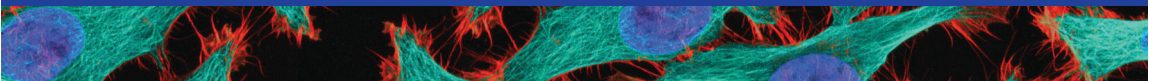


# Программа



## 3-я Школа ADFLIM

для молодых ученых, аспирантов и студентов

Сентябрь 24-28, 2018 г.

Саратовский государственный университет

### Организаторы:



### Генеральные спонсоры:



### Спонсоры:



**SEPTEMBER, 24 MONDAY**

9.00-14.00	<b>REGISTRATION, BUILDING 10 FOYER</b>		
10.20-10.30	<b><u>INTRODUCTION TO ADFLIM/SFM EDUCATIONAL PROGRAM</u></b>	<b>ALEXANDER P. SAVITSKY, RESEARCH CENTER OF BIOTECHNOLOGY OF THE RAS, MOSCOW, RUSSIA VALERY TUCHIN, SARATOV STATE UNIVERSITY, RUSSIA</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
<b>ADFLIM/SFM PLENARY SESSION I</b>			
<b>CHAIRS: Valery V. Tuchin, Saratov State University, Russia Alexander P. Savitsky, Research Center of Biotechnology of the RAS, Moscow, Russia</b>			
10.30-11.10	<b>QUANTIFYING STABILITY IN DETERMINISTIC AND STOCHASTIC COMPLEX SYSTEMS</b>	<b>JÜRGEN KURTHS, HUMBOLDT UNIVERSITY, PHYSICS DEPARTMENT AND POTSDAM INSTITUTE FOR CLIMATE IMPACT RESEARCH, POTSDAM, GERMANY</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
11.10-11.50	<b>OPTICAL STUDY OF MOLECULAR AND MICRORHEOLOGIC MECHANISMS OF INTERACTION AND ALTERATION OF BLOOD COMPONENTS IN THE MICROCIRCULATORY SYSTEM</b>	<b>ALEXANDER V. PRIEZZHEV, M.V. LOMONOSOV MOSCOW STATE UNIVERSITY, RUSSIA</b>	
11.50-12.20	<b>COFFEE BREAK, BUILDING 10</b>		
<b>ADFLIM/SFM PLENARY SESSION II</b>			
<b>CHAIRS: Alexander P. Savitsky, Research Center of Biotechnology of the RAS, Moscow, Russia Valery V. Tuchin, Saratov State University, Russia</b>			
12.20-13.00	<b>BIOLOGICAL TISSUE OPTICS AND OPTICAL CLEARING</b>	<b>VALERY V. TUCHIN, SARATOV STATE UNIVERSITY, RUSSIA</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
13.00-14.00	<b>LUNCH</b>		
14.00-15.00	<b><u>OSA SHORT COURSE:</u> DIFFUSE LASER SPECKLES AND THEIR STATISTICS FOR NON-INVASIVE, DEEP TISSUE BLOOD FLOW MEASUREMENTS (PART I)</b>	<b>TURGUT DURDURAN, ICREA PROFESSOR AT ICFO-THE INSTITUTE OF PHOTONIC SCIENCES, BARCELONA, SPAIN</b>	<b>BUILDING 10 HALL 503</b>
15.00-15.30	<b>COFFEE BREAK, BUILDING 10</b>		
15.30-16.30	<b><u>OSA SHORT COURSE:</u> DIFFUSE LASER SPECKLES AND THEIR STATISTICS FOR NON-INVASIVE, DEEP TISSUE BLOOD FLOW MEASUREMENTS (PART II)</b>	<b>TURGUT DURDURAN, ICREA PROFESSOR AT ICFO-THE INSTITUTE OF PHOTONIC SCIENCES, BARCELONA, SPAIN</b>	<b>BUILDING 10 HALL 503</b>

**ADFLIM/SFM PLENARY SESSION III**

CHAIRS: Valery V. Tuchin, Saratov State University, Russia

Alexander P. Savitsky, Research Center of Biotechnology of the RAS, Moscow, Russia

16.40-17.20	<b>PLASMONIC SERS TAGS WITH EMBEDDED RAMAN MOLECULES FOR BIOIMAGING AND SENSING APPLICATIONS</b>	<b>NIKOLAI G. KHEBTSOV, INSTITUTE OF BIOCHEMISTRY AND PHYSIOLOGY OF PLANTS AND MICROORGANISMS OF THE RAS, SARATOV STATE UNIVERSITY, RUSSIA</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
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17.20-17.40 **COFFEE BREAK, BUILDING 10****ADFLIM/SFM PLENARY SESSION IV**

CHAIRS: Valery V. Tuchin, Saratov State University, Russia

Alexander P. Savitsky, Research Center of Biotechnology of the RAS, Moscow, Russia

17.40-18.20	<b>OPTICAL DOSIMETRY OF EXTRAORAL PHOTOBIOMODULATION THERAPY OF OROPHARYNGEAL MUCOSITIS IN PEDIATRIC PATIENTS UNDERGOING HEMATOPOIETIC CELL TRANSPLANTATION</b>	<b>ANNA N. YAROSLAVSKY, ADVANCED BIOPHOTONICS LABORATORY AT THE DEPARTMENT OF PHYSICS, UNIVERSITY OF MASSACHUSETTS, LOWELL, USA</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
18.20-19.00	<b>MICROSCOPY OF THE BRAIN ON THE BASIS OF GENERATION OF OPTICAL HARMONICS: IN SEARCH OF OPTIMUM</b>	<b>ILYA FEDOTOV, MOSCOW STATE UNIVERSITY, RUSSIA</b>	

**SEPTEMBER 25, TUESDAY**9.00-14.00 **REGISTRATION, BUILDING 10 FOYER**

10.00-11.00	<b><u>SPIE SHORT COURSE:</u> FLUORESCENCE GUIDED PROCEDURES AND PHOTODYNAMIC THERAPY IN NEUROSURGERY</b>	<b>RONALD SROKA, LIFE-CENTER AT DEPARTMENT OF UROLOGY AT HOSPITAL OF UNIVERSITY OF MUNICH, MUNICH, GERMANY</b>	<b>BUILDING 10 HALL 503</b>
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11.00-11.30 **COFFEE BREAK, EXIBITION BUILDING 10**

11.30-12.30	<b><u>SPIE SHORT COURSE:</u> FLUORESCENCE GUIDED PROCEDURES AND PHOTODYNAMIC THERAPY IN NEUROSURGERY</b>	<b>RONALD SROKA, LIFE-CENTER AT DEPARTMENT OF UROLOGY AT HOSPITAL OF UNIVERSITY OF MUNICH, MUNICH, GERMANY</b>	<b>BUILDING 10 HALL 503</b>
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12.30-14.00 **LUNCH**

14.00-14.20	<b><u>OPENING OF SFM AND ADFLIM</u></b>	<b>VALERY TUCHIN, SARATOV STATE UNIVERSITY, RUSSIA ALEXANDER SAVITSKY, RESEARCH CENTER OF BIOTECHNOLOGY OF THE RAS, MOSCOW, RUSSIA WOLFGANG BECKER, BECKER&amp;HICKL GMBH, GERMANY</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
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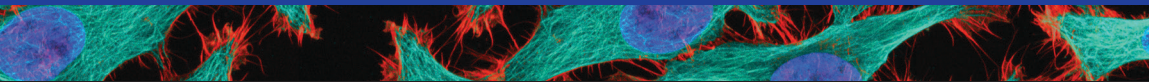
<b>ADFLIM/SFM PLENARY SESSION V</b>			
<b>CHAIR: Wolfgang Becker, Becker&amp;Hickl GmbH, Berlin, Germany</b>			
14.20–15.00	<b>HOW TO MEASURE TISSUE BLOOD FLOW NON-INVASIVELY WITH LIGHT AND WHAT ARE THE CURRENT TRENDS?</b>	<b>TURGUT DURDURAN, ICFO-THE INSTITUTE OF PHOTONIC SCIENCES, BARCELONA, SPAIN</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
15.00–15.40	<b>ADVANCED TECHNOLOGIES FOR BRAIN</b>	<b>METIN AKAY, UNIVERSITY OF HOUSTON, USA</b>	
15.40-16.10	<b>COFFEE BREAK, EXIBITION BUILDING 10</b>		
<b>ADFLIM/SFM PLENARY SESSION VI</b>			
<b>CHAIR: Turgut Durduran, ICFO-The Institute of Photonic Sciences, Barcelona, Spain</b>			
16.10-16.50	<b>APPROACHES OF THE MOLECULAR IMAGING AND MACHINE LEARNING FOR MEDICAL APPLICATIONS</b>	<b>YURI V. KISTENEV TOMSK STATE UNIVERSITY, SIBERIAN STATE MEDICAL UNIVERSITY</b>	<b>BUILDING 10 MAIN CONFERENCE HALL</b>
16.50-17.30	<b>PHOTONIC AND MAGNETIC NANOPARTICLES FOR HEALTH, ENERGY, AND BIOSENSING</b>	<b>T. RANDALL LEE, UNIVERSITY OF HOUSTON, USA</b>	
17.30-18.10	<b>SUPERCONDUCTING THIN FILM NANOSTRUCTURES AS TERAHERTZ AND INFRARED HETERODYNE AND DIRECT DETECTORS</b>	<b>GRIGORY N. GOLTSMAN, MOSCOW STATE PEDAGOGICAL UNIVERSITY, RUSSIA</b>	
<b>SFM SPECIAL EVENT</b>			
<b>CHAIR: Valery V. Tuchin, Saratov State University, Russia</b>			
18.10-18.40	<b>TIME-RESOLVED SINGLE PHOTON DETECTION FOR ULTRAFAST LIFETIME IMAGING AND ENHANCED SUPERRESOLUTION STED IMAGING</b>	<b>MATHIAS BAYER, SALES AND APPLICATION SPECIALIST FOR MICROSCOPY, PICOQUANT (TECHNOINFO), GERMANY</b>	
19.00-22.00	<b>WELCOME PARTY (EXTRA PAYMENTS) UNIV. CAMP</b>		
<b>WEDNESDAY, SEPTEMBER, 26</b>			
9.00-10.00	<b>SPIE SHORT COURSE: OPTICAL DOSIMETRY OF CLINICAL LIGHT TREATMENTS</b>	<b>ANNA N. YAROSLAVSKY ADVANCED BIOPHOTONICS LABORATORY AT THE DEPARTMENT OF PHYSICS, UNIVERSITY OF MASSACHUSETTS, LOWELL, USA</b>	<b>BUILDING 10 HALL 503</b>
10.00-10.30	<b>COFFEE BREAK, EXIBITION BUILDING 10</b>		
10.30-11.30	<b>SPIE SHORT COURSE: OPTICAL DOSIMETRY OF CLINICAL LIGHT TREATMENTS</b>	<b>ANNA N. YAROSLAVSKY ADVANCED BIOPHOTONICS LABORATORY AT THE DEPARTMENT OF PHYSICS, UNIVERSITY OF MASSACHUSETTS, LOWELL, USA</b>	<b>BUILDING 10 HALL 503</b>

<b>ADFLIM SESSION I</b>			
<b>CHAIR: Francesco S. Pavone</b> , European Lab. for Non-linear Spectroscopy, Florence, Italy			
11.40-12.20	<b>THE MULTI-DIMENSIONAL WORLD OF TCSPC FLIM</b>	<b>WOLFGANG BECKER, BECKER&amp;HICKL GMBH, GERMANY</b>	<b>BUILDING 10 HALL 503</b>
12.20-13.00	<b>FRET FOR BIOCHEMICAL APPLICATION: PRINCIPLES AND MODE OF MEASUREMENTS</b>	<b>ALEXANDER P. SAVITSKY, RESEARCH CENTER OF BIOTECHNOLOGY OF THE RAS, MOSCOW, RUSSIA</b>	
13.00-14.00	<b>LUNCH</b>		
<b>ADFLIM SESSION II</b>			
<b>CHAIR: Vladislav Shcheslavskiy</b> , Becker&Hickl GmbH, Berlin, Germany			
14.00-14.20	<b>FAST-ACQUISITION TCSPC FLIM WITH 25 ps IRF WIDTH</b>	<b>WOLFGANG BECKER, BECKER&amp;HICKL GMBH, GERMANY</b>	<b>BUILDING 10 HALL 503</b>
14.20-15.00	<b>DEVELOPMENT OF NEW PROTEIN-BASED OPTICAL TRIGGERS FOR PICOSECOND TIME-RESOLVED FLUORESCENCE SPECTROSCOPY</b>	<b>EUGENE MAKSIMOV FACULTY OF BIOLOGY, MOSCOW STATE UNIVERSITY, RUSSIA</b>	
15.00-15.40	<b>FLUORESCENCE MICROSCOPY OF SINGLE PARTICLES AND IT APPLICATIONS TO THE STUDY OF STRUCTURE AND INTERACTIONS OF NUCLEOSOMES</b>	<b>ALEXEY FEOFANOV, FACULTY OF BIOLOGY, MOSCOW STATE UNIVERSITY, RUSSIA</b>	
15.40-16.20	<b>NEW TOOLS FOR FUNCTIONAL MICROSCOPY AND IMAGE CONTENT EXTRACTION RELATED TO SUPER RESOLUTION CONFOCAL MICROSCOPY</b>	<b>GIORGIO MODESTI, LEICA MICROSYSTEMS, EUROPEAN FIELD SUPPORT TEAM, ROMA, ITALY</b>	
16.30-17.00	<b>COFFEE BREAK, EXIBITION BUILDING 10</b>		
<b>ADFLIM SESSION III</b>			
<b>CHAIR: Alexey Feofanov</b> , Faculty of Biology, Moscow State Universtiy, Russia			
17.00-17.40	<b>MACROIMAGING WITH TIME RESOLUTION</b>	<b>VLADISLAV SHCHESLAVSKIY, BECKER&amp;HICKL GMBH, BERLIN, GERMANY</b>	
20.00-22.00	<b>SOCIAL PROGRAM (VOLGA BOAT TOUR) (EXTRA PAYMENTS)</b>		
<b>THURSDAY, SEPTEMBER, 27</b>			
<b>ADFLIM SESSION IV</b>			
<b>CHAIR: Wolfgang Becker</b> , Becker&Hickl GmbH, Berlin, Germany			
9.00-9.40	<b>DETERMINATION OF INTRACELLULAR CHLORIDE CONCENTRATION IN NEURONAL TISSUE BY FLUORESCENCE LIFETIME MICROSCOPY</b>	<b>GENSCH THOMAS, RESEARCH CENTRE JÜLICH, GERMANY</b>	<b>BUILDING 10 HALL 503</b>
9.40-10.20	<b>ADVANCED IMAGING TECHNIQUES FOR SURVEYING THE INTERACTIONS AND DYNAMICS OF VIRAL AND BACTERIAL PROTEINS</b>	<b>YVES MELY, UNIV. STRASBOURG, FRANCE</b>	
10.20-10.40	<b>НОВЫЕ РЕШЕНИЯ В ОБЛАСТИ ОПТИЧЕСКОЙ МИКРОСКОПИИ ОТ КОМПАНИИ NIKON (NEW SOLUTIONS IN OPTICAL MICROSCOPY FROM NIKON)</b>	<b>ZYKOV PAVEL, BIOVITRUM LLC, RUSSIA</b>	

10.40-11.00	NIKON STORM 5.0: ФЛУОРЕСЦЕНТНАЯ МИКРОСКОПИЯ ЖИВЫХ КЛЕТОЧНЫХ КУЛЬТУР СО СВЕРХВЫСОКИМ РАЗРЕШЕНИЕМ (NIKON STORM 5.0: MICROSCOPY OF LIVE CELL CULTURE WITH SUPER RESOLUTION)	TATIANA SMIRNOVA, NIKON, RUSSIA	
11.00-11.30	COFFEE BREAK, EXIBITION BUILDING 10		
<b>ADFLIM SESSION V</b>			
<b>CHAIR: Vladislav Shcheslavskiy, Becker&amp;Hickl GmbH, Berlin, Germany,</b>			
11.30-12.10	QUANTITATIVE SINGLE-MOLECULE FRET MEASUREMENTS OF $F_0F_1$ -ATP SYNTHASE AT WORK IN AN ABELTRAP	MICHAEL BOERSCH, JENA UNIVERSITY, JENA, GERMANY	BUILDING 10 HALL 503
12.10-12.30	MULTIPHOTON LABEL-FREE IMAGING OF PROCESSES IN THE HUMAN SKIN	EUGENIY SHIRHSIN, M.V. LOMONOSOV MOSCOW STATE UNIVERSITY, RUSSIA	
12.30-12.50	MICROSCOPY OF THE BRAIN ON THE BASIS OF GENERATION OF OPTICAL HARMONICS: IN SEARCH OF OPTIMUM	ALEXEY FEDOTOV, MOSCOW STATE UNIVERSITY, RUSSIA	
12.50-13.10	ПРИМЕНЕНИЕ ФЕМТОСЕКУНДНЫХ ЛАЗЕРОВ В БИОФИЗИКЕ И ФИЗИЧЕСКОЙ МЕДИЦИНЕ (FEMTOSECOND LASER APPLICATION IN BIOPHISICS AND PHYSICS MEDICINE)	CHERNYKH DMITRIY, AVESTA LLC, LEBEDEV PHYSICAL INSTITUTE OF THE RAS, MOSCOW, RUSSIA	
13.10-13.30	ИНТЕГРАЦИЯ КОНФОКАЛЬНОГО, БЛИЖНЕПОЛЕВОГО ОПТИЧЕСКОГО И АТОМНО-СИЛОВОГО МИКРОСКОПОВ. ОДНОФОТОННЫЕ ИЗМЕРЕНИЯ (INTEGRATION OF CONFOCAL, NEAR-FIELD OPTICAL AND ATOMIC FORCE MICROSOPE. SINGLE PHOTON MEASUREMENTS)	VLADIMIR SHERSHULIN, AZIMUTH PHOTONICS LLC, MOSCOW, RUSSIA	
13.30-14.30	LUNCH		
14.00-15.00	PUBLIC LECTURE SESSION MODERN OPTICS		BUILDING 3,BIG PHYSICAL HALL
14.30-16.30	Lecture sessions of SFM		SFM PROGRAM
16.30-17.00	COFFEE BREAK, EXIBITION		BUILDING 3
17-00-18-30	SFM INTERNET PLENARY SESSION IX		BUILDING 3,BIG PHYSICAL HALL
18.30-19.30	JOINT POSTER/INTERNET SESSION. COMPETITION FOR THE BEST STUDENT POSTER AWARD Chair: Ivan V. Fedosov, Saratov State University, Russia		BUILDING 3, 1-3 <sup>RD</sup> FLOOR HALL

**FRIDAY, SEPTEMBER, 28****ADFLIM SESSION VI****CHAIR: Vladislav Shcheslavskiy**, Becker&Hickl GmbH, Berlin, Germany

9.00-9.40	FLUORESCENCE AND OPTOACOUSTICS DEEP TISSUE IMAGING	ILYA TURCHIN, INSTITUTE OF APPLIED PHYSICS OF THE RAS, NIZHNIY NOVGOROD, RUSSIA	BUILDING 10 HALL 503
9.40-10.20	FLUORESCENCE LIFE TIME IMAGING OF TUMOR METABOLISM: FROM CELLS TO PATIENTS	ELENA ZAGAYNOVA, PRIVOLZHISKY RESEACRH MEDICAL UNIVERSITY	
10.20-11.00	PHOSPHORESCENT COMPLEXES FOR FUNCTIONAL IMAGING	SERGEY TUNIK, SAINT- PETERSBURG STATE UNIVERSITY, RUSSIA	
11.00-11.30	<b>COFFEE BREAK, EXIBITION BUILDING 10</b>		
<b>ADFLIM SESSION VII</b>			
<b>CHAIR: Alexander P. Savitsky</b> , Research Center of Biotechnology of the RAS, Moscow, Russia			
11.30-12.10	BIOMEDICAL PHOTONICS OF SINGLET AND TRIPLET OXYGEN	ALEXANDER A. KRASNOVSKY RESEARCH CENTER OF BIOTECHNOLOGY OF THE RAS, MOSCOW, RUSSIA	BUILDING 10 HALL 503
12.10 – 13.00	WINNERS AWARD ADFLIM CLOSING	WOLFGANG BECKER, BECKER&HICKL GMBH, GERMANY VALERY V. TUCHIN, SARATOV STATE UNIVERSITY, RUSSIA ALEXANDER P. SAVITSKY, RESEARCH CENTER OF BIOTECHNOLOGY OF THE RAS, MOSCOW, RUSSIA	
14.00-18.00	<b>OPEN AIR DINNER (EXTRA PAYMENTS)</b>		



# **3rd ADFLIM School**

**for young scientists & students**  
**September 24-28, 2018**  
**Saratov State University**