SCT-2014

KUZNETSOV
Evgenii A.

Династия

РФФИ

VII International Conference
"SOLITONS, COLLAPSES AND TURBULENCE:
Achievements, Developments and Perspectives" (SCT-14)
in honor of Vladimir Zakharov's 75th birthday
August 04 – August 08, 2014

Program

Organizing Committee:

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Sergei K. TURITSYN, *Aston University, Birmingham, U.K.*

SUNDAY, August 03	
17:00–19:00	REGISTRATION AT THE HOTEL CHERNOGOLOVKA
MONDAY, August 04	
08:30–09:15	REGISTRATION AT THE LANDAU INSTITUTE
09:15–09:30	WELCOME
09:30–10:00	**NEWELL A. C.** *Phyllotaxis, pushed pattern fronts, and optimal packing*
10:00–10:30	**FERAPONTOV E. V.** *Dispersionless integrable systems in three-dimensional and Einstein–Weyl geometry*
10:30–11:00	**TURITSYN S. K.** *Inverse scattering transform in coherent optical communications*
11:00–11:20	**COFFEE BREAK**
11:20–11:50	**ALEKSEEV G. A.** *Characteristic initial value problems for integrable reductions of Einstein's field equations and gravitational interaction of short electromagnetic pulses on an expanding cosmological background*
11:50–12:20	**KOCHAROVSKY V., KOCHAROVSKAYA E., KOCHAROVSKY V.** *Superradiant lasing: Quasi-regular and quasi-chaotic regimes*
12:20–12:50	**ZAKHAROV V. E., GELASH A. A.** *Nonlinear stage of modulation instability in the scalar and vector nonlinear Schrodinger equations.*

12:50–14:10	**LUNCH**
14:10–14:40	**GRINEVICH P. G., SANTINI P. M., WU D.**
	The Cauchy problem for the Pavlov equation
14:40–15:10	**STURMAN B.**
	Nonlinear phenomena with whispering gallery modes
15:10–15:40	**CONTE R., GRUNDLAND, A. M.**
	New reductions of Gauss−Codazzi equations in three-dimensional Euclidean space to the sixth Painlevé equation
15:40–16:10	**BALAKIN A., FRAIMAN G. M.**
	Raman backscattering in plasma as method for the phase correction of intense ultrashort laser pulses
16:10–16:30	**COFFEE BREAK**
16:30–17:00	**KOSAREVA Q. G., PANOV N. A., SHIPILO D. E., ANDREEVA V. A., SAVEL'EV A. B., BERGE L., CHIN S. L.**
	Confined low-frequency radiation from femtosecond filaments in gases
17:00–17:30	**FADEEV D. A., MIRONOV V. A.**
	A study of two color optical breakdown of gas by investigation of irradiated terahertz pulses properties
17:30–18:00	**KALYAKIN L.**
	Stability of autoresonance under persistent perturbation
18:00–18:30	**WELCOME RECEPTION**

TUESDAY, August 05

09:00–09:30 **ZAKHAROV V. E**.
Analytical theory of wind-driven sea

09:30–10:00 **KODAMA Y., SCHIEF W., KONOPELCHENKO B.**
Whitham type equations revisited: Critical points and Lauricella functions

10:00–10:30 **FALKOVICH G., BELAN S., FOUXON I.**
Localization-delocalization transition of inertial particles in inhomogeneous turbulence

10:30–10:50 **COFFEE BREAK**

10:50–11:20 **GERDJIKOV V. S.**
Riemann–Hilbert problems and soliton equations. The reduction problem and Hamiltonian properties

11:20–11:50 **PELINOVSKY E., DUTYKH D., SHURGALINA E.**
Soliton interaction and turbulence in KdV-like models

11:50–12:20 **DIAS F., BRENNAN J., DUDLEY J., VIOTTI C.**
Local analysis of wave fields from hindcasted sea states for rogue wave risk evaluations

12:20–12:50 **SHAMIN R.**
Processes of concentration of energy during the formation of rogue waves

12:50–14:10 **LUNCH**

14:10–14:40	**NOVIKOV S. P.**
	TBA
14:40–15:10	**MEZENTSEV, WOLF, DOSTOVALOV, AND DUBOV V. M., MEZENTSEV V.**
	Vortical laser bullets in femtosecond pulse propagation
15:10–15:40	**BOGDANOV L. V.**
	Projective differential geometry of multidimensional dispersionless integrable hierarchies
15:40–16:00	**COFFEE BREAK**
16:00–16:30	**MUSAKAEV M. R.**
	On the symmetries of the Manakov-polarization mode dispersion equation
16:30–17:00	**PUSHKAREV A., ZAKHAROV V. E.**
	Self-similarity of wind input terms and magic numbers
17:00–17:30	**KOUTVITSKY V. A., MASLOV E. M.**
	Nonlinear dynamics of cosmological scalar fields with singular potentials
17:30–18:00	**VLADIMIROVA N., FALKOVICH G.**
	Inverse and direct cascades in two-dimensional Gross–Pitaevskii equation
18:00–18:30	**BRAZHNIKOV M., LEVCHENKO A. A., MEZHOV-DEGLIN L. P., REMIZOV I.**
	Bottleneck phenomena in capillary turbulence on the surface of cryogenic liquids

WEDNESDAY, August 06

09:00–09:30 **KRICHEVER I. M.**
TBA

09:30–10:00 **DYACHENKO A. I., ZAKHAROV V. E., KACHULIN D. I.**
Freak-waves

10:00–10:30 **FISHER S. N., McCLINTOCK P. V.**
Experiments on the visualisation and properties of quantum turbulence

10:30–10:50 **COFFEE BREAK**

10:50–11:20 **LEBEDEV V.**
TBA

11:20–11:50 **MAGRI F.**
Haantjes manifolds and Witham equations

11:50–12:20 **RUMPF B.**
Spontaneous breaking of the spatial homogeneity symmetry in wave turbulence leading to the formation of radiating pulses

12:20–12:50 **ZAKHAROV V. E., BADULIN S. I., HWANG P., CAULLIEZ G.**
Self-similarity of wind-driven seas and universality of wind wave growth

12:50–14:10	**LUNCH**
14:10–14:40	**ROSANOV N. N., VYSOTINA N. V.**
	The Fermi–Ulam problem and dynamical billiard with solitons
14:40–15:10	**RUBAN V. P.**
	Ideal hydrodynamics inside as well as outside nonrotating black hole: Hamiltonian description in the Painleve–Gullstrand coordinates
15:10–15:40	**EROKHIN N. S., ZOLNIKOVA N. N., MIKHAILOVSKAYA L. A., SHVARTSBURG A. B., ZAKHAROV V. E.**
	Features of resonant tunneling of electromagnetic waves through gradient barriers plasma. Exactly solvable models
15:40–16:00	**COFFEE BREAK**
16:00–16:30	**STEPANYANTS Yu. A., NIKITENKOVA S. P., OSTROVSKY L. A., RAJ N.**
	Nonlinear vector waves in the atomic chain model
16:30–17:00	**KOROTKEVICH A. O., DYACHENKo A. I., ZAKHAROV V. E.**
	Waves' instabilities on a discrete grid
17:00–17:30	**KOCHURIN E. A., ZUBAREV N. M.**
	Strongly nonlinear surface dynamics of nonconducting fluid under the action of horizontal electric field
17:30–18:00	**MALTSEV A.**
	TBA

THURSDAY, August 07

09:00–09:30 **GOLITSYN G.**

Earthquakes as turbulence in the Earth's core

09:30–10:00 **POGREBKOV A. K.**

KPII: Cauchy – Jost function, Darboux transformations, and totally nonnegative matrices

10:00–10:30 **ANNENKOV S., SHRIRA V. I.**

Modeling of squall with the generalized kinetic equation

10:30–10:50 **COFFEE BREAK**

10:50–11:20 **MIKHAILOV A. Y.**

TBA

11:20–11:50 **GABITOV I. R., MAIMISTOV A., KOVACIC G., NEWHALL K.**

Random switching in two-level atomic system

11:50–12:20 **SLUNYAEV A., SHRIRA V. I.**

Solitons of trapped waves on jet currents

12:20–12:50 **LUSHNIKOV P. M.**

Branch cut singularity of stokes wave

12:50–14:10	**LUNCH**
14:10–14:40	**LVOV V. S.**
	Turbulence in superfluids: Ideas, experiments, mumerics, and theory
14:40–15:10	**EFIMOV V. B.**
	Nonlinear harmonic surface waves on a deep water. Experimental results in "Marintok" ocean basin (Trondheim, Norway)
15:10–15:40	**KHUSNUTDINOVA K.**
	Coupled Ostrovsky equations for internal waves on a shear flow
15:40–16:00	**COFFEE BREAK**
16:00–16:30	**LUKASCHUK S. N., ABDURAKHIMOV L., ROBERT B.**
	Observations of low-frequency surface waves in a vertically oscillating elastic container
16:30–17:00	**KONTOROVICH V. M.**
	To the origin of sexagesimal system of numeration
17:00–17:30	**RASIN A.**
	The Backlund transformations for the Camassa–Holm equation
17:30–18:00	**YAKUBOVICH E.**
	Exact solutions for two-dimensional fluid motions by means of potential continuation of localized vortices
19:00–19:10	**CONFERENCE DINNER**

FRIDAY, August 08

09:00–09:30 **RASMUSSEN J. J., NAULIN V.**
Self-organization and generation of large scale flows in quasi-two-dimensional turbulence

09:30–10:00 **SOKOLOV V. V.**
Polynomial forms for Calogero-type Hamiltonians

10:00–10:30 **BUSTAMANTE M. D., QUINN B., LUCAS D.**
Robust energy transfer mechanism via precession resonance in nonlinear turbulent wave systems

10:30–10:50 **COFFEE BREAK**

10:50–11:20 **SHRIRA V. I., SLUNYAEV A.**
Waves on jet currents: A new paradigm and novel mechanisms of freak wave formation

11:20–11:50 **REMIZOV I., MEZHOV-DEGLIN L. P., BRAZHNIKOV M., LEVCHENKO A.A.**
Generation of subharmonics in the turbulent spectra of liquid hydrogen

11:50–12:20 **KAMCHATNOV A. M.**
Nonlinear waves in a two-component Bose–Einstein condensate

12:20–12:50 **MIRONOV V. A., SMIRNOV L. A., SMIRNOV A. I.**
Dynamics of two-dimensional dark solitons in the inhomogeneous flow of the Bose–Einstein condensate

12:50–14:10	**LUNCH**
14:10–14:40	**ZUBAREV N. M., KUZNETSOV E. A.**
	Formation of singularities at the interface of two fluids as a result of the Kelvin–Helmholtz instability
14:40–15:10	**PAVLOV M. V.**
	Hamiltonian formalism of the benney system in three dimensions
15:10–15:40	**MAILYBAEV A. A.**
	Blowup as a driving mechanism of turbulence in shell models
15:40–16:00	**COFFEE BREAK**
16:00–16:30	**SHAGALOV A., SERGEY B.**
	Resonant control of solitons
16:30–17:00	**ZENCHUK A. I.**
	Particular solutions to a mutltidimensional version of n-wave type equation
17:00–17:30	**KUZNETSOV E. A., PASSOT T., RUBAN V. P., SULEM P. L.**
	Variational principle and stationary mirror structures in a plasma with pressure anysotropy
17:30–17:40	**CONFERENCE CLOSING**

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пр. Академика Семенова

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