

Third workshop on Soliton Theory, Nonlinear Dynamics and Machine Learning

Report of Contributions

Contribution ID: **1**

Type: **not specified**

OPENING

Contribution ID: 2

Type: **not specified**

Gaussian quantum entanglement in curved spacetime

Tuesday, 19 August 2025 10:00 (45 minutes)

Presenter: ISAR, Aurelian

Contribution ID: 3

Type: **not specified**

NPT entanglement witnesses in Gaussian states

Tuesday, 19 August 2025 11:00 (40 minutes)

Presenter: MIHAESCU, Tatiana

Contribution ID: 4

Type: **not specified**

Two-quanta features in coupled double-quantum-dot-cavity systems

Tuesday, 19 August 2025 11:40 (40 minutes)

Presenter: CECOI, Elena

Contribution ID: 5

Type: **not specified**

Phonon assisted cavity quantum electrodynamics of double-quantum-dots

Tuesday, 19 August 2025 13:40 (45 minutes)

Presenter: CEBAN, Victor

Contribution ID: 6

Type: **not specified**

Soliton Theory and Nonlinear Dynamics in the Human Body

Tuesday, 19 August 2025 15:00 (30 minutes)

Presenter: PIROVSKI, Nikola

Contribution ID: 7

Type: **not specified**

General discussion

Tuesday, 19 August 2025 16:00 (2 hours)

Contribution ID: 8

Type: **not specified**

Discovering symmetries from data by learning Lie algebras

Saturday, 23 August 2025 09:30 (30 minutes)

Presenter: MISHEV, Stoyan

Contribution ID: 9

Type: **not specified**

Enhanced Fault Diagnosis of Rolling Bearings Using LSTM Autoencoders and Feature-Based XG-Boost Classification

Saturday, 23 August 2025 10:30 (30 minutes)

Presenter: KOLEV, Atanas

Contribution ID: **10**

Type: **not specified**

OPENING

Tuesday, 19 August 2025 09:30 (30 minutes)

Contribution ID: 11

Type: **not specified**

Gaussian quantum entanglement in curved spacetime

Presenter: ISAR, Aurelian

Contribution ID: 12

Type: **not specified**

Surface water waves interacting with vortices

Wednesday, 20 August 2025 09:30 (45 minutes)

Presenter: IVANOV, Rossen

Contribution ID: 13

Type: **not specified**

Thermodynamic properties of quantum spin systems: scaling and disorder

Wednesday, 20 August 2025 10:15 (45 minutes)

Presenter: GRAHOVSKI, Georgi

Contribution ID: 14

Type: **not specified**

Solitary wave dynamics within Whitham-type equations

Wednesday, 20 August 2025 11:30 (40 minutes)

Presenter: FLAMARION, Marcelo

Contribution ID: 15

Type: **not specified**

Breather and Rogue Wave Solutions of a New Three-Component System

Wednesday, 20 August 2025 12:10 (40 minutes)

Presenter: STEFANOV, Aleksander

Contribution ID: 16

Type: **not specified**

Modelling of Intermediate Internal Ocean Waves in the Presence of Currents and Uneven Bottom Topography

Wednesday, 20 August 2025 14:00 (30 minutes)

Presenter: IVANOVA, Lyudmila

Contribution ID: 17

Type: **not specified**

Scientific Applications of Small-Aperture Astronomical Observatories: Case Studies in Variable Star and Exoplanet Research

Wednesday, 20 August 2025 14:30 (30 minutes)

Presenter: ANTONOV, Nikola

Contribution ID: **18**

Type: **not specified**

Fighting digital fraudsters in credit lending context – an alternative approach leveraging the GA4 data

Saturday, 23 August 2025 10:00 (30 minutes)

Presenter: MUSHMOV, Apostol

Contribution ID: **19**

Type: **not specified**

General Discussion

Wednesday, 20 August 2025 16:00 (2 hours)

Contribution ID: 20

Type: **not specified**

Lensing and light rings of Rotating Boson Stars with synchronized scalar hair

Thursday, 21 August 2025 11:30 (40 minutes)

Presenter: GYULCHEV, Galin

Contribution ID: 21

Type: **not specified**

Neutron stars in modified theories of gravity with scalar field

Thursday, 21 August 2025 12:10 (40 minutes)

Presenter: STAYKOV, Kalin

Contribution ID: 22

Type: **not specified**

Reparametrization Invariant Scaling Symmetry as resolution of the Li-7 problem within the BBNS

Thursday, 21 August 2025 09:30 (45 minutes)

Presenter: GUEORGUIEV, Vesselin

Contribution ID: 23

Type: **not specified**

On consistency conditions for SRRT inflation in 2-field cosmological models

Thursday, 21 August 2025 10:15 (45 minutes)

Presenter: BABALIC, Elena-Mirela

Contribution ID: 24

Type: **not specified**

Effects of plasma and relativistic aberrations on the shadows of traversable wormholes

Thursday, 21 August 2025 14:00 (30 minutes)

Presenter: ANGELOV, Tanimir

Contribution ID: 25

Type: **not specified**

Signatures of the dark matter halo in the polarized emission around galactic black holes

Thursday, 21 August 2025 14:30 (30 minutes)

Presenter: BEKIR, Rasim

Contribution ID: 26

Type: **not specified**

General dscussion

Thursday, 21 August 2025 15:30 (2h 30m)

Contribution ID: 27

Type: **not specified**

An Open-Source Embedded AI Vision Platform for Advanced Driver Assistance Systems

Saturday, 23 August 2025 11:15 (30 minutes)

Presenter: TEMELAKIEV, Lyuben

Contribution ID: 28

Type: **not specified**

Beam parameters estimation with machine learning from incomplete data sets

Saturday, 23 August 2025 11:45 (30 minutes)

Presenter: IVANOV, Svetoslav

Contribution ID: 29

Type: **not specified**

Application of equivariant transformations in neural networks to classification of galaxy images

Saturday, 23 August 2025 12:15 (30 minutes)

Presenter: FOTEVA, Yoana

Contribution ID: **30**

Type: **not specified**

Closing

Saturday, 23 August 2025 12:45 (15 minutes)

Contribution ID: **31**

Type: **not specified**

Riemann–Hilbert Problems and Integrable Equations

Friday, 22 August 2025 09:30 (45 minutes)

Presenter: GERDJIKOV, Vladimir

Contribution ID: 32

Type: **not specified**

Mathematical theories and models for the nonlinear proliferation of gliomas

Friday, 22 August 2025 10:15 (45 minutes)

Presenter: CONSTANTINESCU, Radu

Contribution ID: 33

Type: **not specified**

Characterization of Petrov manifolds using Stanilov curvature operators

Friday, 22 August 2025 11:20 (40 minutes)

Presenter: VIDEV, Veselin

Contribution ID: 34

Type: **not specified**

Load-Aware Greedy Routing algorithm with Spectral Embeddings and adaptive Utilization-Weighted Penalties for Optimal Link Utilization

Friday, 22 August 2025 12:00 (30 minutes)

Presenter: VEKOV, Hristo

Contribution ID: 35

Type: **not specified**

A New Generalization of the Liouville-Jacobi Identity

Friday, 22 August 2025 12:30 (40 minutes)

Presenter: MARKOV, Lubomir

Contribution ID: 36

Type: **not specified**

Integrable discretization of coupled additive Bogoyavlensky and its multiple soliton solutions

Friday, 22 August 2025 14:00 (40 minutes)

Presenter: BABALIC, Corina

Contribution ID: 37

Type: **not specified**

On the use of auxiliary equations for solving nonlinear ordinary differential equations

Friday, 22 August 2025 14:40 (40 minutes)

Presenter: PAUNA, Alina

Contribution ID: **38**

Type: **not specified**

General Discussion

Friday, 22 August 2025 15:40 (2h 20m)

Contribution ID: 39

Type: **not specified**

Shaping Solitons with Complex Dispersion: Geometric and Dynamical Insights From The Modified KdV-Burgers Equation toward Optical Pulse Control

Tuesday, 19 August 2025 14:25 (35 minutes)

Presenter: SAAD, Md. Abdus