



Nineteenth International Scientific Conference

„Space, Ecology, Safety”

Devoted to

**35-TH ANNIVERSARY OF THE SHIPKA SCIENTIFIC
PROGRAMME AND THE MISSION OF THE BULGARIAN
AUSTRONAUT ALEXANDER ALEXANDROV**

SES 2023

PROGRAMME

Sofia, 24 – 26 October 2023

S o f i a



***The titles of the reports are written in the languages
in which they will be delivered/posted***

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Bulgarian Academy of Sciences**

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**The Conference is supported by Bulgarian National Science Fund
Contract № КП-06-МНФ/23 - 08.08.2023**



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REGISTRATION

24.10.2023 13:00 – 15:45

Lobby of the Central building of the BAS

25.10.2023 08:30 – 11:30

Lobby on the 3rd floor of block 1

24.10.2023 (Tuesday)

Great hall of the central BAS building – 1, 15 November Str.

15:00 **Official Opening**

Welcome Speech

Corr. Member Petar Getsov – *Chairman of Organizational Committee*

Greeting words from the Bulgarian Academy of Sciences

Greeting Words and Addresses

Prof. Georgi Jeleв – *Director of SRTI-BAS*

15:45 **Plenary Session**

Prof. Dr. Hab. Malgorzata Labus – Silesian University of Technology, Poland

Biomass as an ecologic source of energy – combustion and pyrolysis

*Prof. Dr. Hab. Krzysztof Labus – Silesian University of Technology - Faculty of Mininig,
Safety Engineering*

Enhanced geothermal systems from Polish perspective

*Assoc. Prof. Beshir Marzouk – National Res. Inst. of Astronomy and Geophysics
(NRIAG) - Egypt*

High-speed photometry of coronal structures during total solar eclipses

*Prof. Tsvetan Dachev, Borislav Tomov, Yury Matviichuk, Plamen Dimitrov, Mityo
Mitev Malina Jordanova – Space Research and Technology Institute - Bulgarian
Academy of Sciences, tdachev59@gmail.com, Pantaleone Carlucci, Francesco
Cairo – National Research Council of Italy, Institute of Atmospheric Sciences and
Climate (CNR-ISAC), pantaleone.carlucci@cnr.it, Lucia Paciucci – National
Research Council of Italy, Engineering, ICT and Technologies for Energy and
Transportation Department (CNR-DIITET), lucia.paciucci@cnr.it*

**Preliminary space radiation results for the first-ever commercial suborbital mission
GALACTIC 1 with Virgin Galactic spaceship two Unity on 29 June 2023**

*Corr. Member Petar Getsov, Assoc. Prof. Nikolay Zagorski, Prof. Garo Mardirossian –
Space Research and Technology Institute - Bulgarian Academy of Sciences,
nzagorski_bbc@abv.bg, getsovp@space.bas.bg*

**Участие на Института за космически изследвания и технологии при Българската
академия на науките в Национална научна програма „Сигурност и отбрана“**

Coffee Break



17:00 **Special Session**

The catastrophic earthquake in Turkey in 2023 and the seismicity of Bulgaria

Prof. Dr. Cengiz Yildirim – *University of Potsdam Institute for Geosciences&Istanbul Technical University, itu.edu.tr*

Geological Background and Socio-economical Impacts of the Devastating February 6, 2023, Earthquakes in Türkiye

Проф. Димчо Солаков, доц. Стела Симеонова, доц. Пламена Райкова, доц. Мила Атанасова – *Национален институт по геофизика, геодезия и география, Българска Академия на Науките*

Афтершокова активност след катастрофалното земетресение (M W 7.8) от 6 февруари 2023 г.

Prof. Boyko Ranguelov – *Mining and geology University-Sofia, branguelov@gmail.com*, **Memet Salih Bayraktutan** – *Technical University - Igdır*, **Fathimath Shadiya** – *Maldives National University - Male*, **Edelvays Spassov** – *Kinematics - LA, USA*, **Yulia Krumova** – *National Institute of Geophysics, Geodesy and Geography (NIGGG) - Bulgarian Academy of Sciences*, **Garó Mardirossian** – *Space Research and Technology Institute - Bulgarian Academy of Sciences*
Comparative seismic risk analysis: earthquakes M7.8 (1904-Bulgaria) and (2023-Turkey)

Prof. Hristo Nikolov – *Space Research and Technology Institute – Bulgarian Academy of Sciences, hristo@stil.bas.bg*, **Assoc. Prof. Mila Atanasova** – *National Institute of Geophysics, Geodesy and Geography - Bulgarian Academy of Sciences, mila_at_zl@abv.bg*
Detecting ground displacements after the earthquakes in Turkey-Syria by thematic processing of SAR data

18:30 **Presentation of the new book "Introduction to Astronautics"**

18:45 **Announcements**



25.10.2023 (Wednesday)

Hall 1

Session 1

Space Physics

Chairmen: Prof. Tsvetan Dachev,
Corr. Member Peter Velinov
Secretariy: Assoc. Prof. Daniela Boneva

- 09:00 **Peter Velinov, Simeon Asenovski, Lachezar Mateev** – Space Research and Technology Institute – Bulgarian Academy of Sciences, PeterIYVelinov@gmail.com, asenovski@gmail.com
Validation of cosmic ray ionization models Corimia and Corsima applied for solar energetic particles and anomalous cosmic rays
- 09:20 **Jordanka Semkova, Rositsa Koleva, Krasimir Krastev, Yuri Matviichuk, Borislav Tomov, Nikolay Bankov, Stephan Maltchev, Tsvetan Dachev** – Space Research and Technology Institute – Bulgarian Academy of Sciences, jordankasemkova@gmail.com
Igor Mitrofanov, Dmitry Golovin, Maxim Mokrousov, Maxim Litvak – Space Research Institute, Russian Academy of Sciences, Moscow, Russia
Victor Benghin, Vyacheslav Shurshakov, Sergey Drobyshev – State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Moscow, Russia
What we learned for the space radiation weather from investigations aboard ExoMars TGO?
- 09:40 **Tsvetan Dachev, Borislav Tomov, Yuri Matviichuk, Plamen Dimitrov, Jordanka Semkova, Nikolay Bankov, Mityo Mitev, Malina Jordanova** – Space Research and Technology Institute - Bulgarian Academy of Sciences, tdachev59@gmail.com
Viacheslav Shurshakov, Victor Benghin – State Research Center Institute of Biomedical Problems, Russian Academy of Science, shurshakov@inbox.ru
Overview of the outer radiation belt dose rates, observed at “MIR” and International space stations by Liulin type instruments
- 10:00 **Rositsa Miteva** – Institute of Astronomy and NAO - Bulgarian Academy of Sciences, rmiteva@nao-rozhen.org
Susan Samwel – National Research Institute of Astronomy and Geophysics, Egypt
Comparative study between low and high energy SOHO/ERNE protons in solar cycle 23
- 10:20 **Krasimira Yankova** – Space Research and Technology Institute - BAS, f7@space.bas.bg
The time in thermodynamics and advection terms – fundamental consequences



10:40 – 11:20 **Coffee Break**

- 11:20 **Daniela Boneva, Krasimira Yankova** – Space Research and Technology Institute - BAS, danvasan@space.bas.bg
Wojciech Dimitrov – Astronomical Observatory Institute, Faculty of Physics, Adam Mickiewicz University, Poznań, Poland, dimitrov@amu.edu.pl
Short- and long-lasting outbursts and mass transfer in AM CVn stars
- 11:40 **Velko Velkov**
Философски проблеми на космологията и пътища за решаването им
- 12:00 **Алексе́й Стоев, Пенка Мъглова, Огнян Огнянов** – Space Research and Technology Institute - BAS, stoev52@abv.bg
Лунни лавови пещери – технологии за наблюдения, документиране и експлоатация
- 12:20 **Пенка Мъглова, Алексе́й Стоев, Цветан Паров, Мирослав Костов** – Space Research and Technology Institute – BAS, stoev52@abv.bg
Енергетични параметри на слънчевата активност
- 12:40 **Atanas Atanassov** – Space Research and Technology Institute - BAS, At_M_Atanassov@yahoo.com
Applying Situation Analysis Solver to Satellite-Space Debris Close Approaches Problems
- 13:00 **Rumen Shkevov** – Space Research and Technology Institute – BAS, shkevov@space.bas.bg
Nadezhda Zolnikova, Ludmila Mikhailovskaya – Space Research Institute - Russian Academy of Sciences, nzolnik@iki.rssi.ru, ludamikh@gmail.com
Heliosphere calm areas as a source of relativistic particles
- 13:20 **Simeon Asenovski** – Space Research and Technology Institute – Bulgarian Academy of Sciences, asenovski@gmail.com
Six ascending solar cycle phases in the heliosphere
- 13:30 **Veneta Guineva, Rolf Werner, Atanas Atanassov, Lyubomira Raykova, Dimitar Valev** – Space Research and Technology Institute - BAS, v_guineva@yahoo.com
Roumiana Bojilova – National Institute of Geophysics, Geodesy and Geography (NIGGG) - BAS
Irina Despirak, Andris Lubchich, Pavel Setsko – Polar Geophysical Institute, Apatity, Russia
Natalia Kleimenova – Schmidt Institute of the Physics of the Earth - RAS, Moscow
Results from the Bulgarian-Russian project on investigation of the geomagnetic disturbances propagation to mid-latitudes and their interplanetary drivers identification for the development of mid-latitude space weather forecast

14:30 – 15:00 **Poster session**

- 1-1 **Rositsa Miteva, Kamen Kozarev, Momchil Dechev, Nikola Petrov, Mohamed Nedal, Tsvetan Tsvetkov, Yovelina Zinkova** – Institute of Astronomy and NAO - Bulgarian Academy of Sciences, rmiteva@nao-



rozhen.org

Werner Poetzi, Astrid Veronig, Robert Jarolim, Stefan Purkhart, Christof Schirninger – Institute of Physics and Kanzelhöhe Observatory for Solar and Environmental Research, University of Graz, Austria

New Bulgarian-Austrian project ‘Joint observations and investigations of solar chromospheric and coronal activity’

- 1-2 **Petko Nenovski** – Independent researcher, Bulgaria,
petko.nenovski@abv.bg
Rumen Shkevov – Space Research and Technology Institute –
BAS,shkevov@space.bas.bg
Pi2 pulsations at high- mid- and high-latitudes evidenced by SuperDARN Hokkaido radar observations - possible manifestation of global poloidal-compressional MHD modes of the ionosphere
- 1-3 **Rumen Shkevov** – Space Research and Technology Institute – BAS,
shkevov@space.bas.bg
Nadezhda Zolnikova, Ludmila Mikhailovskaya – Space Research Institute
- Russian Academy of Sciences, *nzolnik@iki.rssi.ru, ludamikh@gmail.com*
Heavy nuclei resonant acceleration by a single electromagnetic wave in space plasmas
- 1-4 **Tsvetan Parov** – Space Research and Technology Institute – BAS,
Environmental climatic cycles and the thermal inertia of caves
- 1-5 **Daniela Boneva, Denislav Rusev** – Space Research and Technology
Institute – BAS, *danvasan@space.bas.bg*
Quiescence and high states of five Z Cam stars and the related systems’ parameters
- 1-6 **Peter Tonev** – Space Research and Technology Institute – BAS,
peterton@abv.bg
Studying exaggerated atmospheric electric currents at high latitudes during major sep events
- 1-7 **Rolf Werner, Veneta Guineva, Atanas Atanassov, Dimitar Valev, Lyubomira Raykova** – Space Research and Technology Institute (SRTI), Stara Zagora Department – BAS, *rolwer52@yahoo.co.uk*
Boyan Petkov – Institute of Polar Sciences (ISP) - National Research Council, Italy
Andrey Kirillov – Polar Geophysical Institute, Russia
Rumiana Bojilova – National Institute of Geophysics, Geodesy and Geography (NIGGG) - BAS
Verification of the long-term stability of ozone measurements with the GUV 2511 instrument in Stara Zagora



25.10.2023 (Wednesday)

Hall 2

Session 2

Aerospace Technologies and Biotechnologies

Chairman: Corr. Member Petar Getsov
Secretary: Assoc. Prof. Nikolay Zagorski

- 09:30 **Pavel Penev** – Space Research and Technology Institute - Bulgarian Academy of Sciences, penevpbt@gmail.com
Различни аспекти в използването на малки спътници за наблюдение на съвременния етап
- 09:50 **Генадий Маклаков, Надежда Георгиева** – Научно-изследователски център за биофотоника - Смолян, България, gmaklakov@mail.bg
Синдромът емоционално прегаряне - как да стабилизираме психосоматичното състояние на авиационния и космическия персонал с използване на системи за виртуална реалност
- 10:10 **Konstantin Metodiev** – Space Research and Technology Institute - Bulgarian Academy of Sciences, komet@mail.space.bas.bg
UAV Mission Simulation in FlightGear
- 10:30 **Зоя Хубенова, Константин Методиев, Георги Сотиров** – Институт за космически изследвания и технологии – БАН, zhubenova@space.bas.bg
Любомир Алексиев – Воено медицинска академия - София
Изследване на човешкия фактор в безпилотните авиационни системи за мониторинг в критични ситуации
- 10:50 – 11:10 **Coffee Break**
- 11:10 **Евгений Хубенов, Георги Сотиров, Зоя Хубенова** – Институт за космически изследвания и технологии – БАН, hubenov@space.bas.bg
Мултисензорна система за откриване и класификация на безпилотни летателни апарати с елементи на изкуствен интелект
- 11:30 **Nikolay Marinov** – Space Research and Technology Institute - Bulgarian Academy of Sciences, tinka_gr@abv.bg
Съвременно състояние на GSM-мрежите в България и балистика на безпилотни летателни апарати
- 11:50 **Nikolay Marinov** – Space Research and Technology Institute - Bulgarian Academy of Sciences, tinka_gr@abv.bg
Управление и снемане на данни от безпилотни летателни апарати посредством 4,5G- и 5G- мрежите в България



- 12:10** **Malina Jordanova** – *Space Research and Technology Institute - BAS, mjordan@bas.bg;*
Todor Uzunov – *Vitos Südhessen gemeinnützige GmbH, Vitos Philippshospital Riedstadt, Riedstadt, Germany*
Frank Lievens – *'LIEVENS-LANCKMAN BVBA, Belgium & AKROMED, France*
Digital Health: Bringing Lessons from COVID-19 into the

13:00 – 14:00 **Poster session**

- 2-1** **Petar Petrov** – *Institute of Plant Physiology and Genetics – BAS*
Ivan Dimitrov – *Space Research and Technology Institute - Bulgarian Academy of Sciences, idimitrov@space.bas.bg*
Evaluation of membrane stability of leaf cells of cynodon (Cynodon dactylon) and four wheat genotypes after exposure to ethanol
- 2-2** **Христофор Скандалиев, Весислава Тотева** – *Химикотехнологичен и металургичен университет – София, fori2ivanov@yahoo.com*
Ракетни двигатели, предназначени за динамични тестове на строителни конструкции



25.10.2023 (Wednesday)

Hall 2

Session 3

Remote Sensing and Geoinformation Systems

Chairman: Prof. Lachezar Filchev

Secretary: PhD Desislava Ganeva

- 14:00 **Paraskevi Gkatzioura, Konstantinos Perakis** – Department of Planning and Regional Development, University of Thessaly, evitagkatz@gmail.com
Land Surface Temperature and NDVI as indicators of Urban Heat Island. Case study: Different cities in Greece
- 14:20 **Milen Chanev** – Space Research and Technology Institute - Bulgarian Academy of Sciences, m_apiaster@abv.bg
Определяне на добивите от биологичен ечемик за стопанската 2022–2023 г. по сателитни данни
- 14:40 **Svetoslav Zabunov, Garo Mardirossian** – Space Research and Technology Institute - Bulgarian Academy of Sciences, svetoslavzabunov@gmail.com
Supercapacitors usage in passive radar autonomous station
- 15:00 **Angel Manev** – Space Research and Technology Institute - Bulgarian Academy of Sciences, amanev@abv.bg
Енергийният отклик на Черно и Каспийско море на повишаващата се слънчева активност
- 15:10 **Angel Manev** – Space Research and Technology Institute - Bulgarian Academy of Sciences, amanev@abv.bg
Космическите аспекти на „Новата ера“
- 15:20 – 15:40 **Coffee Break**
- 15:40 **Zlatomir Dimitrov** – Space Research and Technology Institute - Bulgarian Academy of Sciences, zlatomir.d.dimitrov@gmail.com
Accuracy assessment in forest boundaries determination (Forest/Non-forest mask) based on three SAR bands - X, C, L, in mountainous forest in NW Bulgaria"
- 16:00 **Temenuzhka Spassova** – State Agency "Electronic Government", tspasova@e-gov.bg
Daniela Avetissian, Iva Ivanova – Space Research and Technology Institute - BAS, ivaivanova@space.bas.bg
Adlin Dancheva – National TOL system, adlin.dancheva@space.bas.bg
Simona Borissova – National Science and Mathematics High School "Acad. Lyubomir Chakalov",
Dimitar Michev – 20 Todor Minkov School
Assessment of mosses and lichens in Antarctica and Bulgaria based on Remote sensing and chlorophyll fluorescence



- 16:20** *Atanas Atanasov – Space Research and Technology Institute – BAS, at_m_atanassov@yahoo.com*
Development of Tools for Functional modelling of Payloads for Earth
- 16:40** *Огнян Огнянов – Space Research and Technology Institute - BAS, ognianov@accесо.com*
Изследване на астроклимата в определени географски локации за подбор на оптимални места за космически наблюдения
- 17:00** *Iskren Ivanov, Lachezar Filchev – Space Research and Technology Institute - Bulgarian Academy of Sciences, iso.ivanov@mail.space.bas.bg*
Площадки и проби служещи за калибриране на данни от оптически дистанционни изследвания на Луната
- 17:30 – 18:30** **Poster session**
- 3-1** *Milen Chanev – Space Research and Technology Institute - Bulgarian Academy of Sciences, m_apiaster@abv.bg*
Приложение на дистанционните методи в археологическите проучвания
- 3-2** *Мария Димитрова, Йорданка Прегъзова – Space Research and Technology Institute - Bulgarian Academy of Sciences, maria@space.bas.bg*
Сравнение на сезонното изменение на праховото замърсяване по наземни данни и пясъчните нахлувания от Африка, регистрирани по спътникови данни
- 3-3** *Maria Dimitrova – Space Research and Technology Institute - Bulgarian Academy of Sciences, maria@space.bas.bg*
Seasonal and Temporal Behavior of Background NO₂ Pollution over Bulgaria on the Base of Sentinel P5 Data
- 3-4** *Йорданка Прегъзова, Мария Димитрова – Space Research and Technology Institute - Bulgarian Academy of Sciences, maria@space.bas.bg,*
Прахово замърсяване над България по наземни данни
- 3-5** *Ilina Kamenova – Space Research and Technology Institute - Bulgarian Academy of Sciences, ilina.kamenova@hotmail.com*
Sentinel-3 thermal data sharpening using Sen-ET SNAP Plugin
- 3-6** *Ilina Kamenova, Milen Chanev, Petar Dimitrovq Lachezer Filchev, Georgi Jeleв – Space Research and Technology Institute - Bulgarian Academy of Sciences, ilina.kamenova@hotmail.com*
Qinghan Dong – Department of Remote Sensing - Flemish Institute of Technological Research, Mol, Belgium
Liang Zhu – State Key Laboratory of Remote Sensing Science, Aerospace Information Research Institute, Chinese Academy of Sciences, Beijing, China
Evapotranspiration estimation, case study in Bulgaria within Dragon-15 program



- 3-7 **Todor Djamiykov, Katya Dimitrova, Kamen Iliev, Elena Anastasova, Mihaela Tsvetkovga, Ventsislav Polimenov, Julieta Arnaudova, Dimka Haytova, Slaveya Petrova – RST-TTO, AU**
Използване на данни от дистанционно наблюдение на Земята - резултати по Националната научна програма „Интелигентно растениевъдство“
- 3-8 **Тодор Джамийков, Катя Димитрова, Елена Анастасова, Михаела Цветкова, Венцислав Полименов – CNSDR/RST-TTO, BAS-BG, e.anastasova@rst-tto.com**
Дистанционни методи за наблюдение на Земята за целите на екологичен мониторинг – тематични приложения за територията на национален парк „Рила“
- 3-9 **Plamen Trenchev – Space Research and Technology Institute - Bulgarian Academy of Sciences, ptrenchev@space.bas.bg**
Tracking nonlinear dynamics in tropospheric ozone concentrations
- 3-10 **Plamen Trenchev – Space Research and Technology Institute - Bulgarian Academy of Sciences, ptrenchev@space.bas.bg**
Remote sensing monitoring of methane emissions from landfills
- 3-11 **Nadya Yanakieva, Daniela Avetisyan – Space Research and Technology Institute – Bulgarian Academy of Sciences, nadya.yanakieva@mail.space.bas.bg**
Application of remote sensing methods for observing surface changes due to permafrost melting on Livingston island, Antarctica
- 3-12 **Iva Ivanova, Nataliya Stankova – Space Research and Technology Institute - Bulgarian Academy of Sciences, ivaivanova@space.bas.bg**
Използване на индекси за мониторинг на плаващите тръстикови острови в езерото Сребърна по данни от Sentinel 2
- 3-13 **Васил Василев – Институт за космически изследвания и технологии – БАН, vasil_gis@yahoo.com**
Моделни подходи с използването на данни от дистанционното наблюдение на Земята за класифициране на типове горивни модели в горите
- 3-14 **Nataliya Stankova – Space Research and Technology Institute - Bulgarian Academy of Sciences, natalia_hs@space.bas.bg**
Оценка на пораженията след горски пожар до село Хвойна (Средни Родопи) с използване на дистанционни методи



25.10.2023 (Wednesday)

Hall 1

Session 4

Ecology and Risk Management

Chairman: Prof. Garo Mardirossian

Secretary: Maria Dimitrova

- 14:00 **Димитър Ст. Димитров** – Национален институт по геофизика, геодезия и география - БАН, *clgdimi@abv.bg*
Жеан-Клод Руеж – Институт по физика на Земята, Париж, Франция
Как прогнозирахме земетресението от 2010 г. в Централно Чили с данни от космическата технология GPS и моделиране
- 14:20 **Стефан Хаджитодоров, Камен Илиев, Венцислав Полименов, Катя Димитрова** – CNSDR/RST-TTO, BAS-BG
Перспективни технологии за оценка на риска и оптимизиране уязвимостта на обектите от критичната инфраструктура
- 14:35 **Катя Димитрова** – CNSDR/RST-TTO, BAS-BG
Kamen Iliev, Ventsislav Polimenov, Mihaela Tsvetkova, Elena Anastasova, Todor Djamiykov – IKIT/RST-TTO, BAS-BG
Earth Observation for Climate adaptation - "Horizon Europe" projects
Regions for Climate and VALORADA
- 14:50 **Roxandra Pamukoff – Michelson** – Medical University – Sofia, *r.m.pamukova@gmail.com*
Екология и природната аптека на България
- 15:05 **Roxandra Pamukoff – Michelson** – Medical University – Sofia, *r.m.pamukova@gmail.com*
Екология и растения за дълголетието на българите
- 15:20 – 15:40 **Coffee Break**
- 15:40 **Генадий Маклаков, Надежда Георгиева** – Научно-изследователски център по биофотоника - Смолян, България, *gmaklakov@mail.bg*
Момчил Караиванов – Областна администрация - Смолян
Влияние на биоенергийни зони в Родопите върху качеството на селскостопанските продукти
- 16:00 **Ivan Stoev, Elitsa Uzunova** – Space Research and Technology Institute – BAS, *elizauzunova@space.bas.bg*
Knowledge Transfer in Artificial Neural Networks: State-of-the-Art
Techniques for Efficient Learning and Performance Improvement



- 16:20** **Stanimir Karapetkov, Kamen Ishtev, Diana Bankova, Venelin Kondov, Simeon Panev** – Technical University - Sofia, skarapetkov@yahoo.com, **Ivan Demerdjiev** – dpblawyers@abv.bg, **Philip Philipov** – Institute of Mechanics - BAS, philip.philipoff.octable.dregan@gmail.com, **Venkatanathan Natarajan** – Sastra University, India, physics16972@gmail.com, **Mario Muñoz Organero** – Universidad Carlos III de Madrid, Spain, munozm@it.uc3m.es
Mehmet Salih Bayraktutan – Freelancer, Turkiye, batuta59ms@gmail.com
Blagovest Panev – LevIns Insurance Company, blago_99@yahoo.com
Neural networks for risk management in natural disasters, transport crashes and industrial accidents (Numerical and experimental results)
- 16:40** **Александра Стоянова, Ралица Берберова** – New Bulgarian University, rberberova@nbu.bg
Анализ на състоянието на зимуващи водолюбиви птици от разред гъскоподобни на територията на рамсарските места по Българското черноморие за периода 2012–2021 г.
- 17:00** **Boyko Ranguelov** – Mining and geology University - Sofia, branguelov@gmail.com
Memet Salih Bayraktutan – Technical University - Igdir
Fathimath Shadiya – Maldives National University - Male
Edelvays Spassov – Kinematics - LA, USA
Yulia Krumova – National Institute of Geophysics, Geodesy and Geography (NIGGG) - Bulgarian Academy of Sciences
Garo Mardirosian – Space Research and Technology Institute - Bulgarian Academy of Sciences
Comparative seismic risk analysis: earthquakes M7.8 (1904-Bulgaria) and (2023-Turkey)
- 17:20** **Diana Zlatanova, Elitsa Popova** – Faculty of Biology, Sofia University “St. Kliment Ohridski”, dianazlatanova@biofac.uni-sofia.bg
Nikolay Dolapchiev – Institute of Biodiversity and Ecosystem Research - Bulgarian Academy of Sciences
GIS-derived covariates for modelling occupancy and spatial relationship between a predator and prey in Osogovo Mtn
- 17:40** **Dimitar Nenov, Diana Zlatanova** – Faculty of Biology, Sofia University “St. Kliment Ohridski”, dinenov@uni-sofia.bg
Key parameters for vulture flight derived from remote sensing data
- 18:00** **Nadya Marinova** – New Bulgarian University, nmarinova@nbu.bg
Космос и човечество
- 18:15** **Nadya Marinova** – New Bulgarian University, nmarinova@nbu.bg
Модели за експертни оценки на сложни конкурентни стратегии



18:30 – 19:20 Poster session

- 4-1 **Аделина Стоянова, Ралица Берберова** – *New Bulgarian University, rberberova@nbu.bg*
Мобилните любителски приложения за отбелязване и проследяване на птици като инструмент за тяхното опазване и развитието на орнитологичен туризъм
- 4-2 **Bilyana Kostova** – *New Bulgarian University, bkostova@nbu.bg*
Ventseslav Stoyanov – *University of Structural Engineering and Architecture “Lyuben Karavelov” and Academy of the Faculty of Fire Safety and Civil Protection, vensy.stoyanov@gmail.com,*
Katerina Mihaylova – *University of Mining and Geology “St. Ivan Rilski”,*
Vilma Petkova – *Institute of Mineralogy and Crystallography “Acad. Ivan Kostov” – Bulgarian Academy of Sciences, vilmapetkova@gmail.com*
Application of natural zeolite in mortar phase formation as an ecological approach for reducing greenhouse gases
- 4-3 **Vilma Petkova** – *Institute of Mineralogy and Crystallography “Acad. Ivan Kostov” - Bulgarian Academy of Sciences, vilmapetkova@gmail.com*
Katerina Mihaylova – *University of Mining and Geology “St. Ivan Rilski”,*
Bilyana Kostova – *New Bulgarian University, bkostova@nbu.bg*
High-energy milling – an ecological approach to processing phosphorous ores for the production of soil conditioners
- 4-4 **Цветан Паров, Милен Чанев, Илина Каменова, Искрен Иванов** – *Space Research and Technology Institute - BAS, m_apiaster@abv.bg*
Влияние на слънчевата активност върху атмосферни процеси в пукнатинно-дренажни системи на антарктически ледник
- 4-5 **Тодор Джамийков, Катя Димитрова, Елена Анастасова, Михаела Цветкова, Венци Полименов** – *CNSDR/RST-TTO, BAS-BG, e.atanasova@rst-tto.com*
Методология и принципи на дистанционните изследвания за интелигентно растениевъдство - приложение и резултати
- 4-6 **Ekaterina Ivanova** – *Space Research and Technology Institute - Bulgarian Academy of Sciences, ivanovae@space.bas.bg*
Water-related natural hazards assessment: A GIS-based methodology for the Rhodope Mountain Range in Bulgaria
- 4-7 **Христофор Скандалиев, Нели Сивева, Томислав Скандалиев** – *Химикотехнологичен и металургичен университет – София, fori2ivanov@yahoo.com;*
Динамика на екологичните фактори във водосбора на река Соголянска бистрица
- 4-8 **Anton Sotirov** – *Institute of Agriculture, Kyustendil, Agricultural Academy, Bulgaria, renvtioluf098@outlook.com*
Quality of the water of river Lebnitsa - SW Bulgaria for agricultural irrigation
- 4-9 **Nataliya Stankova** – *Space Research and Technology Institute - Bulgarian Academy of Sciences, natalia_hs@space.bas.bg*
Мониторинг на възстановяване след горски пожар с използване на Direction Angle



26.10.2023 (Thursday)
Hall 1

Session 5

Space Material Science and Nanotechnology

Chairman: Prof. Dimitar Teodosiev
Secretary: Daniela Shuleva

- 09:20 **Margarita Dimitrova** – Space Research and Technology Institute - Bulgarian Academy of Sciences, maggy.larsen@gmail.com
Влияние на космическата радиация върху материалите и как тя променя тяхната електронна структура
- 09:40 **Adelina Miteva** – Space Research and Technology Institute - Bulgarian Academy of Sciences, ad.miteva@gmail.com
Superalloys for Space Applications
- 10:00 **Adelina Miteva** – Space Research and Technology Institute - Bulgarian Academy of Sciences, ad.miteva@gmail.com
Food Irradiation for space applications
- 10:20 – 10:40 **Coffyee Break**
- 10:40 **Korneli Grigorov** – Space Research and Technology Institute - Bulgarian Academy of Sciences, kgrigoro@abv.bg
Carlos Monezi, Camila Gaudencio, C.R.C Lima, Marcos Massi – School of Engineering - PPGEMN, Mackenzie Presbyterian University, São Paulo, Brazil
Principles of Titanium Carbo-Nitride (TiCN) PVD Coatings as a dry film lubricant with improved hardness
- 12:00 – 12:40 **Poster session**
- 5-1 **Dimitar Teodosiev, Anna Bouzekova–Penkova, Rositsa Koleva** – Space Research and Technology Institute - Bulgarian Academy of Sciences, dteod@space.bas.bg
Dimitar Tonev, Elena Geleva – Institute for Nuclear Research and Nuclear Energy - Bulgarian Academy of Sciences
Boyko Tsyntsarski – Institute of Organic Chemistry with Centre of Phytochemistry - Bulgarian Academy of Sciences
Peter Tzvetkov – Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences
Изследване влиянието на йонизиращи лъчения върху спектрално чист графит, уплътнен и покрит със стъкловъглерод, след продължителен престой в открития космос на борда на МКС
- 5:2 **Anna Bouzekova–Penkova** – Space Research and Technology Institute - Bulgarian Academy of Sciences, a_bouzekova@abv.bg
Корозия на алуминий и алуминиеви сплави



26.10.2023 (Thursday)

Hall 1

13:30 – 15:30 Rounde Table

15:50 – 16:50 Discussion

17:30 Closing Ceremony

Hall 2

09:00 – 13:00 Training Session “Copernicus Data Exploitation”



AGENDA

Date	Central BAS building	
24.10.2023 Tuesday	13:00 – 15:45 Registration 15:00 – Opening Ceremony <u>Coffee Break</u> 15:45 – Plenary Session 17:00 – Special Session <i>The catastrophic earthquakes in Turkey in 2023 and the seismicity of Bulgaria</i> 18:45 – Announcements	
Date	Hall 1 - block 1	Hall 2 - block 1
25.10.2023 Wednesday	09:00 – 14:00 <i>Session 1</i> "Space Physics"	09:30 – 12:10 <i>Session 2</i> "Aerospace Technologies and Biotechnologies"
25.10.2023 Wednesday	14:30 – 18:30 <i>Session 4</i> "Ecology and Risk Management"	14:00 – 18:30 <i>Session 3</i> „Remote Sensing and GIS"
19:30 Welcome Party Restaurant of a Scientist's home - BAS		
26.10.2023 Thursday	09:20 – 11:00 <i>Session 5</i> "Space Material Science and Nanotechnologies"	09:00 – 13:00 <i>Training Session</i> "Copernicus Data Exploitation"
	13:30 – 15:30 Round Table	
	15:45 – 16:45 Discussion	
	17:00 Closing of the Conference	
All poster sessions will be held the lobby on the 3rd floor of block 1		



NOTES