



UNIwersytet
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WROCLAW UNIVERSITY
OF ENVIRONMENTAL
AND LIFE SCIENCES

SAM 2018

XLVIII Seminarium Zastosowań Matematyki 2018

XLVIII Seminar of Applied Mathematics

THE HONORARY PATRONAGE
RECTOR OF WROCLAW UNIVERSITY OF ENVIRONMENTAL AND LIFE SCIENCES
Prof. dr hab. inż. Tadeusz Trziszka
AND
DEAN OF FACULTY OF ENVIRONMENTAL ENGINEERING AND GEODESY
Prof. dr hab. inż. Bernard Kontny

Komunikat II
Second Circular

Program Konferencji
Conference Program



KATEDRA MATEMATYKI
WYDZIAŁ INŻYNIERII
KSZTAŁTOWANIA
ŚRODOWISKA I GEODEZJI

09-11 IX 2018, Boguszów-Gorce

NIEDZIELA/SUNDAY 09.09.2018

18.00 - 20.00	Rejestracja uczestników / Registration of participants
20.00 - 24.00	Kolacja integracyjna / Dinner – Integration evening

PONIEDZIAŁEK/MONDAY 10.09.2018

08.00 - 09.00	Śniadanie / Breakfast
09.00 - 09.15	Otwarcie Konferencji / Opening Session
09.15 - 11.00	Sesja I / Session I

Chairman: Wojciech Zieliński, Leszek Kuchar

1. **Hans von Storch, Chen Xueen, Tang Shengquan**
"Noise" - an integrant part of climate modelling
2. **Ondřej Ledvinka**
An overview of trend tests used in current hydroclimatology
3. **Stanisław Węglarczyk**
Kernel density estimation and its application
4. **Marcin Stróżecki, Anshu Rastogi, Radosław Juszczak**
The impact of chamber transparency on estimation of peatland net ecosystem exchange

11.00 - 11.30	Przerwa kawowa / Coffee Break
11.30 - 13.00	Sesja II / Session II

Chairman: Stanisław Węglarczyk, Bogdan H. Chojnicki

1. **Leszek Kuchar, Sławomir Iwański, Leszek Jelonek**
Simulation of the minimum annual river flows based on the RCP climatic scenario, time horizon up to 2060-2080 and the Kaczawa River
2. **Anshu Rastogi, Subhajt Bandopadhyay, Marcin Stróżecki, Radosław Juszczak**
Monitoring the Impact of Environmental Manipulation on Peatland Surface by Simple Remote Sensing Indices
3. **Maciej Karczewski, Andrzej Michalski**
The study and comparison of one-dimensional kernel estimators – a new approach
4. **Marlena Dąg, Paweł Dąg**
Model-based electrospinning process design for nanofibers production
5. **Mariusz Grządziel**
On using nonparametric approaches for precipitation estimation

13.30 - 14.30 Obiad / Lunch

15.00 - 16.30 Sesja III / Session III

Chairman: Ondřej Ledvinka, Andrzej Michalski

1. **Dariusz Kayzer, Przemysław Frankowski, Janina Zbierska, Ryszard Staniszewski**
Evaluation of trophic parameters in newly built reservoir using canonical variates analysis
2. **Wiesław Szulczewski, Wojciech Jakubowski, Tamara Tokarczyk**
An analysis of the hydrological regime as a factor influencing on the distributions of maximum annual flows
3. **Gabriela Biel**
Probabilistic analysis of coincident sums of precipitation at two measurement stations. Introduction to the method and an example
4. **Lukasz Gruss, Robert Głowski, Mirosław Wiatkowski**
Modeling of water flows through a designed dry dam using the Hec-Ras program
5. **Robert Mańko**
The influence of weight coefficients in the Preissman scheme on flows in the lower Odra river network using the Hec-Ras software

16.30 - 17.00 Przerwa kawowa / Coffee Break

17.00 - 18.00 Sesja IV (posterowa) / Session IV (Poster Session)

1. **Waldemar Bojar, Leszek Knopik, Jacek Żarski, Renata Kuśmierk-Tomaszewska, Wojciech Żarski**
Markov chain as a tool for forecasting daily precipitation in the vicinity of the city of Bydgoszcz, Poland
2. **Waldemar Bojar, Leszek Knopik, Renata Kuśmierk-Tomaszewska, Jacek Żarski, Wojciech Żarski**
Statistical analysis of daily precipitation in the Bydgoszcz region
3. **Ewa Diakowska, Paulina Stanek, Sławomir Iwański, Edward Gąsiorek**
Estimation of the drought occurrence in Poland by 2060, based on the HTC index and probability distributions
4. **Marta Duljarz, Wojciech Jakubowski**
Regional dependencies in statistical methods for flood risk assessment
5. **Małgorzata Kleniewska, Dorota Mitrowska, Bogdan H. Chojnicki**
Monthly average daily diffuse solar radiation in Poland within the period 2005-2015
6. **Grzegorz Gancarzewicz**
Graphs with Hamiltonian cycles Trough Path Systems
7. **Sylvia Myszograj**
Reaction rate coefficient k_{20} and temperature coefficient Θ in organic waste thermal disintegration

8. **Sylvia Myszograj, Magdalena Wojciech**
Mathematical modelling of waste activated sludge thermal disintegration
9. **Irena Otop, Jan Szturc, Katarzyna Ośródk, Piotr Dżaków**
Automatic quality control of telemetric rain gauge data for operational applications at IMGW-PIB
10. **Anna Pacak, Demis Pandelidis, Sergey Anisimov**
Mathematical modelling of solid desiccant systems
11. **Grzegorz Siwek**
Seasonality and multiannual variability of floods: case study from Eastern Poland
12. **Jacek Wawrzosek, Szymon Ignaciuk, Andrzej Bochniak**
Postoptimization problems of supplying urban-industrial agglomerations with water
13. **Marcin Wdowikowski, Bartosz Kaźmierczak, Katarzyna Wartalska**
Probabilistic approach in the heavy rainfall modelling – is model verification needed?

20.00 - 02.00 Uroczysta kolacja / Ceremonial dinner

WTOREK/TUESDAY 11.09.2018

08.00 - 09.00 Śniadanie / Breakfast

09.00 - 11.00 Sesja V / Session V

Chairman: Bolesław Borkowski, Wiesław Szulczewski

1. **Ryszard Ewertowski**
Applying of depth-averaged hydrodynamic modeling with different methods of turbulence closure for flow near channel groyne
2. **Katarzyna Baran-Gurgul**
A comparison of three parameter estimation methods of the gamma distribution of annual maximum low flow duration and deficit in the Upper Vistula catchment (Poland)
3. **Jacek Kurnatowski**
The influence of the measurement errors on the Brutsaert and Nieber analysis of flow recession curves
4. **Joanna A. Kamińska**
Residuals in the modelling of pollution concentration depending on meteorological conditions and traffic flow, employing decision trees
5. **Robert Mańko, Norbert Laskowski**
Comparative analysis of the effectiveness of the conceptual rainfall-runoff hydrological models on the selected rivers in Odra and Vistula basins

6. **Mieczysław Chalfen, Joanna A. Kamińska**
Identification of parameters and verification of an urban traffic flow model. A case study in Wrocław
7. **Jan Jelowicki**
Dynamic edit distances applied for assessment of similarity of daily gauge data
8. **Bogdan Bąk, Leszek Łabędzki**
Monitoring and short-term agro-hydro-meteorological forecasting for operational planning of subirrigation and drainage

11.00 - 11.30 Przerwa kawowa / Coffee Break

11.30 - 13.30 Sesja VI / Session VI

Chairman: Bartosz Kaźmierczak, Dariusz Kayzer

1. **Jacek Leśny, Monika Panfil**
A gap filling method for active surface heat balance structure
2. **Joanna Kajewska-Szkudlarek, Justyna Stańczyk**
Filling missing meteorological data with Computational Intelligence methods
3. **Jacek Wawrzosek, Szymon Ignaciuk**
Postoptimization of the model of water supply for urban and industrial agglomeration
4. **Arkadiusz Glogowski, Mieczysław Chalfen**
Analysis of the effectiveness of the systems protecting against the impact of water damming in the river on the increase of groundwater level on the example of the Malczyce dam
5. **Kamila M. Harenda, Patryk Poczta, Dominika Szczepanik, Dongxiang Wang, Iwona S. Stachlewska, Bogdan H. Chojnicki**
Strategy for Multidimensional Peatland Ecosystem Analysis in the Context of the Atmospheric Properties
6. **Wojciech Młocek**
Trend analysis of hydrometeorological time series with seasonal variation
7. **Paulina Stanek, Leszek Kuchar, Irena Otop**
Estimation of diurnal total radiation based on meteorological variables in the period of plant vegetation in Poland
8. **Grzegorz Dumieński, Agnieszka Mruklik, Andrzej Tiukało, Alicja Lisowska**
Preliminary research on adaptability of municipalities in the sub-basin of Nysa Kłodzka using multidimensional comparative analysis

13.30 - 13.40 Zakończenie konferencji / Conference close

13.40 - 14.40 Obiad / Lunch