

BioInfoMed'2022 Symposium Programme

5 October 2022

Congress Center, Floor 2, Hall "Foros"

From	To	
12:30	13:30	Registration
13:30	13:45	Conference Inauguration
13:45	14:30	<u>Session Chair: Prof. Tania Pencheva</u> Invited Speaker: Prof. Maia Angelova <i>AI and Data-Driven Models for Precision Healthcare</i>
14:30	15:15	Invited Speaker: Prof. Krasimira Tsaneva-Atanasova <i>Understanding Molecular Accumulation in Single Cells via Microfluidics and Mathematical Modelling</i>
15:15	16:00	Invited Speaker: Dr. Maria A. Miteva <i>Predicting Drug-Drug Interactions of Phase II Drug Metabolizing Enzymes</i>
16:00	16:30	Coffee break
16:30	17:15	<u>Session Chair: Prof. Sotir Sotirov</u> Invited Speaker: Prof. Nikola Kasabov <i>Current Challenges and Current Solutions in Biomedical Data Science: Personalisation; Explainability; Multi-modality; Model Adaptation</i>
17:15	18:00	Invited Speaker: Prof. Guy De Tré <i>Efficiently Handling Textual Data in Medical Applications: A Novel Approach</i>
18:00	18:45	Invited Speaker: Prof. Oscar Castillo <i>Type-2 and Type-3 Fuzzy Systems: Theory and Applications</i>
18:45	19:00	Walk to Hotel "Bulgaria"
19:00		Gala Dinner in Hotel "Bulgaria"



BioInfoMed'2022 website
<https://bioinfomed.org>

BioInfoMed'2022 zoom link
<https://us06web.zoom.us/j/81730296083?pwd=bmo4U3pLYUhOUVFzaGJacE95V0JSUT09>
Meeting ID: 817 3029 6083 Passcode: 380535



6 October 2022

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Data Mining in Biomedicine and Healthcare Session Chair: Prof. Sotir Sotirov		
09:00	09:20	Gani Stamov, Stanislav Simeonov, <u>Ivan Torlakov</u> , Marina Yaneva <i>Parallel Technique on Bidirectional Associative Memory Cohen–Grossberg Neural Network</i>
09:20	09:40	Dimitrinka Ivanova, Yordanka Tasheva, Evdokia Sotirova, <u>Aleksandar Dimitrov</u> , Sotir Sotirov <i>Prediction of the Granulometric Composition of the Silt Loading on Transport Arteries in the City of Burgas Based on Artificial Neural Networks</i>
09:40	10:00	<u>Todor Kostadinov</u> , Sotir Sotirov, Stoyan Hristov <i>An Intuitionistic Fuzzy Estimation Approach to Magnetic Resonance Imaging</i>
10:00	10:20	<u>Hyusein Yemendzhiev</u> , Plamena Zlateva, Valentin Nenov <i>Water Safety and Toxicity Assessment Using Real Time Sensor Measurements and Fuzzy Logic Data Processing</i>
10:20	10:40	<u>Veselina Bureva</u> , Todor Petkov, Stanislav Popov <i>Generalized Net Model of a Multimodal Biometric System for Authenticating an Individual by Keystroke Dynamics and Eye Tracking Techniques</i>
10:40	11:10	Coffee break
Decision Making in Biomedicine and Healthcare Session Chair: Prof. Krasimira Tsaneva-Atanasova		
11:10	11:30	Valentin Vasilev, Hristo Hlebarov, <u>Simeon Ribagin</u> , Krassimir Atanassov <i>InterCriteria Analysis of Data Obtained from Patients with Hypercholesterolemia Treated with Linoprixol</i>
11:30	11:50	<u>Vassia Atanassova</u> , Nikolay Andreev, Angel Dimitriev <i>ABO System Blood Groups Distribution in Bulgaria, Based on a Dataset of the Patients of the University Hospital “Saint Anna”, Sofia, Bulgaria, from 2015 to 2021</i>
11:50	12:10	<u>Vassia Atanassova</u> , Nikolay Andreev, Angel Dimitriev <i>InterCriteria Analysis of the Geographic Distribution of the ABO System Blood Groups in the Patients of the University Hospital “Saint Anna”, Sofia, Bulgaria, from 2015 to 2021</i>
Poster Session		
12:10	13:00	See Page 4
13:00	14:00	Lunch
Bioinformatics and Computational Biology Session Chair: Prof. Tania Pencheva		
14:00	14:20	<u>Maya Zhelyazkova</u> , Roumyana Yordanova, Iliyan Mihaylov, Stefan Tsonev, Dimitar Vassilev <i>Bioinformatics and Biostatistical Models for Analysis and Prognosis of Antimicrobial Resistance</i>
14:20	14:40	<u>Petko Alov</u> , Ivanka Tsakovska, Ilza Pajeva <i>Hybrid Classification/Regression QSPR Modeling of Polyphenols' Antioxidant Activities in Stoichiometric and Kinetic Assays</i>

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Student Session Session Chair: Chief Assist. Prof. Yordan Georgiev		
14:40	15:15	Keynote Lecture: <u>Deyana Ivanova</u> , Xiao-Feng Li, Caitlin McIntyre, Yali Liu, Lingsi Kong, Kevin T O’Byrne <i>Urocortin 3 in the Posterodorsal Medial Amygdala Mediates Stress-induced Suppression of LH Pulsatility in Female Mice</i>
15:15	15:30	<u>Ariana Langari</u> , Velichka Strijkova, Avgustina Danailova, Sashka Krumova, Stefka G. Taneva, Ina Giosheva, Tania Stoyanova, Lora Topalova, Regina Komsa-Penkova, Svetla Todinova <i>Relation between Oxidative Stress and Morphometric Alterations of Red Blood Cells Derived from Women with Early Pregnancy Loss</i>
15:30	15:45	<u>Maria Dragomirova</u> , Marina Yaneva <i>Methods of Treatment of Congenital Deformities of the Musculoskeletal System: Talipes Equinovarus</i>
15:45	16:00	<u>Yordan Georgiev</u> , Gabriela Fazlova, Petko Denev, Christian Wold, Ondrej Vasicek, Irina Yanakieva, Balik Dzhambazov, Tsvetelina Batsalova, Desislava Teneva, Manol Ognyanov, Daniela Pencheva, Kari Inngjerdigen, Berit Paulsen, Albert Krastanov <i>Identification of Antioxidant and Immunomodulating Metabolites in the Leaves of the Endemic Plant Haberlea rhodopensis Friv.</i>
16:00	16:15	<u>Todor Petkov</u> , Aleks Titanyan, Veselina Bureva, Stanislav Popov <i>Emotion Recognition Using a Convolutional Neural Network</i>
16:15	16:40	Coffee break
Mathematical Modelling in Biomedicine and Healthcare Session Chair: Prof. Evdokia Sotirova		
16:40	17:00	<u>Simeon Ribagin</u> , Antoaneta Grozeva, Stoyan Hristov <i>Generalized Net Model of Rehabilitation Algorithm for Patients with Proximal Humeral Fracture after Surgical Treatment</i>
17:00	17:20	<u>Petar Petrov</u> , Veselina Bureva, Janusz Kacprzyk <i>Generalized Net Model of Density-based Spatial Clustering of Applications with Noise (DBSCAN) Algorithm and Its Application to a Diabetes Dataset</i>
17:20	17:40	<u>Evdokia Sotirova</u> , Hristo Bozov, Yaroslava Petrova, Greta Bozova, Krassimir Atanassov <i>Generalized Net Model of the Malignant Melanoma Treatment</i>
17:40	18:00	<u>Stefka Fidanova</u> , Krassimir Atanassov, Leoneed Kirilov, Vanya Slavova, Veselin Ivanov <i>Generalized Net Model of the Consequences of Earthquake</i>
18:00	18:20	<u>Plamena Yovcheva</u> , Sotir Sotirov, Vanya Georgieva, Radovesta Stewart, Maciej Krawczak <i>A Generalized Net Model of Time-Delay Recurrent Neural Networks with the Stochastic Gradient Descent and Dropout Algorithm</i>

7 October 2022

In front of the Congress Center

09:45	13:00	<p>Boat trip to the fishermen village Chengene Skele. Visit to the Tourist Complex and brief <i>emergency body signaling</i> and <i>fishing nets knitting</i> trainings.</p> <p style="text-align: center;">Award Ceremony and Conference Closing</p> <p style="text-align: center;">Return to the Port Burgas on the board of Ship “Burgus”</p>
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6 October 2022

Congress Center, Floor 2, Foyer

Poster Session

Gergana Angelova-Popova

Rehabilitation Approach after Arthroscopic Rotator Cuff Repair

Iliana Ivanova, Radostina Toshkovska, Dayna Benkova, Vesela Yordanova, Alexandrina Nesheva, Rusina Hazarosova, Galya Staneva, Aneliya Kostadinova

Stress Response of Gram-positive and Gram-negative Bacteria Induced by Metal and Non-Metal Nanoparticles. In Search of Smart Antimicrobial Agents.

Vesela Yordanova, Galya Staneva, Plamen Krastev, Tania Markovska, Ana-Mariya Marinovska, Aneliya Kostadinova, Rusina Hazarosova, Albena Momchilova

Lipid Order of Membranes Isolated from Erythrocytes of Patients with Coronary Artery Disease: Correlation with Biochemical Parameters

Vessela Krasteva, Irena Jekova

Rhythm Analysis during Cardio-pulmonary Resuscitation with Convolutional and Recurrent Neural Networks Using ECG and Optional Impedance Input

Kamen Ivanov, Irena Jekova, Vessela Krasteva

Convolutional Autoencoder for Filtering of Power-line Interference with Variable Amplitude and Frequency: Study of 12-lead PTB-XL ECG Database

Yordan Georgiev, Manol Ognyanov, Petko Denev

Phytochemical Composition and Therapeutic Potential of Bistorta Major Gray: A Review

Daniela Todorova-Balvay, R. Ravishankaran, C. R. Pillai, Xavier C. Ding, Pradip K. Desai

Reactivity of Recombinant and Native pLDH Antigens with Seven Commercially Available Rapid Diagnostic Test Kits for Malaria Diagnosis

Petko Alov, Ilza Pajeva, Ivanka Tsakovska, Tania Pencheva

Comparison of Docking Scoring Functions by InterCriteria Analysis on a Set of Protein Targets Related to Alzheimer and Parkinson Diseases

Evdokia Sotirova, Hristo Bozov, Sotir Sotirov, Greta Bozova, Simeon Ribagin, Vladimir Gonchev

Multicriteria Analysis of Oncology Data during the Covid-19 Pandemic

Valentina Ignatova, Krassimir Atanassov

Generalized Net Model of the Vegetative (Autonomic) Innervation of Gastrointestinal Tract

Elenko Popov, Radostina Georgieva, Dmitrii Dmitrenko, Borislav Bojkov, Chavdar Slavov, Martin Lubich, Peter Vassilev, Vassia Atanassova, Lyudmila Todorova, Krassimir Atanassov

A Generalized Net Model of the Prostate Cancer Early Stages of Development

Zlatka Cholakova, Nikolay Mirinchev

3D Technologies in Urological Practice. Application of Software for 3D Processing in Urological Practice

Milen Todorov, Gergana Avramova-Todorova, Veselina Bureva, Maciej Krawczak, Cengiz Kahraman

Emotional Intelligence of Students during Pandemic Outbreak. A Study in Higher Education

BioInfoMed'2022 Symposium Organizers & Sponsors

“Prof. D-r Asen Zlatarov” University – Burgas

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“Informatics” and “Biomedical Engineering”



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