

**10th International Symposium on Display  
Holography  
(ISDH-2015)**

Organized by

**ITMO University**

in collaboration with

**Hellenic Institute of Holography**

Book of Abstracts

28 June – 03 July, 2015  
Saint-Petersburg, Russia

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Saint Petersburg  
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## **SESSIONS AND CHAIRS:**

### **Opening Session**

Hans I. Bjelkhagen (UK)  
Sergey Stafeev (Russia)

### **Session 1 History, Culture, and Education**

Alec Jeong (USA)  
Pearl John (UK)

### **Session 2 Art Concepts and Techniques**

Martin Richardson (UK)  
Jonathan Ross (UK)

### **Session 3 Recording Materials, Processing**

Yves Gentet (France)  
Michael Shevtsov (Russia)

### **Session 4 Electronic, Digital, and Computer Generated Holography**

V. Michael Bove Jr. (USA)  
David Brotherton-Ratcliffe (UK)

### **Session 5 Technical Applications**

Boris Turuhano (Russia)  
Igor Denisyuk (Russia)

### **Session 6 Color Holography**

Hans I. Bjelkhagen (UK)  
Andreas Sarakinos (Greece)

### **Session 7 The Business of Holography**

Hugues Souparis (France)  
Frank C. Fan (China)

### **Session 8 Youth Sessoin & Workshop**

Igor Gurov (Russia)  
Victor Dyomin (Russia)  
Olga Andreeva (Russia)

The ISDH 2015 will be held in **memoriam of Yuri N. Denisyuk**, the Russian inventor of display holography, who graduated from ITMO University and was a professor at this university for many years.

## GENERAL INFORMATION

ITMO University, 49 Kronverksky pr., Saint-Peterburg, 197101, Russia

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**Web-site:** [www.isdh2015.ifmo.ru](http://www.isdh2015.ifmo.ru)

### Conference venue

The ISDH-2015 is being held in Saint-Petersburg, the second largest city of Russia. The International Pulkovo Airport in Saint Petersburg is approximately 30 km from the city center. The ISDH-2015 is located near the historical city center.

Opening of the symposium and sessions will be held in the St. Petersburg Scientific center of the Russian Academy of Sciences.

Address: Universitetskaya emb. 5, St. Petersburg, Russia

Opening of the Yu.N. Denisyuk Memorial plaque, Youth Section and Workshops will be held at Cadetskaya line 3 (ITMO University).

### Languages

The official language of the Symposium is English.

### Exhibition

The exhibition **Magic of Light** will be opened on

**Wednesday, 1 July at 18:30.**

(14, Birzhevaya Liniya, ITMO University)

## GENERAL SYMPOSIUM SCHEDULE

	Mon, 29 June	Tue, 30 June	Wed, 1 July	Thu, 2 July	Fri, 3 July
9:00		Session 2. Art Concepts & Techniques	Session 3. Recording Materials & Processing	Session 5. Technical Applications	Session 7. The Business of Holography
9:30	Opening ceremony, Greetings				
10:00					
10:30	Plenary session				
11:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:30	Plenary session	Session 2. Art Concepts & Techniques	Session 4. Electronic, Digital & CGH	Session 5. Technical Applications	Closing Remarks
12:00					
12:30					
13:00				Lunch	Lunch
13:30		Lunch	Lunch		
14:00	Lunch	Yu.N. Denisyuk Memorial plaque opening	Session 4. Electronic, Digital & CGH	Session 6. Color Holography	Youth Session, Workshop
14:30					
15:00	Session 1. History, Culture, and Education	Round table in memoriam of Yu. Denisyuk	Coffee Break	Coffee Break	
15:30					
16:00	Coffee Break				
16:30	Session 1. History, Culture, and Education	Coffee Break	Session 4. Electronic, Digital & CGH	Session 6. Color Holography	
17:00					
17:30	Photosession	Art Forum			
18:00					
18:30	Welcome Reception on the boat		Exhibition opening	Poster Session	
19:00					
19:30					
20:00					
21:00				Farewell Party	
21:30					

# SYMPOSIUM PROGRAM

**Sunday, June 28**

TIME	EVENTS
15.00 – 20.00 Lobby, staircase	Registration

**Monday, June 29**

TIME	EVENTS
8.30 – 15.00 Lobby, staircase	Registration (will be available during next two days)
9.45– 10.00 Grand Hall	<b>Opening Ceremony</b> <i>Chairs: Hans I. Bjelkhagen (UK), Sergey K. Stafeev (Russia)</i>
10.00 - 10.40 Grand Hall	<b>Greetings:</b> <i>Vladimir N. Vasilev, rector ITMO University</i> <i>Representative of the Governor of Saint-Petersburg</i> <i>Representative of the Russian Academy of Sciences</i> <i>Leonid V. Tanin, Holography society of CIS countries</i>
10.40 - 11.10 Grand Hall	<b>Plenary Session</b> <i>Chairs: Hans I. Bjelkhagen (UK), Sergey K. Stafeev (Russia)</i>
10.45 - 11.10	"HOLOGRAPHY: CULTURE, ART AND INFORMATION TECHNOLOGY", <i>by Alec Jeong (USA) (invited)</i>
11.10 – 11.30 Corridor	Coffee break
11.30 - 13.45 Grand Hall	<b>Plenary Session</b> <i>Chairs: Hans I. Bjelkhagen (UK), Sergey K. Stafeev (Russia)</i>
11.30 – 11.50	"FROM WAVE PHOTOGRAPHY TO 3D HOLOGRAPHY AND BEYOND", <i>by Vladimir Markov (USA) (invited)</i>
11.55 - 12.15	"DISPLAY HOLOGRAPHY: A DISAPPOINTING HISTORY BUT A BRIGHT FUTURE?", <i>by Ian M. Lancaster (UK) (invited)</i>
12.20 – 13.45	<i>Reports from the Nations</i>
13.45 – 15.00	Lunch
15.00 – 16.00 Grand Hall	<b>Session 1. History, Culture, and Education</b> <i>Chairs: Alec Jeong (USA), Pearl John (UK)</i>
15.00 – 15.20	"HOLOGRAPHY FOR ALL", <i>by Pedro Pombo, Emanuel Santos, Carolina Magalhães (Portugal)</i>
15.20 – 15.40	"ADVANCE IN HOLOGRAPHY FIELD IN THE TERRITORY OF THE FORMER SOVIET UNION", <i>by Leonid V. Tanin (Belarus) (invited)</i>
15.40 – 16.00	"IMAGE HOLOGRAPHY IN THE EDUCATIONAL PROCESS OF SAINT-PETERSBURG POLYTECHNICAL UNIVERSITY", <i>by Sergey Gulyaev (Russia)</i>

TIME	EVENTS
16.00 – 16.30 Corridor	Coffee break
16.30 – 17.00 Grand Hall	<b>Session 1. History, Culture, and Education</b> <i>Chairs: Tung H. Jeong (USA), Pearl John (UK)</i>
16.30 – 16.50	"COLLECTING AND EXHIBITING HOLOGRAMS", <i>by Jonathan Ross (UK)</i>
16.50 – 17.10	"OPAL: THE NATURAL PHOTONIC CRYSTAL", <i>by Francesco Mazzero</i>
17.10 – 17.40	PHOTOSESSION
18.30 – 20.30	Welcome Reception on the boat

## Tuesday, June 30

TIME	EVENTS
9.00– 11.00 Grand Hall	<b>Session 2. Art Concepts &amp; Techniques</b> <i>Chairs: Martin Richardson (UK), Jonathan Ross (UK)</i>
9.00 – 9.15	"REFLECTIVE HOLOGRAPHY", <i>by Maria Isabel Azevedo (Portugal), Martin Richardson (UK), Elizabeth Sandford-Richardson (UK), Luís Miguel Bernardo (Portugal), Helder Crespo (Portugal)</i>
9.15 – 9.30	"RECOVERY OF EXCAVATION SCENE OF YUAN BLUE AND WHITE PORCELAIN THROUGH DIGITAL HOLOGRAPHY", <i>by Shuo Wang, Ardeshir Osanlou, Peter Excell (UK)</i>
9.30 – 9.45	"MERGING THE MATERIAL WITH THE IMMATERIAL", <i>by Richard Bruck (USA)</i>
9.45 – 10.00	"COMMUNICATING IN 3D VISIBLE LANGUAGE", <i>by Yin-Ren Chang, Martin Richardson (UK)</i>
10.00 – 10.15	"HOLOGRAPHY AS AN ARCHITECTURAL DECORATION", <i>by Setsuko Ishii (Japan)</i>
10.15 – 10.30	"AN EVALUATION OF AN ART HOLOGRAPHY EXHIBITION: SHOULD ARTISTS CARE WHAT PEOPLE THINK?", <i>by Pearl John (UK)</i>
10.30 – 10.45	"HOLOGRAPHIC 3-D PRINTING IN POLYMERIC MATERIALS", <i>by Nadezda Vorzobova, Vera Bulgakova (Russia)</i>
10.45 – 11.00	"WHAT WAS I THINKING WHEN I THOUGHT PRODUCING FOUR BY FIVE FOOT DENISYUK DCG HOLOGRAMS WAS A GOOD IDEA", <i>by John August Muth (USA)</i>
11.00 – 11.30 Corridor	Coffee break
11.30 – 13.00 Grand Hall	<b>Session 2. Art Concepts and Techniques</b> <i>Chairs: Martin Richardson (UK), Jonathan Ross (UK)</i>
11.30 – 11.45	"HOLOGRAPHY IN DESIGN", <i>by Ray Park, Elena Stoykova, Hoonjong Kang (South Korea)</i>
11.45 – 12.00	"AN INTERACTIVE HOLOGRAPHIC DISPLAY SYSTEM", <i>by Martin Richardson, Vivian Suresh Kumar Amos (UK)</i>



TIME	EVENTS
12.00 – 12.15	"HOLOGRAMS IN CAVES", <i>by Julio Ruiz, Luis Roves (Spain)</i>
12.15 – 12.30	"MEDICAL 3D DIGITAL HOLOGRAPHIC IMAGING FROM INDIVIDUAL ORGANS TO THE WHOLE HUMAN ANATOMY", <i>by Javid Khan (UK)</i>
12.30 – 12.45	"CREATING STEREOGRAMS ON AN iPhone", <i>by Patrick Boyd (UK)</i>
12.45 – 13.00	"ARTISTIC HOLOGRAPHY AS A TYPOLOGY BELONGING TO THE VIRTUALLY THREE-DIMENSIONAL ARTS", <i>by Nuno Miguel José Janardo (Portugal)</i>
13.00 – 14.00	Lunch
14.00 – 14.30 Cadetskaya line, 3	Opening of the Yu. Denisyuk's Memorial Desk
15.00 – 16.30 Grand Hall	Round table in memoriam of Yu. Denisyuk <i>Chair: academician Eugene Aleksandrov (Russia)</i>
16.30 – 16.50 Corridor	Coffee break
17.00 – 19.00 Small Hall	Art Forum. An opportunity To Voice Your Opinion <i>Chair: Martin Richardson (UK)</i>

### Wednesday, July 1

TIME	EVENTS
9.00– 11.00 Grand Hall	<b>Session 3. Recording Materials &amp; Processing</b> <i>Chairs: Yves Gentet (France), Michael Shevtsov (Russia)</i>
9.00 – 9.20	"DISPLAY HOLOGRAPHY AND NANOPLASMONICS", <i>by Olga Andreeva (Russia)</i>
9.20 – 9.40	"EFFECTS OF NONLINEARITY AND FINITE SPATIAL RESOLUTION OF SILVER HALIDE RECORDING MATERIALS ON THE RECONSTRUCTED HOLOGRAPHIC IMAGE", <i>by István Bányász (Hungary)</i>
9.40 – 10.00	"HOLOGRAPHIC METHODS OF DIFFUSERS FORMATION ON SILVER HALIDE PHOTOGRAPHIC EMULSIONS", <i>by Nina Ganzherli, Sergey Gulyaev, Irina Maurer, Dmitriy Chernykh (Russia)</i>
10.00 – 10.20	"DIRECT LASER RECORDING OF DOT HOLOGRAMS ON AMORPHOUS SILICON FILM", <i>by Askar Kutanov, Zamirgul Kazakbaeva (Kyrgyzstan)</i>
10.20 – 10.40	"CHARACTERISTICS OF NRC "KURCHATOV INSTITUTE" MATERIALS FOR COLOR HOLOGRAPHIC RECORDING", <i>by Nadezda Vorzobova, Roze Ryabova (Russia)</i>
10.40 – 11.00	"RECORDING MATERIAL "ULTIMATE" FOR DISPLAY HOLOGRAPHY AND HOE's", <i>by Yves Gentet (France)</i>
11.00 – 11.30	Coffee break - Corridor
11.30 – 13.00	<b>Session 4. Electronic, Digital &amp; CGH</b>

TIME	EVENTS
<b>Grand Hall</b>	<i>Chairs: V. Michael Bove Jr. (USA), David Brotherton-Ratcliffe (UK)</i>
11.30 – 11.45	"A MORE INTUITIVE APPROACH TO DIFFRACTION IN VOLUME OPTICAL GRATINGS AND HOLOGRAMS", <i>by David Brotherton-Ratcliffe (UK) (invited)</i>
11.45 – 12.00	"VISUALIZATION OF COMPLEX MEDICAL DATA USING NEXT-GENERATION HOLOGRAPHIC TECHNIQUES", <i>by Michael Page (Canada) (invited)</i>
12.00 – 12.15	"PROGRESS IN FULL-COLOR HOLOGRAPHIC DISPLAYS BASED AROUND ANISOTROPIC LEAKY-MODE MODULATORS", <i>by V. Michael Bove Jr., Sundeep Jolly, Ermal Dreshaj, Nickolaos Savidis Daniel Smalley (USA)</i>
12.15 – 12.30	"IMAGE FORMATION OF HOLOGRAM RECONSTRUCTION BY LIQUID CRYSTAL ON SILICON DEVICE", <i>by Chau-Jern Cheng, Chung-Hsin Wu, Han-Yen Tu, Junchang Li and Jinbin Gui (Taiwan)</i>
12.30 – 12.45	"A FAST OCCLUSION EFFECT CALCULATION METHOD BY MULTI-VIEW INVERSE ORTHOGRAPHIC PROJECTION IN 3D HOLOGRAPHIC DISPLAY", <i>by Jia Jia, Juan Liu, Guofan Jin, Yongtian Wang (China)</i>
12.45 – 13.00	"INTEGRATED SOLUTION FOR HOE BASED HOLOGRAPHIC PRINTER", <i>by Alexander Morozov, Andrew Putilin, Hong-Seok Lee, Vladislav Druzhin, German Dubinin, Sergey Kopenkin, Yuriy Borodin, Sunll Kim, ChilSung Choi (Russia)</i>
13.00 – 14.00	Lunch
14.00 – 15.45 <b>Grand Hall</b>	<b>Session 4. Electronic, Digital &amp; CGH</b> <i>Chairs: V. Michael Bove Jr. (USA), David Brotherton-Ratcliffe (UK)</i>
14.00 – 14.15	"COLOR HOLOGRAPHIC WAVEFRONT PRINTER", <i>by Hoonjong Kang, Elena Stoykova, Youngmin Kim, Sunghee Hong, Joosup Park, Jisoo Hong (South Korea)</i>
14.15 – 14.30	"HOLOGRAPHIC IMAGE PROJECTION WITH DOUBLED FIELD OF VIEW BY HALF-PIXEL SHIFT ALIGNMENT OF TWO SPATIAL LIGHT MODULATORS", <i>by Seyedmahdi Kazempourradi, Deniz Mengü, Kivanc Hedili, Erdem Ulusoy, Hakan Urey (Turkey)</i>
14.30 – 14.45	"A REVIEW OF DESIGN CONSIDERATIONS AND PRACTICAL IMPLEMENTATION OF 3D ELECTRO-HOLOGRAPHIC DISPLAYS", <i>by Javid Khan (UK)</i>
14.45 – 15.00	"FOURIER ZOOM-IN AND WIDE RANGE ANGULAR SPECTRUM METHOD", <i>by Yong-Hae Kim, Chun-Won Byun, Himchan Oh, Jae-Eun Pi, Ji-Hun Choi, Gi Heon Kim, Myung-Lae Lee, Hojun Ryu, Chi-Sun Hwang (South Korea)</i>
15.00 – 15.15	"THE QUALITY INSPECTION METHOD OF SECURITY HOLOGRAMS", <i>by Vasily Kolyuchkin, Sergey Odinkov, Yevgeny Talalaev, Ivan Tsyganov (Russia)</i>
15.15 – 15.30	"COMPUTER-GENERATED FOURIER HOLOGRAM IN OPTICAL DEVICE OF VISUAL OBSERVATION", <i>by Evgenii Zlokazov, Sergey Odinkov, Aleksandr Betin, Sergey</i>

TIME	EVENTS
	<i>Donchenko, Mikhail Kovalev, Vladimir Talalaev (Russia)</i>
15.30 – 15.45	"EXPLOITATION OF DISPLAY HOLOGRAPHY IN MAPPING, FACING NEW CHALLENGES IN THE FIELD OF ENVIRONMENTAL PROTECTION", <i>by Ch. Paraschou, A. Sarakinos, T. Alexandridis, G. Zalidis (Greece)</i>
15.45 – 16.00 Corridor	Coffee break
16.00 – 17.30 Grand Hall	<b>Session 4. Electronic, Digital &amp; CGH</b> <i>Chairs: V. Michael Bove Jr. (USA), David Brotherton-Ratcliffe (UK)</i>
16.00 – 16.15	"DOUBLE LOOKUP TABLE METHOD FOR FAST LIGHT PROPAGATION CALCULATIONS", <i>by Petr Lobaz (Czech Republic)</i>
16.15 – 16.30	"NEW TECHNIQUES IN HIGH-DEFINITION COMPUTER HOLOGRAPHY", <i>by Kyoji Matsushima, Yasuhiro Tsuchiyama, Noriaki Sonobe, Sumio Nakahara (Japan)</i>
16.30 – 16.45	"FAST CALCULATION OF CGH FOR RECTANGULAR PATCH MODEL", <i>by Yuji Sakamoto, Yuki Ogihara, Takuya Sugawara (Japan)</i>
16.45 – 17.00	"IMAGE QUALITY EVALUATION OF A COMPUTER-GENERATED PHASE HOLOGRAM", <i>by Hiroshi Yoshikawa, Takeshi Yamaguchi (Japan)</i>
17.00 – 17.15	"COMPUTER-GENERATED HOLOGRAM BASED ON LAYERED HOLOGRAPHIC STEREOGRAM", <i>by Hao Zhang, Yan Zhao, Liangcai Cao, Guofan Jin (China)</i>
17.15 – 17.30	"DISPLAY AND MEASUREMENT OF COMPLEX FLOW FIELDS BY USING DIGITAL HOLOGRAPHIC INTERFEROMETRY", <i>by Jianlin Zhao, Jianglei Di, Jun Wang, Bingjing Wu (China)</i>
18.30 – 21.30 Birzhevaya, 14	Exhibition opening

### Thursday, July 2

TIME	EVENTS
9.00– 11.00 Grand Hall	<b>Session 5. Technical Applications</b> <i>Chairs: Boris Turukhano (Russia), Igor Denisyuk (Russia)</i>
9.00 – 9.15	"REAL-TIME DYNAMIC HOLOGRAPHIC DISPLAY IN SUPER-FAST LIQUID CRYSTALS TO FUTURE HOLOGRAPHIC 3D TV", <i>by Hongyue Gao, Jicheng Liu, Chao Zeng, Yingjie Yu, Huadong Zheng (China) (invited)</i>
9.15 – 9.30	"HOLOGRAPHIC PHOTOMASKS FOR "GREEN" MICROLITHOGRAPHY", <i>by William Parker, Julie Parker (USA) (invited)</i>
9.30 – 9.45	"ADVANCES IN MULTI-DIMENSIONAL DISPLACEMENT MEASUREMENT USING HOLOGRAPHIC INTERFEROMETRY", <i>by Pramod Rastogi (Switzerland) (invited)</i>
9.45 – 10.00	"HOLOGRAPHIC LINEAR ANGLE NANO MEASURING SYSTEMS", <i>by Turukhano B., Turukhano N. (Russia)</i>

TIME	EVENTS
10.00 – 10.15	"PULSED LASER HOLOGRAPHY SIMPLIFIED BY DIGITAL PHOTOGRAPHY", <i>by Ed Wesly (USA)</i>
10.15 – 10.30	"HOLOGRAPHIC FLOATING IMAGING SYSTEM WITH LCOS SLM AND LED RECONSTRUCTION LIGHT SOURCE", <i>by Po-Sheng Chiu, Cheng-Huan Chen (Taiwan)</i>
10.30 – 10.45	"IMPROVING THE RECORDING CHARACTERISTICS OF DIFFRACTION GRATINGS IN THE DOT MATRIX HOLOGRAMS ", <i>by Akylbek Jeenbekov, K. Zhumaliev, V.Redkorechev (Kyrgyzstan)</i>
10.45 – 11.00	"HOLOGRAPHY FRINGE PATTERNS: SYSTEMS AND APPLICATIONS IN THE STRUCTURAL DIAGNOSIS, DOCUMENTATION AND DISPLAY OF WORKS OF ART", <i>by Vivi Tornari, Anastasia Tsigarida, Varvara Ziampaka (Greece)</i>
11.00 – 11.15	"AUTOMATION THE PROCESS OF CREATION A VIDEO FROM A TIME SEQUENCE OF DIGITAL HOLOGRAMS OF PARTICLES" <i>by Victor Dyomin, Denis Kamenev (Russia)</i>
11.15 – 11.30 Corridor	Coffee break
11.30 – 13.00 Grand Hall	<b>Session 5. Technical Applications</b> <i>Chairs: Boris Turukhano (Russia), Igor Denisyuk (Russia)</i>
11.30 – 11.45	"GOLD - ACRYLATE NANOCOMPOSITE AS MATERIAL FOR HOLOGRAPHIC RECORDING", <i>by Julia Burunkova, Igor Denisyuk, Dmitry Zhuk (Russia)</i>
11.45 – 12.00	"HOLOGRAPHIC COLOUR IMAGES OF POTTED ANATOMICAL HUMAN SPECIMENS FOR MEDICAL STUDIES", <i>by Ardeshir Osanlou, John Delieu, Peter Crosby, Rostam Osanlou, Emma Osanlou, Orod Osanlou (UK)</i>
12.00 – 12.15	"OPTICAL DESIGN OF HOLOGRAM OPTICAL ELEMENT-BASED SEE-THROUGH GLASSES" <i>by Jaeyeol Ryu, Dmitry Piskunov, Mikhail Popov, Nikolay Muravyev (Russia)</i>
12.15 – 12.30	"HOLOGRAPHIC SEE-THROUGH HEAD-MOUNTED DISPLAY", <i>by Vladislav Druzhin, Aleksander Morozov, Andrew Putilin, E.G. Malinovskaya (Russia)</i>
12.30 – 12.45	"PLASMONIC SPECTRAL FILTERS BASED ON ONE-DIMENSIONAL PERIODIC STRUCTURES", <i>by Alexander Zherdev, Sergey Odinkov, Dmitriy Lushnikov, Maria Ruchkina, Evgeni Bezus, Leonid Doskolovich, Andrey Smirnov (Russia)</i>
12.45 – 13.00	" 3D OPTICAL INTENSITY MODULATION ON CURVED SURFACES BY OPTIMIZATION METHOD AND ITS APPLICATION TO FABRICATE ARBITRARY PATTERNS ", <i>by Qiankun Gao, Ran Tian, Xugang Wang, Juan Liu, Jian Han, Nannan Zhang, Xin Li, Bin Hu, Yongtian Wang (China)</i>
13.00 – 14.00	Lunch
14.00 – 15.40 Grand Hall	<b>Session 6. Color Holography</b> <i>Chairs: Hans I. Bjelkhagen (UK), Andreas Sarakinos (Greece)</i>
14.00 – 14.20	"ULTRA-REALISTIC IMAGING AND OPTOCLONES", <i>by Hans Bjelkhagen (UK)</i>
14.20 – 14.40	"ULTIMATE FULL-PARALLAX NATURAL LIGHT HOLOGRAPHY",

TIME	EVENTS
	by <i>Michael Finegan, Yves Gentet, Franck Randriamanana (Ireland)</i>
14.40 – 15.00	"THE "F" ADVENTURE", by <i>Alkis Lembessis, Andreas Sarakinos (Greece)</i>
15.00 – 15.20	"EXPERIMENTAL STUDY OF THE METHOD OF RECORDING COLOR VOLUME HOLOGRAPHIC OF STEREOGRAMS ON DIFFERENT PHOTSENSITIVE MATERIALS ON THE BASE OF THE DIFFUSER WITH A NARROW INDICATRIX OF LASER RADIATION", by <i>Sergey Odinkov, Dmitry Lushnikov, Vladimir Markin, Alexander Zherdev, Ivan Tsyganov, Andrey Smirnov (Russia)</i>
15.20 – 15.40	"METHOD TO MEASURE COLOR REPRODUCTION IN REFLECTION HOLOGRAMS BASED ON A CMOS RGB CAMERA", by <i>Natalith Palacios Ortega, Daniel Velasquez (Colombia)</i>
15.40 – 16.00 Corridor	Coffee break
16.00 – 17.40 Grand Hall	<b>Session 6. Color Holography</b> Chairs: <i>Hans I. Bjelkhagen (UK), Andreas Sarakinos (Greece)</i>
16.00 – 16.20	"20-YEARS PATH TO PERFECTION: THE LATEST ACHIEVEMENTS IN COLOR HOLOGRAPHY", by <i>Michael Shevtsov, Yves Gentet (Russia)</i>
16.20 – 16.40	"IN SITU RECORDING AND DISPLAYING TRUE COLOR HOLOGRAPHIC OPTICAL CLONES (OPTOCLONES©) OF CULTURAL ARTIFACTS IN MUSEUMS", by <i>Andreas Sarakinos, Alkis Lembessis (Greece)</i>
16.40 – 17.00	"NEXT-GENERATION VISIBLE LASERS FOR HOLOGRAPHY", by <i>Michelle Stock, Peter Andersen, Peter Skovgaard (USA)</i>
17.00 – 17.20	"MOBILE PULSE HOLOGRAPHIC CAMERA GREEF AND ITS APPLICATION IN CULTURE AND EDUCATION", by <i>Michael Shevtsov (Russia)</i>
17.20 – 17.40	"MAKING ANALOGUE COLOUR HOLOGRAMS AT HOME LABORATORY: LESSONS FROM FAILURE AND SUCCESS", by <i>Quan Yuan (China)</i>
18.00 – 19.30 Small Hall, Lobby	Poster Session
21.00 – 23.00 Birzhevaya line, 14	Farewell Party

### Friday, July 3

TIME	EVENTS
9.00– 11.20	<b>Session 7. The Business of Holography</b> Chairs: <i>Hugues Souparis (France), Frank C. Fan (China)</i>
9.00 – 9.20	"DEMONSTRATION OF PERFECT HOLOGRAPHIC DISPLAY ON COMMERCIAL 4K PLANE DISPLAYER", by <i>Frank Fan, Sam Choi, Chaochuan Jiang (China) (invited)</i>
9.20 – 9.40	"STRIVING TO MAKE A LIVING WITH 3D IMAGES: QUITE A CHALLENGE...",

TIME	EVENTS
	<i>by Pascal Gauchet (France)</i>
9.40 – 10.00	"SLAVICH HOLOGRAPHIC MATERIALS", <i>by Juliay Beryozkina (Russia)</i>
10.00 – 10.20	"FROM A START-UP OF THE 80'S TO A MATURE BUSINESS IN HOLOGRAPHY:THE STORY OF HOLOGRAM. INDUSTRIES.", <i>by Hugues Souparis (France)</i>
10.20 – 10.40	"THE HOLOGRAM FOUNDATION: PROMOTING HOLOGRAPHY AS A COLLECTABLE ART", <i>by Hugues Souparis (France)</i>
10.40 – 11.00	"REFLECTION VOLUME HOLOGRAPHY: WHERE THE BUSINESS OF BRAND AND PRODUCT SECURITY CAN BE BOTH POSITIVE AND BEAUTIFUL", <i>by Tim Sandford</i>
11.00 – 11.20	"SCIENCE-INTENSIVE, HIGH-TECH ENTERPRISE CJSC «HOLOGRAPHY INDUSTRY» - AN EXAMPLE OF PUBLIC AND PRIVATE PARTNERSHIP IN THE FIELD OF ANTI-COUNTERFEITING TECHNOLOGY OF DOCUMENTS, SECURITIES AND PRODUCTS BASED ON HOLOGRAPHY IN THE REPUBLIC OF BELARUS" <i>by Leonid Tanin</i>
11.20 – 11.40 Corridor	Coffee break
11.40 – 11.55	<b>Closing Remarks</b>
12.00 – 17.00 Cadetskaya line, 3	<b>Youth Session, Workshop</b>
	"THE FUTURE OF HOLOGRAPHY IN A DIGITAL AGE", <i>by Javid Khan (UK)</i>
	"ENGAGING WITH A HOLOGRAPHIC PERSPECTIVE", <i>by Martina Mrongovius (USA)</i>
	<b>Workshops №1, №2, №3, №4, №5, №6</b>

### Workshops

<b>№1</b> <i>By Nataliy Andreeva (Russia)</i> and	Recording of display holograms by Yu.N. Denisyuk's method
<b>№2</b> <i>by Alexandre Escarguel (France)</i>	Upgrade of the pedagogic/popular science tool for holography: the color holography kit
<b>№3</b> <i>by Victor Dyomin (Russia)</i>	Digital holographic recording of plankton
<b>№4</b> <i>by Boris Manukhin (Russia)</i>	Holographic interferometry of transparent media during the action of heat sources
<b>№5</b> <i>By Paramonov Alexandr (Russia)</i>	Recording of high-selectivity hologram optical element
<b>№6</b> <i>By Nikolay Petrov (Russia)</i>	Simulation of wavefront propagation

# Poster Session

## Session 1. History, Culture, and Education

1. "HOLOGRAPHY AT SCHOOLS",  
by Pedro Pombo, Emanuel Santos, Carolina Magalhães (Portugal)
2. "READING FROM ACADEMICIAN YURY NIKOLAEVICH DENISYUK AT THE ITMO UNIVERSITY",  
by Natalia Andreeva, Olga Andreeva, Victor Bespalov, Sergey Kozlov (Russia)

## Session 2. Art Concepts & Techniques

3. "3D-PRINTING AND HOLOGRAPHY - FASCINATING NEW OPPORTUNITIES FOR DESIGNING HOLOGRAMS",  
by Swann Rack (Germany)
4. "ART CONCEPT AND TECHNIQUES USING RAINBOW HOLOGRAM WITH INSTALLATION ART",  
by Duck Hee Cho (New Zealand)
5. "HOLOGRAPHIC ART PRACTICE; AN EXPLORATION OF INTERFERENCE",  
by Arlinda Henderson (USA)

## Session 3. Recording Materials & Processing

6. "A NOVEL TYPE OF ALL OPTICALLY ADRESSED SPATIAL LIGHT MODULATOR FOR HOLOGRAPHIC DISPLAY",  
by Vera Marinova, Shiuan H Lin, Ren C Liu, Ken Y Hsu (Taiwan)
7. "DIRECT RECORDING OF THE SURFACE RELIEF HOLOGRAPHIC GRATINGS",  
by Andrejs Gerbreders, Andrejs Bulanovs, Kaspars Traskovskis, Janis Teteris (Latvia)
8. "HOLOGRAPHIC PROPERTIES OF MATERIALS BASED ON PHOTOPOLYMERS ACRYLATE COMPOSITIONS",  
by Nadezda Vorzobova, Vera Bulgakova, Alena Moskalenko, Vasiliy Veselov (Russia)
9. "STUDY OF THERMAL EFFECTS IN HOLOGRAPHIC RECORDING MATERIAL "DIFPHEN",  
by Boris Manukhin, Sergey Chivilikhin, Galina Vinogradova, Michail Gusev, Olga Andreeva (Russia)

## Session 4. Electronic, Digital & CGH

10. "ACTIVE LSP BASED STRUCTURE FOR HOLOGRAPHIC 3D VIDEO DISPLAY",  
by Chuan Shen, Hao Wang, Sui Wei (China)
11. "COMPARISON OF READ-OUT OPTICAL SCHEMES FOR HOLOGRAPHIC MEMORY SYSTEMS BASED ON MULTIPLEXED COMPUTER GENERATED 1D-FOURIER HOLOGRAMS",  
by Alexandr Betin, Vladimir Bobrinev, Sergey Donchenko, Evgenie Zlokazov, Sergey Odinokov, Rostislav Starikov (Russia)
12. "COMPUTER GENERATED FOURIER MICROHOLOGRAMS FOR OPTICAL MEMORY

SYSTEM",

by Evgenii Zlokazov, Sergey Odinokov, Aleksandr Betin, Rostislav Starikov, Sergey Donchenko, Nina Verenikina (Russia)

13. "A COMPUTER-GENERATED WAVEGUIDE HOLOGRAM FOR NEAR-TO-EYE 3-D DISPLAY", by Michael Bove, Sundeep Jolly, Nickolaos Savidis, Bianca Datta, Daniel Smalley (USA)

14. "DIGITAL HOLOGRAPHIC INTERFEROMETRY AT ANALYSIS OF THERMAL LENS ARISING AT DIODE PUMPING",  
by Zakir Azamatov, Nigora Akbarova, Ilya Kulagin, Vyasheslav Redkorechev (Uzbekistan)

15. "METHODS OF INTERFEROGRAM FILTRATION FOR INCREASING OF MEASUREMENT ACCURACY",  
by Zakir Azamatov, Nigora Akbarova, Ilya Kulagin, Vyasheslav Redkorechev, Akylbek Zheenbekov (Uzbekistan)

16. "FAST CALCULATION METHOD OF COMPUTER GENERATED HOLOGRAM USING RAY TRACING METHOD FOR FOURIER TRANSFORM OPTICAL SYSTEM",  
by Ryosuke Watanabe, Takuya Sugawara, Yuji Sakamoto (Japan)

17. "INTERACTIVE AUGMENTED REALITY BY COMPUTER-GENERATED-HOLOGRAPHY",  
by Ken Yuh Hsu, Ren Chung Liu, Yi Hsin Huang, Shiuan Huei Lin (Taiwan)

18. "QUANTITATIVE PHASE IMAGING TECHNIQUE FOR THE ESTIMATION OF DIGITAL HOLOGRAPHIC DISPLAY SYSTEM",  
by Yongjun Lim, Keehoon Hong, Joongki Park, Hyuneui Kim, Hyongon Choo, Jinwoong Kim (South Korea)

19. "HOLOGRAPHIC DATA VISUALIZATION OF FLUID DYNAMICS AND SOLAR IRRADIATION MODELS",  
by Tove Noorjahaan Dalenius, Simon Rees, Martin Richardson (Sweden)

20. "HOLOSUITE: AN EXPLORATION INTO HOLOGRAPHIC TELEPRESENCE AND INTERACTION",  
by Ermal Dreshaj, Sundeep Jolly, V. Michael Bove Jr. (USA)

21. "MEASUREMENT AND RECONSTRUCTION OF THREE-DIMENSIONAL SPECIMEN BASED ON DIGITAL HOLOGRAPHIC INTERFEROMETRY",  
by Jianglei Di, Xin Chen, Minru Li, Jianlin Zhao (China)

22. "ULTRA SLIM SOLUTION FOR COHERENT ILLUMINATION OF HOLOGRAPHIC DISPLAY",  
by Aleksander Morozov, Andrew Putilin, Hong-Seok Lee, Sergey Dubynin, German Dubinin, Sergey Kopenkin, Yuriy Borodin, Sunll Kim, ChilSung Choi (Russia)

23. "SAMPLING CONDITION FOR DIGITAL HOLOGRAPHY",  
by Konstantin Grebenyuk (Russia)

24. "HARDWARE AND SOFTWARE COMPLEX FOR PLANKTON INVESTIGATION AND SETTLING PARTICLES MONITORING IN NATURAL WATER RESERVOIR ",  
by Victor Dyomin, I. Polovtsev, A. Olshukov and D. Kamenev (Russia)

## **Session 5. Technical Applications**



25. "HOLOGRAPHIC IMAGES WITH PARALLAX EFFECT",  
by *Anatoly Gubarev, Kornilov, G.V., Goncharsky A.V., Goncharsky, A. A., Smirnov, A. V., Chepurnoy A. I., Odinokov S. D., Lushnikov D. S., Markin V.V. (Russia)*
26. "INNOVATIVE TECHNOLOGY OF COLOR LASER PATTERNING OF METAL PRODUCT FOR DECORATIVE AND APPLIED ARTS",  
by *Vadim Veiko, Galina Odintsova, Yulia Karlagina, Roman Yatsuk, Eduard Ageev (Russia)*
27. "NUMERICAL RECONSTRUCTION OF A FULL PARALLAX HOLOGRAPHIC STEREOGRAM WITH RADIAL DISTORTION",  
by *Jiyong Park, Hoonjong Kang, Soonchul Kwon, Seunghyun Lee (South Korea)*
28. "RECONSTRUCTION OF MULTI-IMAGES ON COAXIAL DEPTH DIRECTION USING COMPUTER HOLOGRAPHY",  
by *Sumio Nakahara, Kyoji Matsushima (Japan)*
29. "HOLOGRAPHIC PRODUCTS DEVELOPMENT AT LUMINIT",  
by *Fedor Dimov (Russia)*
30. "MICROPRISM ARRAY FOR SECURITY PRINTING APPLICATION",  
by *Vera Balia (Russia)*
31. "ON THE RELATIVE ACCURACY OF THE PSM AND KOGELNIK MODELS OF DIFFRACTION IN LOSSLESS REFLECTION AND TRANSMISSION HOLOGRAPHIC GRATINGS",  
by *Ardeshir Osanlou, David Brotherton-Ratcliffe, Lishen Shi, Peter Excell (UK)*
32. "THERAPEUTIC EVALUATION OF LIVING CELLS BY DIGITAL HOLOGRAPHIC MICROSCOPY",  
by *Chung-Hsin Wu, Chau-Jern Cheng, Xin-Ji Lai, Shuenn-Jyi Sheu (Taiwan)*
33. "ATTEMPT TO CREATE HOLOGRAPHY IMAGE OF THE AURORA",  
by *Sergey Chernouss, Yves Gentet, Michael Shevtsov (Russia)*
34. "SEE-THROUGH GLASS BASED ON HOLOGRAM OPTICAL ELEMENT",  
by *Jaeyeol Ryu, Andrey Putilin (Russia)*
35. 21. RESEARCH ON FIELD OF VIEW EXPANSION IN OFF-AXIS PUMP-PROBE FEMTOSECOND DIGITAL HOLOGRAPHY  
by *Chipegin A.A., Putilin S.E.,Petrov N.V. (Russia)*

## **Session 6. Color Holography**

36. "RECORDING VOLUMETRIC COLOR HOLOGRAMS ON TWO-LAYER HOLOGRAPHIC MATERIAL",  
by *Igor Shevkunov, Yulia Vavilova, Ludmila Selyavko, Igor Vaskov, Nikolay Petrov (Russia)*