaviour of swimming pool users</i> |
| 4. | <u>Sara Sewastianik, Andrzej Gajewski</u> <i>Carbon dioxide emissions of ground heat pump for a detached house</i> |
| 5. | <u>Magdalena Stolarska</u> <i>Problems with indoor air quality in multifamily buildings</i> |
| 11.30 - 13.00 | PLENARY SESSION 4 - Conference room 2/37 CNK, 2nd floor Session Chairs: Prof. Rafał Miłaszewski, Prof. Assos. Edyta Kudlek, Assoc.Prof. Dariusz Andraka |
| 1. | <u>Gracja Fijałkowska, Małgorzata Wiśniewska, Katarzyna Szewczuk-Karpisz</u> <i>Studies of the cationic polyacrylamide adsorption on the montmorillonite surface in the presence of lead(II) ions</i> |
| 2. | <u>Grzegorz Jarnuszewski</u> <i>Assessment of the water environment quality in a small agricultural catchment (Gowienica Miedwiańska)</i> |
| 3. | <u>El Khalil Cherif, Farida Salmoun, Nordine Nouayti</u> <i>Sources of Bathing Water Pollution in the West Coast of Tangier, Morocco: Effects of Industrial Zones</i> |
| 4. | <u>Marek Król, Mariusz Dudziak</u> <i>Determination of organic micropollutants in water using gas chromatography-mass spectrometry</i> |
| 5. | <u>Kamil Suder, Karol Plesiński, Artur Radecki-Pawlik</u> <i>Three-dimensional velocity measurements of water flow along the large-pool pass on Trzebuńka stream</i> |
| 6. | <u>Patrycja Wilczewska, Aleksandra Bielock-Gieldoń, Agnieszka Fiszka-Borzyszkowska, Aleksandra Pieczyńska, Ewa Maria Siedlecka</u> <i>Influence of ionic liquids assisted synthesis on morphology and photocatalytic properties of Bi₄O₅Br₂</i> |
| 13.00 - 13.30 | CLOSING CEREMONY |
| 13.45 | LUNCH |



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