Program of the XXXIX Max Born Symposium:
5th International Symposium on Optics & its applications (OPTICS-2017)
Wroclaw, 03. - 07.07.2017

Monday 3.07. **Uni. Wroclaw**	Tuesday 4.07. **INTiBS**	Wednesday 05.07. **Uni. Wroclaw**	Thursday 06.07. **WUST**	Friday 07.07. Uni. Wroclaw
Pre-Symposium School ***N 422*** *Plac Maksa Borna 9*	*Ul. Okólna 2*	***Rzewuski Hall (N 60)*** *Plac Maksa Borna 9*	*27 Wybrzeże Wyspiańskiego st.* **Room 321, b. A1**	***Oratorium Marianum*** *plac Uniwersytecki 1*
09:00-10:30 G. Röpke (1a)	09:00-09:05 Welcome INTiBS	09:00-09:05 Welcome IFT, UWr	9:00-9:05 Welcome WUST	9:00-9:45 L. Pavesi (2)
10:30-11:00 **Coffee Break**	09:05-09:50 T. Zaleski	9:05-10:05 W. Dittrich (3)	9:05-9:50 C. Lopez-Mariscal	9:45-10:30 H. Sarkisyan
11:00-12:30 G. Röpke (1b)	09:50-10:50 W. Strunz	10:05-11:05 G. Röpke (2a)	9:50-10:20 V. Lysiuk	10:30-10:50 **Coffee Break**
12:30-13:30 **Lunch**	10:50-11:15 **Coffee Break**	11:05-11:25 **Coffee Break**	10:20-10:45 V. Apinyan	10:50 - 11:50 J. Mlynek
13:30-14:30 Tour in University main building	11:15-11:45 A. Vartanian	11:25-12:25 G. Röpke (2b)	10:45-11:05 **Coffee Break**	**11:50-12:10** **Closing**
Oratorium Marianum *plac Uniwersytecki 1*	11:45-12:00 M. Szatkowski	12:25-12:50 A. Chizhov	11:05-11:20 A. Scherbakov	12:10-13:30 **Lunch**
14:30-14:50 **Registration**	12:00-12:15 M.A. Pocsai	12:50-14:00 **Lunch**	11:20-11:35 A. Chalyan	**14:00** **Falling Walls Lab Wroclaw**
15:00 **Opening**	12:15-13:15 **Lab tour**	14:00-15:00 M. Berry (1)	11:35-11:50 S. Signorini	
15:15-16:45 W. Dittrich (1)	13:15-15:00 **Lunch**	15:00-15:45 D. Sampson	11:50-12:20 **Lab tour**	
16:45-17:15 Coffee-break	**Uni. Wroclaw** ***Rzewuski Hall*** *Plac Maksa Borna 9*	15:45-16:05 Coffee Break	12:20-13:30 **Lunch**	
17:15-17:45 E. Arthurs	15:00-16:00 W. Dittrich (2)	16:05-16:20 A. Otto	**Room 322, b. A1**	
17:50 **Group Photo**	16:00-16:15 T. Chalyan	16:20-16:35 L. Juchnowski	13:30-14:30 M. Berry (2)	
	16:15-16:30 S. Gusev	16:35-16:50 E. Klinger	14:30-14:55 J. Kalaga	
	16:30-16:45 V. Kotanjyan	16:50-17:05 V. Martikyan	14:55-15:25 L. Pavesi (1)	
	16:45-17:00 M. Szafranska	17:05-17:50 D. Bukowska-Sampson	15:25-16:00 **Coffee Break**	
	17:01-20:00 **Poster Session** (SPIE-cake, wine, cheese, & music ☺)	**18:30** **Symposium Dinner**	**17:00-19:00** **City tour By historic Tram**	

INVITED LECTURERS/SPEAKERS

Eugene Arthurs (SPIE, USA)
Opportunities in Photonics

Michael Berry (University of Bristol, UK) – **SPIE. Visiting Lecturer** (WUST chapter)
1) Optica fantastica: images to illuminate the physics of light
2) Stable and unstable Airy-related caustics and beams

Walter Dittrich (University of Tuebingen, Germany) – **SPIE. Visiting Lecturer** (RAU & NAS chapter)
***1) The life and work of prominent physicists at Breslau University until 1933* – Public Lecture**
2) Vacuum birefringence in strong magnetic fields
3) Riemann's functional equation originating from QED

Carlos Lopez-Mariscal (Underwater Photonics, Mexico) - **OSA Traveling Lecturer**
Optical vector beams with Spatial light modulators

Viktor Lysiuk (Institute of Semiconductor Physics NASU, Ukraine)
Multielement surface plasmon resonance sensing. From base principles to health monitoring

Juergen Mlynek (HU Berlin & CEO Falling Walls Foundation, Germany)
Quantum Technology: The New European Flagship Project Initiative

Lorenzo Pavesi (University of Trento, Italy)
1) Classical and Quantum integrated silicon photonics
2) Silicon photonics for optical switching in data centers

Gerd Röpke (University of Rostock, Germany) - **Erasmus Lecturer**
1) Nonequilibrium statistical physics:
- ***a) Derivation of the nonequilibrium statistical operator***
- ***b) Kinetic theory and linear response theory***

2) Optical properties of plasmas:
- ***a) Spectral line profiles, Ionization potential depression, Effects of dynamical structure factor***
- ***b) Quantum master equation and transitions in Rydberg atoms***

David Sampson (University of Western Australia, Australia)
Motion, mechanics and birefringence – 'multi-modality' optical coherence tomography

Hayk Sarkisyan (Russian-Armenian Uni., Armenia; Yerevan State Uni., Armenia; SPBSTU, Russia)
Interband optics of quantum cones and dashes

Walter Strunz (TU Dresden, Germany)
Quantum dynamics in structured environments

Arshak Vartanian (Yerevan State University, Armenia)
Polaron and dielectric mismatch effects on impurity-related optical characteristics in quantum dots

Tomasz Zaleski (Institute for Low Temperature and Structure Research, Poland)
Solid-state physics in optical lattices

PROFESSIONAL DEVELOPMENT LECTURE

Danuta Bukowska-Sampson (University of Western Australia, Australia)
Science, Ethics and Professional Identity

CONTRIBUTED TALKS

Vardan Apinyan (INTiBS, Wroclaw, Poland)
Spectral properties of excitons in the bilayer graphene

Astghik Chalyan (Russian-Armenian Uni., Armenia; Uni. of Trento, Italy), C. Castellan, M. Mancinelli, P. Guilleme, M. Borghi, M. Bernard, M. Ghulinyan, G. Pucker, L. Pavesi
Strain-induced resonance shift in different angled silicon racetrack resonators

Tatevik Chalyan (Uni. of Trento, Italy), C. Potrich, F. Falke, E. Schreuder, R. Heideman, C. Pederzolli, L.Pavesi
Optical biosensors for Aflatoxin M1 detection in milk

Alexey Chizhov (JINR, Dubna, Russia), G. Alber
Spontaneous emission spectrum of a two-level atom in a parabolic mirror

Svyatoslav Gusev (ITMO University, St.Petersburg, Russia), A.A. Simonova, P.S. Demchenko, O.P. Cherkasova, M.K. Khodzitsky
Blood glucose concentration sensing using THz spectroscopy

Łukasz Juchnowski (Uni. of Wroclaw, Poland), D. Blaschke, S. Smolyansky, A. Panferov, A. Otto, B. Kaempfer
Vacuum pair creation in strong fields as a field-induced phase transition

Joanna K. Kalaga (University of Zielona Góra, Poland), W. Leoński, J. Peřina Jr.
The family of three-qubit states - EPR steering and coherence

Emmanuel Klinger (Institute for Physical Research of NAS, Armenia; Université Bourgogne - Franche-Comté, France), A. Sargsyan, A. Tonoyan, G. Hakhumyan, A. Amiryan, A. Papoyan, C. Leroy, D. Sarkisyan
Forbidden at zero B-field atomic transitions monitored by selective reflection from a Rb vapor nanocell

Vardazar Kotanjyan (YSU, Armenia), L.Sh. Grigoryan, A.A. Saharian, A.S. Kotanjyan, H.F. Khachatryan
Features of the electromagnetic field of a charged particle moving around a conducting tube

Vardan Martikyan (YSU, Armenia), R.G. Petrosyan, A.S. Kotanjyan
Spin effects of neutrons diffraction at periodic slits in electromagnetic field with Redmond configuration

Andreas Otto (Helmholtz-Zentrum Dresden-Rossendorf and TU Dresden, Germany), B. Kämpfer
Secondary probes of the dynamically assisted Schwinger effect

Mihály András Pocsai (Wigner Research Center for Physics, Hungary; Uni. of Pécs, Hungary), I.F. Barna
Ab initio calculations of photoionisation of rubidium in strong laser fields

Andrii Shcherbakov (Taras Shevchenko National Uni. of Kyiv, Ukraine), V. Kononenko, V. Kravets, L. Poperenko, I. Yurgelevich
Optical characteristics of multylayer structures based on cu with graphene layer

Stefano Signorini (University of Trento, Italy), Mattia Mancinelli, Martino Bernard, Mher Ghulinyan, Georg Pucker, Lorenzo Pavesi
Multi-modal Four Wave Mixing for broad wavelength generation and conversion in silicon waveguides

Szafranska Monika (National Institute of Telecommunications, Poland; WUST, Poland)
EMC and optics applications

Mateusz Szatkowski (WUST, Poland), Agnieszka Popiołek - Masajada, Jan Masajada
Macro - scale object reconstruction in Optical Vortex Microscopy

POSTERS

1. Arevik Amiryan (Institute for Physical Research of NAS, Armenia; Université Bourgogne - Franche-Comté, France), A. Sargsyan, **E. Klinger**, S. Cartaleva, C. Leroy, D. Sarkisyan
Linear Faraday Rotation for Rb D_1 line atomic transitions using a nanometric-thin cell

2. Anna Asatryan (Yerevan State Uni., Armenia), Arshak Vartanian, Lyudvig Vardanyan
Image charge effect on impurity-related linear and nonlinear optical properties of spherical quantum dots under electric field

3. Andrii Barabashov (ILTPE, Kharkiv, Ukraine), I.V. Khyzhniy, S.A. Uyutnov, M.A. Bludov, E.V. Savchenko, G.B. Gumenchuk, V.E. Bondybey
Excitation-stimulated processes in the films of solid N_2

4. Imre Ferenc Barna (Wigner Research Center for Physics, Hungary), S. Varró
Electron scattering and conduction in doped semiconductors in simultaneous strong terahertz radiation field

5. Razet Basnukaeva (ILTPE, Kharkiv, Ukraine), A.V. Dolbin, M.V. Khlistuck, V.B. Eselson, V.G. Gavrilko, N.A. Vinnikov, V.A. Konstantinov, Y. Nakazawa
Thermal expansion of organic superconductor κ-(D4-BEDT-TTF)2Cu[N(CN)2]Br

6. Edyta Bobrowska (WUST, Poland), Piotr Bojęś, Jan Scheffler, Łukasz Gołacki, Jan Masajada
Optical trapping in air

7. Agnieszka Boszczyk (WUST, Poland), Henryk Kasprzak
Occurrence of Eye Globe Retraction and Rotation During 'air puff' IOP Measurement

8. Mateusz Ficek (Gdansk Uni. of Technology, Poland; Hasselt Uni., Belgium), *P. Niedziałkowski, M. Śmietana, M. Koba, R. Bogdanowicz*
Protein detection using long-period fiber gratings with nanocrystalline boron-doped diamond coating

9. Maciej Geniusz (WUST, Poland), M. Geniusz, M. Szmigiel
Impact of blood alcohol level on color perception

10. Malwina Geniusz (WUST, Poland)
Deterioration of retinal image quality caused by calcium deposits of different intraocular lenses

11. Malwina Geniusz (WUST, Poland), M.A. Szmigiel
Comparison of two different colour vision tests

12. Yuliia Horbatenko (ILTPE, Kharkiv, Ukraine), O.O. Romantsova, A.I. Krivchikov, O.A. Korolyuk
Benzophenone and its substituted derivatives in optics

13. Simon Liebing (TU Bergakademie Freiberg, Germany), F.C. Beyer, F. Zimmermann, Ch. Röder, , M. Barchuk, G. Lukin, T. Schneider, O. Pätzold, J. Heitmann
Characterization of µm thin GaN layers grown by High Temperature Vapour Phase Epitaxy

14. Maksym Maslivets (V.N. Karazin Kharkiv National Uni., Ukraine), A. S. Klimkin, V. A. Gudimenko, A. P. Pospelov, G. V. Kamarchuk
Gas-sensitive point contacts' nonmonotonic response under human breath gas

15. Anna Reymers (Russian-Armenian Uni., Armenia), V. Gevorgyan
Investigation of optical and morphology properties cuprous oxide thin films prepared by thermal oxidation of copper layers

16. Marta E. Rogowska (WUST, Poland), D. Robert Iskander
Age- and Glaucoma-Related Changes in Corneal Deformation Dynamics Utilizing Scheimpflug Imaging

17. Ruslan Ryskulov (Taras Shevchenko National Uni. of Kyiv, Ukraine), A.Ya. Sribniy, Ye.R. Kovalevski, P.O. Kovanji, V.M. Prokopets, L.V. Poperenko
Features of automation of spectroellipsometric measurements within range of 1-4,9 eV

18. Mane Sahakyan (INTiBS, Poland), V. H. Tran
Electronic structure of $Th_7(Ru,Fe)_3$

19. Marcelina Sobczak (WUST, Poland), Henryk Kasprzak
How eye tracks objects - analysis of eye movements while fixation on moving point

20. Marta A. Szmigiel (WUST, Poland), Urszula Getek, Henryk Kasprzak
Eye movements directionality while fixation on moving or stable point - examination and numerical analysis

21. Marta A. Szmigiel (WUST, Poland), Malwina Geniusz
How the preschool children see - vision screening tests in kindergartens

22. Russian-Armenian Univ. and National Academy of Sciences SPIE Chapter, Armenia

23. Univ. of Trento SPIE Chapter, Italy

24. Wroclaw Univ. of Science and Technology SPIE Chapter, Poland

25. ITMO University SPIE Chapter, Russia

26. Institute of Radiophysics and Electronics SPIE Chapter, Ukraine

27. Taras Shevchenko National Univ. of Kyiv SPIE Chapter, Ukraine