

Workshop on History, Methodology and Philosophy of the Optical Education XVIII

Workshop Chairs: **Boris A. Medvedev**,
Irina Yu. Yanina, Saratov State University,
Russia

Secretary: **Anton A. Kharchenko**, Saratov
State University, Russia

International Program Committee **Vladimir
L. Derbov**, Saratov State University,
Russia; **Alexander V. Priezzhev**, M.V.
Lomonosov Moscow State University,
Russia; **Alexander V. Gorokhov**, Samara
State University, Russia; **Valery V. Tuchin**,
Saratov State University, Russia;

October 1, Wednesday

**ORAL SESSION /ROUND TABLE
(Scientific Library, Conf. Hall)**

Co-chairs: **Boris A. Medvedev**,
Irina Yu. Yanina,
Saratov State University, Russia

Saratov time

14:00-14:30

Zoom Oral Report

**Theoretical Physics at Saratov
University**

Lev M. Babkov;
Saratov State University, Saratov, Russia

14:30-14:45

Oral Report

**Episodes of the history of scientific
research at Saratov State University**

Valery M. Anikin;
Saratov State University, Saratov, Russia

14:45-15:00

Oral Report

**Student of the SSU Physics Department
Lev Pitaevsky**

Svetlana V. Churochkina, Dmitry V.
Churochkin, Valery M. Anikin;

Saratov State University, Saratov, Russia

15:00-15:15

Oral Report

Paradoxes of special relativity

Nataliya A. Boykova, Bogdan S. Rezepov;
Saratov State University, Saratov, Russia

15:15-15:30

Zoom Oral Report

**Site-specific insect fluorescence in
courtship displays**

Matvey I. Nikelshparg¹, Evelina I.
Nikelshparg¹, Vasily V. Anikin²;

¹Ben-Gurion University of the Negev, Beer
Sheva, Israel, ²Saratov State University,
Saratov, Russia

15:30-15:45

Oral Report

Conic Sections and Optical Lens

Michael M. Stolnitz;
Saratov State University, Saratov, Russia

15:45-16:00

Oral Report

**Study of statistics of laser speckle
fields during immersive clearing of
human skin with glucose solutions in
polarized light**

Anton A. Kharchenko¹, Polina A.
Timoshina^{1,2}, Valery V. Tuchin^{1,2,3}

¹Saratov State University, Saratov, Russia

²Tomsk State University, Tomsk, Russia

³Institute of Precision Mechanics and
Control, FRC "Saratov Scientific Center of
the Russian Academy of Sciences",
Saratov, Russia

16:00-16:15

Oral Report

**Approaches to building an automated
diagnostic system for diseases of the
lower extremities using pattern
recognition methods**

Artem E. Radin, Julia A. Brodskaya;
Gagarin's State Technical University of
Saratov, Saratov, Russia

16:15-16:30

Oral Report

Pattern recognition algorithms for the diagnosis of skin mycoses and onychomycosis

Andrey M. Alekseev, Julia A. Brodskaya; Gagarin's State Technical University of Saratov, Saratov, Russia

16:30-16:50
Coffee break

ROUND TABLE

Man and light in natural and art treatment of the Universe

Panel members:

Valery V. Tuchina, Vladimir L. Derbov, Victor V. Rozen^a, Oleg V. Shimelfenig^a, Lev M. Babkov^a, A. V. Gorokhov^b, Dmitry A. Zimnyakov^c, Leonid A. Melnikov^c, Julia M. Duplinskay^c, Oleg M. Parshkov^c, A. V. Priezzhev^d,

^aSaratov State University, Saratov, Russia; ^bSamara University, Samara, Russia, ^cYuri Gagarin State Technical University of Saratov, Russia, ^dM.V. Lomonosov Moscow State University, Moscow, Russia

16:20-16:40

The Golden Ratio and other harmony options in academic music

Lev A. Brodsky¹, Julia A. Brodskaya²; ¹Lyceum of Mathematics and Computer Science, Saratov, Russia; ²Gagarin's State Technical University of Saratov, Saratov, Russia

16:40-17:00

On the idea of the synthesis of arts in A. Scriabin's Mysterium

Vasily S. Igonin; Saratov State Conservatory, Saratov, Russia

17:00-17:20

The phenomenon of immortality in artistic works through the lens of natural sciences

Vitaliy V. Sorokin¹, Vladimir V. Orlov²;

¹Saratov State University, Saratov, Russia;

²Saratov State Conservatory, Saratov, Russia

17:20-17:40

On the 550th Anniversary of the Birth of Michelangelo Buonarroti

Boris A. Medvedev¹, Mariya I. Kharkovenko²;

¹Saratov State University, Saratov, Russia;

²The State Autonomous Cultural Institution of the Vladimir region. A.E. Markin Classical Music Center, Vladimir, Russia

October 2, Thursday

ROUND TABLE

Man and light in natural and art treatment of the Universe

(Scientific Library, Conf. Hall)

Co-chairs: **Boris A. Medvedev,**
Irina Yu. Yanina,

Saratov State University, Russia

Panel members:

Valery V. Tuchina, Vladimir L. Derbov, Victor V. Rozen^a, Oleg V. Shimelfenig^a, Lev M. Babkov^a, A. V. Gorokhov^b, Dmitry A. Zimnyakov^c, Leonid A. Melnikov^c, Julia M. Duplinskay^c, Oleg M. Parshkov^c, A. V. Priezzhev^d,

^aSaratov State University, Saratov, Russia;

^bSamara University, Samara, Russia, ^cYuri Gagarin State Technical University of Saratov, Russia, ^dM.V. Lomonosov Moscow State University, Moscow, Russia

Saratov time

14:00-14:30

PLENARY LECTURE

Using metabarcoding in entomology

Vasily V. Anikin; Saratov State University, Saratov, Russia

14:30-14:50

On the 140th anniversary of the birth of Niels Bohr (1885-1962). The light and life of a thinker

Boris A. Medvedev;

Saratov State University, Saratov, Russia

14:50-15:10

Some aspects of the phenomenon of mentoring: from Aristotle to A. Badiou

Natal'ya V. Dovgalenko;
Saratov State Technical University, Saratov,
Russia

15:10-15:30

Infinity problems in mathematics and physics

Victor V. Rozen;
Saratov State University, Saratov,
Russia

12:00-12:30

Number systems from the Nile to Setun

Boris L. Faifel;
Saratov State Technical University, Saratov,
Russia

15:30-15:50
Coffee break

15:50-16:10

Quantum Optics and Groundworks for Modern Quantum Information Theory

Alexander V. Gorokhov;
Samara State University, Saratov, Russia

16:10-16:30

Wave and Stone..." (On the 100th Anniversary of the Creation of Quantum (Matrix) Mechanics)

Michael M. Stolnitz;
Saratov State University, Saratov
Russia

16:30-16:50

Top down education concept for hi-tech and natural sciences

Ivan V. Fedosov;
Saratov State University, Saratov, Russia

16:50-17:10

The phenomenon of mathematical intuition: are there "shortest paths" in cognition?

Yuliya M. Duplinskya;
Saratov State University, Saratov, Russia

17:10-17:30

Quantum transition time and photon coherence

Valery I. Tsoy;
Saratov State University, Saratov, Russia

17:30-17:50

Do conflicts in Nature and society contradict the principle of plot complementarity?

Oleg V. Schimelfenig;
Saratov State University, Saratov, Russia

**JOINT POSTER/INTERNET SESSION AND
INTERNET DISCUSSION
(Online)**

1H. Comparative optical analysis of the composition of apples under different processing conditions

Elena V. Timchenko¹, Lidiia P. Timchenko²,
Anna P. Kudrysheva²;
¹Samara University, Samara, Russia;
²MBOU "Technical Lyceum", Samara,
Russia

2H. Search for neutrinos with energies above 200 TeV at the Baikal neutrino telescope

Andrew D. Yankevich;
Moscow State University, Moscow, Russia