



PROGRAM
OF
NATIONAL CONFERENCE
"NATURAL SCIENCES 2022"
(NCNS2022)



SHUMEN
2022



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The program is preliminary and may undergo corrections and additions during the course of the conference.



30 September 2022

11:00 – 12:30 Registration – Rectorry, floor 3

13:00 – 13:10 Opening Ceremony – Auditorium 202

Plenary Lecture

13:10 – 13:55 Prof. Dr. Madelaine Böhme, **Danuvius guggenmosi and the positional behaviour of the last common ancestor of great apes and humans**, *German paleontologist and Professor of paleoclimatology at the University of Tübingen*

14:00 – 14:15 Marko Ivanov, Kiril Valkanov, Nikolay Natchev, **Housing of the exotic venomous lizard *Heloderma (Horridum) exasperatum***

14:15 – 14:30 Kiril Valkanov, **Functional and evolutionary aspect of the animal toxins**

14:30 – 14:50 **Opening of art exhibition of students** – Rectorry, floor 3
Coffee Break

FIRST SESSION

Moderator: **Prof. Tsveteslava Ivanova, Ph.D**

Auditorium: **202 (Rectorate)**

14:50 – 15:00 Ismail Hakki Sarpun, Adem Pehlivanli, Nuri Yorulmaz, **Shielding Properties Determination of Glass Materials for Pu-Be Neutron. Source by MCNP and PHITS Codes**, *Akdeniz University, Antalya, Turkey, Kırıkkale University, Kırıkkale, Turkey, Harran University, Şanlıurfa, Turkey*

15:00 – 15:10 Ismail Hakkı Sarpun, Mehmet Murat Yaşar, Mustafa Durgun, **Theoretical Calculation of Photon Shielding Parameters of Lithium Boron Tellurium Glasses by PHITS and MCNP code**, *Akdeniz University, Antalya, Turkey, Harran University, Şanlıurfa, Turkey*

15:10 – 15:20 Stephany Toschkova, Sevginar Ibryamova, Darina Ch. Bachvarova, Aysel Lyatif, Radoslav Ivanov, Nikolay Natchev¹, Tsveteslava Ignatova-Ivanova, **Study of the microbiology of key species of fish from the Bulgarian waters of the Black Sea**, *Shumen University "Konstantin Preslavski"*

15:20 – 15:30 Mariya Spasova, Nasko Nachev, Nevena Manolova, Iliya Rashkov, Mladen Naydenov, **Electrospun polymer materials with fungicidal activity**, *Institute of Polymers, BAS, Bulgaria*

15:30 – 15:40 Vanya Vasileva, Dora Kabakchieva, Svetla Stankova, **Natural tourist resources of Stara planina tourist region**, *Shumen University "Konstantin Preslavski"*



15:40 – 15:50 Viktor Vasilev, Nikolay Velichkov, Samuil Dobrev, Nina Grigorova, **Winter distribution of birds in the General Toshevo region, Southern Dobruja 2021-2022**, *Shumen University "Konstantin Preslavski"*

15:50 – 16:00 Albena Jordanova, Emilia Stoimenova, Asya Tsanova, Vishnya Stoyanova, Ivo Grabchev, Anelia Kostadinova, Rusina Khazarosova, Galya Staneva, **Molecular mechanisms of interaction of newly synthesized dendrimers with bacterial lipids**, *Sofia University "St. Kliment Ohridski"*

16:00 – 16:10 Nikolay Natchev, Ivan Telenchev, Nikolay Nedyalkov, Nikolay Kolev, Radoslav Tsvetkov, Teodora Koynova, **Impact of the traffic on a local population of the European pond turtle (*Emys orbicularis*) in the urban area of Burgas city (SE, Bulgaria) – data from a long term monitoring of the wild-life vehicle collisions**, *Shumen University "Konstantin Preslavski"*

16:10 – 16:20 Tsvetan Tsenov, Dencho Mihov, Rumyana Yankova, Christomir Christov, **Thermodynamic models for predicting solution properties and solid-liquid equilibrium in selenate systems at 25°C. Part I: Models for binary selenite systems**, *Shumen University "Konstantin Preslavski", Burgas University ,prof. A. Zlatarov'*

16:20 – 16:30 Tsvetan Tsenov, Dencho Mihov, Rumyana Yankova, Christomir Christov, **Thermodynamic models for predicting solution properties and solid-liquid equilibrium in selenate systems at 25°C. Part II: Models for mixed selenate systems**, *Shumen University "Konstantin Preslavski", Burgas University ,prof. A. Zlatarov'*

16:30 – 16:40 Coffee Break – Rectory, floor 3

SECOND SESSION

Moderator: **Prof. Nikolay Natchev, Ph.D**

Auditorium: **202 (Rectorate)**

16:40 – 16:50 Sevginar Ibryamova, Stephany Toschkova, Darina Ch. Bachvarova, Aysel Lyatif, Dimitar Dimitrov, Radoslav Ivanov, Nikolay Natchev, Tsveteslava Ignatova-Ivanova, **Study of the microbiology of psammophilic mussel species from the Bulgarian waters of the Black Sea**, *Shumen University "Konstantin Preslavski"*

16:50 – 17:00 Yordanka Eneva, Bora Dogan, Iliana Andonova, **Origin and development of the idea of exoskeleton**, *Medical University-Varna "Prof. Dr. Paraskev Stoyanov"*

17:00 – 17:10 Andrey Edrev, **From polygraphy to digitization of geography education in high school**, *Shumen University "Konstantin Preslavski"*

17:10 – 17:20 Milena Stoyanova, **Possibilities for bicycle tourism development in Shumen region**, *Shumen University "Konstantin Preslavski"*



17:20 – 17:30 Nikolay Mutkurov, Stanimir Radushev, Nonka Zheleva, Virginia Payakova, **Quality control in IGRT - first results**, *Shumen University "Konstantin Preslavski"*, *Complex Oncology Center – Burgas*, research supervisor assoc. prof. Nina Arhangelova

17:30 – 17:40 Rositsa Vladeva, **The key competences and globalisation of geographical education**, *Shumen University "Konstantin Preslavski"*

17:40 – 17:50 Alex Georgiev, Velimir Popov, Dragomir Marchev, Stanimir Ivanov, **Transformation coefficients of the 40-cm telescope at AOSHU**, *Shumen University "Konstantin Preslavski"*

17:50 – 18:00 Veselin Petkov, **Culinary festivals and cultural landschaftf – regional relations and occurrences**, *Shumen University "Konstantin Preslavski"*

19:30 – Conference Dinner

1 October 2022

09:30 – 10:00 Registration – Rectory, floor 3

THIRD SESSION

Moderator: **Prof. Milena Stoianiva, Ph.D**

Auditorium: **202 (Rectorate)**

10:00 – 10:10 Dzhendo Dzhendov, **Dental Simulators Used in Training of Students in Dental Medicine**, *Medical University-Varna "Prof. Dr. Paraskev Stoyanov"*

10:10 – 10:20 Borislav Borisov, **Distribution of Minor Planets**, *Shumen University "Konstantin Preslavski"*

10:20 – 10:30 Dimitar Dimitrov, Stoycho Trifonov, Venka Dagonova, Mariya Atanasova, Altanay Ahmedov, **Analysis for synchronization and optimization of data collection processes under the Habitats Directive, the Water Framework Directive and the Marine Strategy Framework Directive**, *Shumen University "Konstantin Preslavski"*

10:30 – 10:40 Milen Penerliev, **Monarchy of the United Kingdom during the reign of Queen Elizabeth II - a geographical analysis**, *Shumen University "Konstantin Preslavski"*

10:40 – 10:50 Nidelina Petkova, Stoyan Karakashev, Dilyana Ivanova-Stancheva, **Foam Films Stabilized by Sodium Dodecyl Sulfate**, *Shumen University "Konstantin Preslavski"*, *Sofia University "St. Kliment Ohridski"*



10:50 – 11:00 Desislava Tsoncheva, Dayana Slavova, **Tourism in the Elena Balkan – trends and perspectives**, *SU “Ivan Nikolov Mochilov”*

11:00 – 11:10 Hristo Hristov, Seniha Salim, Zheny Dimitrova, Nina Arhangelova, **Comparative analysis of allelopathic activity and radionuclide content in *Urtica dioica* L. and *Hedera helix* L.**, *Shumen University “Konstantin Preslavski”*

11:10 – 11:20 Coffee Break – Rectory, floor 3

FOURTH SESSION

Moderator: **Prof. Christomir Christov**

Auditorium: **202 (Rectorate)**

11:20 – 11:30 Bonka Karaivanova-Dolchinkova, **The educational process in schools with a built STEM environment**, *RUO - Veliko Tarnovo, Shumen University “Konstantin Preslavski”*

11:30 – 11:40 Bonka Karaivanova-Dolchinkova, **Innovative schools - a model for implementing education in the classroom and for building knowledge and competences in students**, *RUO - Veliko Tarnovo, Shumen University “Konstantin Preslavski”*

11:40 – 11:50 Stanislav Donchev, Tsvetan Tsenov, Christomir Christov, **A Standard Pitzer Approach Models for Predicting Solution Properties and Solid-Liquid Equilibrium in Binary Nitrate Systems from Low to Very High Concentration (>30 m)**, *Shumen University “Konstantin Preslavski”*

11:50 – 12:00 Stanislav Donchev, Tsvetan Tsenov, Christomir Christov, **A Standard Pitzer Approach Models for Predicting Solution Properties and Solid-Liquid Equilibrium in Binary and Mixed Fluoride Systems from Low to Very High Concentration**, *Shumen University “Konstantin Preslavski”*

12:00 – 12:10 Stefka Hristova, **Possibilities and perspectives for stimulating tourism development in Northern Black Sea region**, *Shumen University “Konstantin Preslavski”*

12:10 – 12:20 Radka Tomova, Svetla Asenova, Rodina Nestorova, Bisera Atanasova, Lilija Atanasova, Mariana Nikolova, Miglena Slavova, **Multivariate statistical analysis for assessment of the relationships between bone density, biogenic elements content, and the level of oxidative stress**, *Medical University of Pleven*

12:20 – 12:30 Sevdzhan Sabrieva, **Tourism in the Varna Black sea area – current condition and prospects for development**, *Shumen University “Konstantin Preslavski”*



12:30 – 12:40 Antoaneta Hineva, **Innovative strategic documents for recruitment and development of pedagogical experts in the municipal educational system, VFU "Chernorizets Hrabar"**

12:40 – 12:50 Ognyan Dobrev, Ivan Slavov, Alexander Stoev, Simeon Savov, Andrea-Maria Dimitrova, **Determination of the average density of the Earth by the experiment of Eratosthenes, Astronomical observatory "Nicolaus Copernicus" Varna,** research supervisor Valentin Ivanov

12:50 – 13:00 Change in solar activity during the period January 2016 - June 2022, **Alexander Ivanov, Yaroslav Baskov, Astronomical observatory "Nicolaus Copernicus" Varna,** research supervisor Valentin Ivanov

13:00 – 13:30 **Lunch Break**

POSTER SESSION

13:30 – 14:00 **Rectory, floor 3**

P1 Gyuldzhan Yakub-Mehmedova, Mehmed Mehmedov, Galya Todorova, Mariya Stefanova, **Electrospun curcumin-loaded mats with anticoagulant and antibacterial properties, Shumen University "Konstantin Preslavski"**

P2 Nikoleta Stoyanova, Mariya Spasova, Mladen Naydenov, **Eco-friendly fibrous polymer materials with antifungal activity, Institute of Polymers, BAS, Bulgaria**

P3 Yana Koleva, Elisaveta Koynova, **Potential toxicity of the sulfur compounds in petroleum, Shumen University "Konstantin Preslavski", Burgas University ,prof. A. Zlatarov'**

P4 Hasan Hasanov, Ismail Ismailov, Ivaylo Parushev, Ivaylo Iliev, Ivaylo Ivanov, **Synthesis of heterocycles and addition products via electrophilic addition reactions to phosphorylate allenes, Shumen University "Konstantin Preslavski", Medical University-Varna "Prof. Dr. Paraskev Stoyanov"**

P5 Irina Yotova, Nidelina Petkova, Stoyan Karakashev, Dilyana Ivanova-Stancheva, **Ion-specific effects on foam, Shumen University "Konstantin Preslavski", Sofia University "St. Kliment Ohridski"**

P6 Gabriela Zidarova, Sunay Ibryamov, Evgeni Semkov, Stoyanka Peneva, **Multicolor photometric behavior of young stars in the field around the star GM Cephei, Shumen University "Konstantin Preslavski", Institute of Astronomy and NAO, BAS**



P7 Nina Arhangelova, Seniha Salim, Daniela Nedeva, Zheni Dimitrova, **Radioactivity in *Achillea clypeolata* L. and *Achillea millefolium* L. collected from the Shumen Plateau, Shumen University "Konstantin Preslavski", Technical University of Gabrovo**

P8 Karamfil Kalchev, Iva Hristova, Gergana Manova, Lyubomir Manov, **Interaction of the birch-bark terpenoids with human and bovine albumins, Shumen University "Konstantin Preslavski", NVU 'Vasil Levski'**

P9 Dimitar Vasilev, **Effect of late spring frost on reproductive characteristics of early nectarine cultivars (*Prunus persica* var. *nucipersica*), Shumen University "Konstantin Preslavski"**

P10 Maria Atanasova, Vanya Koleva, Asya Dragoeva, Zheni Dimitrova, **The complex trait height at a Bulgarian family, Shumen University "Konstantin Preslavski"**

P11 Darina Bachvarova, Aleksandar Doichinov, Rasim Halilov, **Analysis of the Myriapoda (Diplopoda, Chilopoda) of the Shumen Plateau and the Madara Plateau (Northeastern Bulgaria), Shumen University "Konstantin Preslavski"**

P12 Radoslav Spasov, **Let`s protect the Earth - our home!, PGMET "Gen. Ivan Bachvarov" – Sevlievo, research supervisor Ivelina Koleva**

P13 Martin Kazandzhiev, **Sevlievo - the town on the 43rd parallel, PGMET "Gen. Ivan Bachvarov" – Sevlievo, research supervisor Ivelina Koleva**

P14 Denislava Nankova, Ivelina Koleva, **With gratitude to the bees! Bees - the little guardians of Ecosystems, PGMET "Gen. Ivan Bachvarov" – Sevlievo**

14:00 – Closing Ceremony
Auditorium: 202 (Rectorate)

14:10 – Excursion