

Second workshop on Soliton Theory, Nonlinear Dynamics and Machine Learning

Report of Contributions

Contribution ID: 1

Type: **not specified**

Opening

Saturday, 17 August 2024 09:00 (30 minutes)

Contribution ID: 2

Type: **not specified**

Water waves over a variable bottom and soliton propagation

Saturday, 17 August 2024 09:30 (50 minutes)

Presenter: IVANOV, Rossen

Contribution ID: 3

Type: **not specified**

Nonlinear evolution of black holes in modified theories of gravity

Saturday, 17 August 2024 10:50 (50 minutes)

Presenter: DONEVA, Daniela

Contribution ID: 4

Type: **not specified**

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

Saturday, 17 August 2024 11:40 (40 minutes)

Presenter: MISHEV, Stoyan

Contribution ID: 5

Type: **not specified**

Solving differential equations with physics informed neural networks

Saturday, 17 August 2024 14:00 (30 minutes)

Presenter: YAZADJIEV, Stoytcho

Contribution ID: 6

Type: **not specified**

Period variability of cataclysmic star AM Herculus. New photometric observations.

Saturday, 17 August 2024 14:30 (40 minutes)

Presenter: RUMEN BOGDANOVSKI AND NIKOLA ANTONOV

Contribution ID: 7

Type: **not specified**

General discussion

Saturday, 17 August 2024 15:30 (2h 30m)

Contribution ID: 8

Type: **not specified**

Polynomial Lax pairs with a Coxeter reduction

Sunday, 18 August 2024 09:00 (50 minutes)

Presenter: STEFANOV, Alexander

Contribution ID: 9

Type: **not specified**

Singularity analysis and bilinear approach to some Bogoyavlensky equations

Sunday, 18 August 2024 09:50 (50 minutes)

Presenter: CARSTEA, Adrian Stefan

Contribution ID: **10**

Type: **not specified**

Irreversibility and dynamics of quantum correlations in open quantum systems

Sunday, 18 August 2024 11:00 (50 minutes)

Presenter: ISAR, Aurelian

Contribution ID: 11

Type: **not specified**

Dynamics of strongly coupled harmonic oscillators in Gaussian noisy channels

Sunday, 18 August 2024 14:00 (30 minutes)

Presenter: MIHAESCU, Tatiana

Contribution ID: 12

Type: **not specified**

Mathematical Analysis of the Van der Waals Equation

Sunday, 18 August 2024 14:30 (40 minutes)

Presenter: PRODANOV, Emil

Contribution ID: 13

Type: **not specified**

General discussion

Sunday, 18 August 2024 15:30 (2h 30m)

Contribution ID: 14

Type: **not specified**

Riemann–Hilbert Problems and Integrable Equations

Monday, 19 August 2024 09:00 (50 minutes)

Presenter: GERDJIKOV, Vladimir

Contribution ID: 15

Type: **not specified**

Chaffee-Infante type equations with given classes of solutions

Monday, 19 August 2024 09:50 (50 minutes)

Presenter: CONSTANTINESCU, Radu

Contribution ID: 16

Type: **not specified**

On the N-wave hierarchy with constant boundary conditions

Monday, 19 August 2024 11:00 (50 minutes)

Presenter: GRAHOVSKI, Georgi

Contribution ID: 17

Type: **not specified**

Contact Hamilton-Jacobi equations and consistency of strong SRRT inflation

Monday, 19 August 2024 14:00 (40 minutes)

Presenter: BABALIC, Mirela

Contribution ID: **18**

Type: **not specified**

Generalized Dodd-Bullough-Mikhailov equations with given classes of solutions

Monday, 19 August 2024 14:40 (40 minutes)

Presenter: PAUNA, Alina-Maria

Contribution ID: 19

Type: **not specified**

The Lagrangian approach to modelling waves with a linear current component

Monday, 19 August 2024 15:20 (30 minutes)

Presenter: CURTIN, Conor

Contribution ID: 20

Type: **not specified**

General Discussion

Monday, 19 August 2024 16:10 (1h 50m)

Contribution ID: 21

Type: **not specified**

Reparametrization Invariance and Its Relation to the Dark Energy and Dark Matter Phenomena

Presenter: GUEORGUIEV, Vesselin

Contribution ID: 22

Type: **not specified**

Reparametrization Invariance and Its Relation to the Dark Energy and Dark Matter Phenomena

Tuesday, 20 August 2024 09:00 (50 minutes)

Presenter: GUEORGUIEV, Vesselin

Contribution ID: 23

Type: **not specified**

Photon spheres

Tuesday, 20 August 2024 10:10 (30 minutes)

Presenter: YAZADJIEV, Stoytcho

Contribution ID: 24

Type: **not specified**

Images of a thin accretion disk around Kerr Black Hole with synchronized scalar hair

Tuesday, 20 August 2024 10:40 (50 minutes)

Presenter: GYULCHEV, Galin

Contribution ID: 25

Type: **not specified**

Beam parameters estimation with machine learning from incomplete data sets

Tuesday, 20 August 2024 14:00 (40 minutes)

Presenter: IVANOV, Svetoslav

Contribution ID: 26

Type: **not specified**

Applicability evaluation of selected xAI methods for machine learning algorithms for signal parameters extraction

Tuesday, 20 August 2024 14:40 (30 minutes)

Presenter: DIMITROVA, Калина

Contribution ID: 27

Type: **not specified**

An integral formula, with an application to differential equations

Tuesday, 20 August 2024 15:10 (50 minutes)

Presenter: MARKOV, Lubomir

Contribution ID: **28**

Type: **not specified**

General Discussion

Tuesday, 20 August 2024 16:30 (1h 30m)

Contribution ID: 29

Type: **not specified**

On a Method for Solving of Equations of Mathematical Physics in Multidimension

Wednesday, 21 August 2024 09:00 (50 minutes)

Presenter: TODOROV, Michail

Contribution ID: **30**

Type: **not specified**

Variational Method for Inverse Problems in Identifying Solitary-Wave Solutions

Wednesday, 21 August 2024 09:50 (50 minutes)

Presenter: MARINOVA, Rossitza

Contribution ID: 31

Type: **not specified**

Application of Soliton Theory in Business Process Analysis

Wednesday, 21 August 2024 11:00 (30 minutes)

Presenter: IVANOVA, Antonina

Contribution ID: 32

Type: **not specified**

Approximate solutions to ordinary differential equations using neural networks and Monte Carlo

Wednesday, 21 August 2024 11:30 (30 minutes)

Presenter: VEKOV, Hristo

Contribution ID: 33

Type: **not specified**

Application of machine learning methods to predict and analyze the condition of rolling bearings

Wednesday, 21 August 2024 12:00 (30 minutes)

Presenter: KOLEV, Atanas

Contribution ID: **34**

Type: **not specified**

Closing

Wednesday, 21 August 2024 12:30 (20 minutes)