

**Fourth National Conference with International Participation
and Youth Scientific Session**

"Ecological Engineering and Environment Protection"

(EEEP'2015)

Burgas, 3-6 June 2015

PROGRAM

03.06.2015 (Wednesday)

17⁰⁰ – 19⁰⁰ REGISTRATION

04.06.2015 (Thursday)

8⁰⁰ – 10⁰⁰ REGISTRATION

9³⁰ – 10⁰⁰ OPENING AND WELCOME ADDRESSES

10⁰⁰ – 12⁰⁰ PLENARY SESSION

Chairmen: Aleksander Alexandrov, Hristo Najdenski

1. THE NEW ECOLOGY – NEXT STEP

Nesho Chipev

Shumen University “Konstantin Prerslavski”

2. ECOLOGICAL ASPECTS AND INCIDENCE OF THE MOSTLY REPORTED FOOD-BORNE PATHOGENS

Hristo Najdenski

The Stephan Angeloff Institute of Microbiology, Bulgarian Academy of Sciences

3. HOW SCIENTIFIC ACHIEVEMENTS WALK FAST TO THE PRACTICE OF ENVIRONMENTAL TECHNOLOGIES

Yana Topalova

Sofia University, Faculty of Biology

Department of General and Applied Hydrobiology

12⁰⁰ – 13⁰⁰ POSTER SESSION ONE

13⁰⁰ – 14⁰⁰ LUNCH

14⁰⁰ – 18³⁰ ORAL PRESENTATIONS SECTIONS

14⁰⁰ – 15⁴⁵ I-st session: Section „Ecological biotechnologies, biofuels, modeling and automatization”

Chairmen: Yana Topalova, Sette Diop

1. 14⁰⁰ – 14¹⁵ **Non-foaming film reactors for biopesticide productions**
I. Nikov (France)
2. 14¹⁵ – 14³⁰ **Effect of genetic transformation on the phenotypical and biochemical characteristics of transgenic plants**
K.O. Drobot, N.A. Matvieieva (Ukraine)
3. 14³⁰ – 14⁴⁵ **Biotechnology of wastewater treatment with the effective removal of nitrogen and the participation of anammox-bacteria, developed for the 2014 winter olympics in Sochi**
A.N. Nozhevnikova, YuV. Litty, MG. Zubov (Russia)
4. 14⁴⁵ – 15⁰⁰ **Comparative assessment of denitrification/nitrification processes in water treatment technologies in WWTP „Sadinata” and WWTP „Kubratovo”**
I. Schneider, N. Dinova, I. Yotinov, E. Daskalova, Y. Topalova
5. 15⁰⁰ – 15¹⁵ **Influence of electrical charge of Reverse Osmosis Membranes on the extent of fouling through the treatment of wastewater from ceramic industry**
Sami A. Al Rawi, V. Nenov
6. 15¹⁵ – 15³⁰ **Solving of ecological issues in mining industry within its development strategy**
N.N. Melnikov, V.F. Skorokhodov, S.P. Mesyats, R.M. Nikitin et al. (Russia)
7. 15³⁰ – 15⁴⁵ **Study of the influence of ultrasound on the anaerobic digestion of wasted fruits and vegetables**
I. Simeonov, D. Denchev, V. Hubenov, S. Mihajlova, E. Chorukova, S. Grigorov

15⁴⁵ – 16¹⁵ COFFEE BREAK

16¹⁵ – 18³⁰ II-nd session: Section „Ecological biotechnologies, biofuels, modeling and automatization”

Chairmen: Jordan Nikov, Valentin Nenov

1. 16¹⁵ – 16³⁰ **Monitoring biological modes in a bioreactor process by computer simulation**
S. Semcheddine, A. Aitouche (Algeria, France)
2. 16³⁰ – 16⁴⁵ **Obtaining of hydrogen and methane from plant biomass by anaerobic biodegradation**
D. Denchev, L. Kabaivanova
3. 16⁴⁵ – 17⁰⁰ **Specific growth rates estimation of fruits and vegetables wastes anaerobic digestion model**
S. Diop, E. Chorukova, I. Simeonov (France, Bulgaria)
4. 17⁰⁰ – 17¹⁵ **Power generation using modified cathodes in air-cathode microbial fuel cell**
B. Midyurova, V. Nenov
5. 17¹⁵ – 17³⁰ **Phosphorus recovery from wastewaters**
G. Peeva, V. Nenov
6. 17³⁰ – 17⁴⁵ **Does the presence of nanodiamonds applied in azo-degradation process affect the biofilm community?**
M. Belohova, I. Schneider, I. Ivanova, Y. Topalova
7. 17⁴⁵ – 18⁰⁰ **Study of co-combustion process of pulverized coal and biomass by computational modelling**
K. T. Todorov

19⁰⁰ **COCKTAIL**

05.06.2015 (Friday)

9⁰⁰ – 12⁰⁰ **ORAL PRESENTATIONS SECTIONS**

9⁰⁰ – 10³⁰ ***III-rd session: Section „Space technology and environment, forest biology”***

Chairmen: Tania Ivanova, Roumen Nedkov

1. 9⁰⁰ – 9¹⁵ **Spatial and temporal distribution of floods and fires on the territory of Bulgaria, based on MODIS data for the 2004 – 2015 yrs. period**
M. Dimitrova, R. Nedkov

2. 9¹⁵ – 9³⁰ **Research model of monitoring the recovery of an ecosystem after fire based on satellite and GPS data**
N. Stankova, R. Nedkov
3. 9³⁰ – 9⁴⁵ **Floating reed islands dynamic in Srebarna lake for the period 1992-2014 based on satellite, terrestrial and GPS data**
I. Ivanova
4. 9⁴⁵ – 10⁰⁰ **Land cover as an indicator for environmental evaluation for ecotourism using GIS technologies**
E. Sarafova
5. 10⁰⁰ – 10¹⁵ **Environmental monitoring on wetlands restoration in the area of quarry lakes**
K. Radeva
6. 10¹⁵ – 10³⁰ **Application of the aerospace data for forest fire risk assessment and prognoses**
E. Velizarova, R. Nedkov, I. Molla, M. Zaharinova

10³⁰ – 11⁰⁰ COFFEE BREAK

11⁰⁰ – 12⁰⁰ IV-th session: Section „Space technology and environment, forest biology”

Chairmen: Nadezhda Stoyanova, Huseyin Yemendzhiev

1. 11⁰⁰ – 11¹⁵ **Distribution, structure and regeneration of norway spruce forests in Vitosha mountain**
B. Hristova, N. Stoyanova
2. 11¹⁵ – 11³⁰ **Cone scales shape and relative position of different norway spruce provenances at an experimental plantation**
A. H. Alexandrov, P. Popov, E. Nedkova
3. 11³⁰ – 11⁴⁵ **Forest vegetation state and dynamics in the Haskovo region (Bulgaria) – a research based on vegetation indices, climate and solar activity data**
D. Avetisyan, R. Nedkov, D. Gotchev
4. 11⁴⁵ – 12⁰⁰ **Ecological requirements of rare forest tree species in the region of Eastern Balkan range**
G. P. Georgiev

12⁰⁰ – 13⁰⁰ POSTER SESSION TWO

13⁰⁰ – 14⁰⁰ LUNCH

14⁰⁰ – 18⁰⁰ ORAL PRESENTATIONS SECTIONS

14⁰⁰ – 16⁰⁰ V-th session: Section „Ecomonitoring, biodiversity and biosphere, agricultural ecologisation”

Chairmen: Svetla Marinova, Ludmila Kabaivanova

1. 14⁰⁰ – 14¹⁵ **Development and application of biosensors based on microbial fuel cell technology**
H. Yemendzhiev, V. Nenov
2. 14¹⁵ – 14³⁰ **Express enzymological indicators for self-purification effectiveness at different types of pollution in lotic ecosystems**
Y.Todorova, I. Schneider, I.Yotinov, S. Lincheva, Y. Topalova
3. 14³⁰ – 14⁴⁵ **Microbial structure / functions development in bioremediation technology of sediments, highly contaminated with phenol: classical and molecular diagnostic**
I. Yotinov, A. Foteva, M. Belouhova, Y. Todorova, Y. Topalova
4. 14⁴⁵ – 15⁰⁰ **Comparison of different traffic noise prediction methods**
D. Benov, N. Nikolov, M. Mazhdrakov
5. 15⁰⁰ – 15¹⁵ **Some notes about regulatory for building noise barriers along railways**
N. Nikolov, D. Benov, M. Mazhdrakov
6. 15¹⁵ – 15³⁰ **Novel technical and economical superior approach for synthesis of zeolites from coal fly ash**
D. Zgureva, S. Boycheva

15³⁰ – 16⁰⁰ COFFEE BREAK

16⁰⁰ – 17³⁰ VI-th session: Section „Ecomonitoring, biodiversity and biosphere, agricultural ecologisation”

Chairmen: Elena Savino, Hristo Najdenski

1. 16⁰⁰ – 16¹⁵ **Integrated eco-process extraction-adsorption for selective recovery of antioxidant polyphenols from food industry by-products**
L. Galvan D’Alessandro, P. Vauchel, P. Dhulster, I. Nikov, K. Dimitrov

2. 16¹⁵ – 16³⁰ **Wood decay macrofungi: strain collection and studies about antioxidant properties**

E. Savino, C. Girometta, J. Miteva-Staleva, E. Krumova

3. 16³⁰ – 16⁴⁵ **Concept for sustainable development of eco-design in terms of global social and environmental change**

T. Dovramadjiev, P. Bratanov, K. Cankova, G. Jecheva

4. 16⁴⁵ – 17⁰⁰ **Hydrological connectivity and zooplankton community structure in lower Danube floodplains**

S. Kazakov, L. Pehlivanov

5. 17⁰⁰ – 17¹⁵ **Systemic induced plant resistance as a control strategy to parasites alternative to pesticides**

Zh.V. Udalova, S.V. Zinovieva (Russia)

**17³⁰ – 18⁰⁰ DISCUSSION ON YOUTH SCIENTIFIC DEVELOPMENTS,
ANNOUNCEMENT OF THE RESULTS FOR THE BEST SCIENTIFIC WORK**

18⁰⁰ – 19⁰⁰ GENERAL DISCUSSION AND CLOSING OF THE CONFERENCE

06.06.2015 (Saturday)

08³⁰ Excursion to the village Brushlyan (Ivy) in Strandja mountain

POSTER SESSION ONE

1. V. Hubenov, D. Denchev, E. Chorukova, I. Simeonov
Anaerobic digestion of cattle manure with different C/N ratio
2. E. Stoyanova, S. Alt, B. Wilkinson
Genome mining in the marine *Streptomyces* sp. T676 – a search for a thiopeptide natural product
3. T.-E. Kirouani, S. Alexandrova, K. Dimitrov, A. Saboni, O. Chtioui, P. Jacques, P. Dhulster, I. Nikov
Modeling of oxygen transfer in a rotating disks contactor
4. E. Ivanova, V. Mamatarkova, I. Karadjova
Ecological application of *Acidithiobacillus ferrooxidans* JCM 3863 for biohydrometallurgical recovery of rare and precious metals from spent catalytic converters
5. E. Zlatareva, S. Marinova, M. Banov, V. Georgieva
Stabilization methods sewage sludge from wastewater plant treatment station and use in practice
6. S. Lincheva, Y. Todorova, E. Daskalova, Y. Topalova
Algorithms for bio-management of transformation processes in the reservoir of HPPS Lakatnik
7. R. Koleva, V. Nenov
Investigation of opportunities of MFCs for DPPH free radical neutralization
8. Y. Dimitrova, V. Nenov
Sea water desalinating by microbial fuel cell
9. E. Krumova, N. Kostadinova, J. Miteva-Staleva, V. Dishlijska, E. Savino, M. Angelova
Lignolytic and antioxidant potential of fungal species from phylum *Basidiomycota*
10. A. Fedotova, M. Alexeeva, V. Dryakhlov, B. Bonev, V. Nenov
Wastewater of olive oil production treatment using membranes modified in the field of corona discharge
11. V. Todorova, H. Yemendzhiev, B. Bonev
Screening and selection of electrogenic microorganisms in activated sludge from the WWTP-Sliven
12. J. Miteva-Staleva, E. Krumova, N. Kostadinova, V. Gryshko, O. Kopinovska, M. Angelova
Effect of copper and zink ions on oxidative cell response of *Aspergillus fumigatus* isolated from polluted soil
13. Y. Gluhcheva, M. Madzharova, Ju. Ivanova
Effect of chronic exposure to cobalt(ii) compounds on organs' weight indices
14. E. Vasileva, V. Beschkov, T. Parvanova-Mancheva
Biodegradation of 1,2-dibromoethane by *Klebsiella oxytoca* VA 8391 strain
15. T. Parvanova-Mancheva, E. Vasileva, V. Beschkov
Microbial fuel cells with denitrification system
16. L. Dimitrova, M. Popova, I. Tsvetkova, V. Bankova, H. Najdenski
Antibacterial activity of *Geum urbanum* L. Extracts
17. A. Alexandrova
Oxidative stress in ecology and evolution
18. V. Ahad, A. Bliznakov, J. Georgieva, G. Satchanska
Is the bulgarian Danube fish safety for consumption? - A study of cadmium concentrations in two herbivorous species

POSTER SESSION TWO

1. R. Berberova, V. Hadjieva, B. Kostova, G. Petrov
SWOT analysis of research experimental methodology of embankment dams using GPRS method
2. A. Simeonova, T. Zhekova, N. Nikov
Assessment of the deep wastewater discharge from point emitter into Burgas bay
3. T. Zhekova
Simulation model of the hydrodynamic parameters northwest Bourgas bay
4. L. Dimitrova, T. Draganova, I. Tsvetkova, V. Kussovski, G. Gluhchev, N. Ivanov, H. Najdenski
Effect of electrochemically activated water on the aerobic bacterial population in digestate
5. S. Tebbani, S. Diop, E. Chorukova, I. Simeonov
Unscented Kalman filter state estimation of anaerobic digestion of fruits and vegetables wastes
6. M. Dimitrova, S. Etem, K. Jordanova, N. Chipev, Ts. Ignatova-Ivanova
Isolation, identification and performance analysis of microorganisms from Antarctic soils and tatters
7. S. Penchev, V. Pencheva, L. Mihov
Monitoring of atmospheric methane employing dial scheme on powerful pulsed laser diodes
8. S. Marinova, N. Katidzhotes, V. Kolchakov, E. Zlatareva, V. Petrova
Characteristics and evaluation of the sludge from wastewater plant treatment station Kazanlak for use in practice
9. A. Tomov, G. Satchanska
Investigation of antibacterial activity of tomato and cayenne pepper seeds
10. L. Popova, K. Petrov, P. Petrova
Construction of a new shuttle vector pzt1 applicable to hosts *Escherichia coli* and the ethanol producing *Zymomonas mobilis*
11. D. Sinekova, V. Ahad, J. Georgieva, G. Satchanska
Comparitive analysis of cadmium bioaccumulation in Danube and Black sea fish
12. S. Hristoskova, S. Antonova-Nikolova, L. Yocheva, D. Yankov
A review on biobutanol production and its optimization
13. A. Trifonova, C. Tankov, K. Mladenov, H. Najdenski
Microbiological diagnosis of tularemia in new regions of Bulgaria
14. Y. Naydenov, T. Ivanova, I. Ilieva
Application of space biotechnologies in ecological friendly in-home greenhouses
15. A. Savova, J. Georgieva, G. Satchanska
Mercury bioaccumulation in black sea fish – bluefish (*Pomatomus saltarix*)
16. N. Stankova, I. Ivanova, N. Pavlova, R. Nedkov, M. Zaharinova
Environmental effects and consequences of floods in the region of Maritsa river during the period 2005 – 2014 by using satellite, GPS and terrestrial data