



中俄先进光子学与光学研讨会

Sino-Russian Advanced Photonics and Optics Seminar

会议手册

Meeting Manual



ITMO

中国·哈尔滨

俄罗斯·圣彼得堡

Harbin, China

St. Petersburg, Russia

2022年10月27日-28日

October 27-28th, 2022



在“一带一路”倡议背景和《2020—2025年中俄科技创新合作路线图》规划指导下，基于俄罗斯在光子学与光学前沿科学与应用技术方向强劲的实力和底蕴，为加强中俄先进光子学与光学研究领域的交流与合作，推动我国光子学和光学领域不断进步、服务关键发展需求，由哈尔滨工业大学，圣彼得堡国立信息技术、机械学与光学研究型大学（圣光机）主办，哈尔滨工业大学物理学院承办的中俄先进光子学与光学研讨会定于2022年10月27日至28日召开。此次会议将采用线上与线下相结合的方式，邀请了中俄光子学与光学领域著名专家、学者通过专题报告介绍光子学与光学研究热点和未来发展方向，研讨先进光子学与光学前沿科学和关键问题。

一、会议基本信息

主办单位： 哈尔滨工业大学

圣彼得堡国立信息技术、机械学与光学研究型大学

承办单位： 哈尔滨工业大学物理学院

会议时间： 2022年10月27日至28日

会议地点： 线上（Zoom: 823 0126 4382，入会密码: 221116）

线下（哈尔滨工业大学理学楼717会议室）

二、会议组织机构

大会主席：

韩杰才 哈尔滨工业大学校长 中国科学院院士

Vladimir Vasiliev 圣光机大学校长 俄罗斯科学院院士

执行委员会：

甄 良 教授 哈尔滨工业大学副校长

Vladimir Nikiforov 教授 圣光机大学副校长



- 帅 永 教授 哈尔滨工业大学校长助理、科学与工业技术研究院院长
闫永达 教授 哈尔滨工业大学发展改革和规划处/学科建设办公室主任
Igor Meshkovsky 教授 圣光机大学光导光子学中心主任
彭 宇 教授 哈尔滨工业大学科学与工业技术研究院基础创新处处长
梁 恒 教授 哈尔滨工业大学人事处处长
Andrey Kulikov 副教授 圣光机大学工程与技术高等学校研究所主任
熊 健 教授 哈尔滨工业大学国际合作部常务副部长、外事处处长
田 浩 教授 哈尔滨工业大学物理学院院长
Alexey Bakholdin 副教授 圣光机大学应用光学中心主任
袁承勋 教授 哈尔滨工业大学物理学院应用物理系主任
Anna Voznesenskaya 副教授 圣光机工程与技术高等学校研究所副主任

组织委员会:

- 李 立 教授 哈尔滨工业大学物理学院国际交流与合作办公室
丁卫强 教授 哈尔滨工业大学物理学院光电信息科学与工程系
Liubov Ivanova 工程师 圣光机大学教育和方法论协会
王 莹 副教授 哈尔滨工业大学物理学院应用物理系
谭 鹏 副教授 哈尔滨工业大学物理学院光电信息科学与工程系
Oleg Eliseev 主任 圣光机大学学生科学培训、会议和展览中心
王 宇 助理教授 哈尔滨工业大学物理学院光电信息科学与工程系

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- | | | |
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三、会议日程概览

10月27日

15:00-15:30 中俄先进光子学与光学研讨会开幕式

15:30-18:40 中俄先进光子学与光学研讨会 I

10月28日

15:00-19:50 中俄先进光子学与光学研讨会 II

19:50-20:00 中俄先进光子学与光学研讨会闭幕式



Sino-Russian Advanced Photonics and Optics Seminar

Under the background of the Belt and Road Initiative and the guidance of the “2020-2025 China-Russia Science and Technology Innovation Cooperation Roadmap”, based on Russia’s strong strength and heritage in the frontier science and applied technology of photonics and optics, in order to strengthen the exchange and cooperation between China and Russia in the field of advanced photonics and optics research, to promote the continuous progress of China’s photonics and optics field and serve the critical development needs, the Sino-Russian advanced photonics and optics seminar, hosted by Harbin Institute of Technology (HIT) and ITMO University and organized by the School of Physics of HIT, is scheduled to be held from October 27 to October 28, 2022. Inviting renowned experts and scholars in the field of photonics and optics from China and Russia to introduce the hot spots and future directions of photonics and optics research through special presentations, and to discuss the frontier science and key issues of advanced photonics and optics. The seminar will use a combination of online and offline approaches.

1. Basic information about the seminar

Organizers:	Harbin Institute of Technology (HIT) ITMO University (ITMO)
Sponsored by:	School of Physics, Harbin Institute of Technology
Seminar Date:	October 27 to 28th, 2022
Seminar Venue:	Online (Zoom: 823 0126 4382, Password: 221116) Offline (HIT, ITMO)

2. Organizing Committee of the seminar

Conference President

Jiecai Han

President of HIT, Academician of Chinese Academy of Sciences

Vladimir Vasiliev

Rector of ITMO, Member of Russian Academy of Sciences



Executive Committee

Liang Zhen

Professor, Vice President of HIT

Vladimir Nikiforov

Professor, Vice-Rector for Scientific Affairs, ITMO

Yong Shuai

Professor, Assistant to the President of HIT, Director of the Institute of Science and Industrial Technology, HIT

Yongda Yan

Professor, Director of Office of Development, Reform and Planning / Disciplinary Development Office, HIT

Igor Meshkovsky

Professor, Director of Centre for Lightguide Photonics, ITMO

Yu Peng

Professor, Director of Basic Innovation Division, Institute of Science and Industrial Technology, HIT

Heng Liang

Professor, Director of Personnel Office, HIT

Andrey Kulikov

Associate Professor, Director of Institute "Higher School for Engineering and Technology", ITMO

Jian Xiong

Professor, Executive Vice President of the International Cooperation Department, and Director of the Foreign Affairs Division, HIT

Hao Tian

Professor, Dean of School of Physics, HIT

Alexey Bakholdin

Associate Professor, Director of Centre for Applied Optics, ITMO

Chengxun Yuan

Professor, Head of the Department of Applied Physics, School of Physics, HIT

Anna Voznesenskaya

Associate Professor, Vice-Director of Institute "Higher School for Engineering and Technology", ITMO



Organizational Committee

Li Li

Professor, Director of the International Exchange and Cooperation Office, School of Physics, HIT

Weiqiang Ding

Professor, Head of the Department of Optoelectronic Information Science and Engineering, School of Physics, HIT

Liubov Ivanova

Engineer, Department of the Educational and Methodology Association, ITMO

Ying Wang

Associate Professor, Department of Applied Physics, School of Physics, HIT

Peng Tan

Associate Professor, School of Physics, HIT

Oleg Eliseev

Director, Training Center for Student Science, Conferences and Exhibitions, ITMO

Yu Wang

Assistant Professor, School of Physics, HIT

Organizing Committee Contact

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3. Overview of the Seminar program

October 27, 2022

15:00-15:30 (BST)	Opening Ceremony
15:30-18:40 (BST)	Part I of the Sino-Russian Advanced Photonics and Optics Seminar

October 28, 2022

15:00-19:50 (BST)	Part II of the Sino-Russian Advanced Photonics and Optics Seminar
19:50-20:00 (BST)	Closing Ceremony

October 27, 2022 Sino-Russian Advanced Photonics and Optics Seminar

No.	Schedule (St.Petersburg Time)	Schedule (Harbin Time)	Session Chairman	Content	Speaker
1	10:00 – 10:30	15:00 – 15:30	Hao Tian HIT	Opening Ceremony	
				Welcoming speech from Chinese side	Jiecai Han President of HIT, Academician of Chinese Academy of Sciences
				Welcoming speech from Russian side	Vladimir Nikiforov Professor, Vice-Rector for Scientific Affairs
				Take photo	
2	10:30 – 11:00	15:30 – 16:00	Li Li HIT	Ferroelectric domain evolution induced by photorefractive space charge fields	Hao Tian Professor, Dean of School of Physics, HIT
3	11:00 – 11:30	16:00 – 16:30		Lithium niobate integrated photonics: current state and future development	Aleksandr Chamrai Professor, Institute “Higher School for Engineering and Technology”, Chief Researcher, Research Institute for Lightguide Photonics, ITMO
4	11:30 – 12:00	16:30 – 17:00		Research, design and improving optoelectronic autocollimation measuring means	Igor Konyakhin Professor, Institute “Higher School for Engineering and Technology”, Chief Researcher, Institute for Laser Technology, ITMO
Coffee Break					
5	12:10 – 12:40	17:10 – 17:40	Anna Voznesenskaya ITMO	Enhanced optical force and optical manipulation in nanophotonic structures	Weiqliang Ding Professor, Associate Dean of School of Physics, HIT
6	12:40 – 13:10	17:40 – 18:10		Fiber-optic hydroacoustic sensors and their applications for marine geophysical surveys	Mikhail Plotnikov Head of Laboratory, Research Institute for Lightguide Photonics, ITMO Andrey Kulikov Associate Professor, Director of Institute “Higher School for Engineering and Technology”, ITMO Igor Meshkovsky Professor, Director of Research Institute for Lightguide Photonics, ITMO
7	13:10 – 13:40	18:10 – 18:40		Digital image binarization: development and application	Kseniia Ezhova Associate Professor, Institute “Higher School for Engineering and Technology”, ITMO

October 28, 2022 Sino-Russian Advanced Photonics and Optics Seminar

No.	Schedule (St.Petersburg Time)	Schedule (Harbin Time)	Session Chairman	Content	Speaker
1	10:00 – 10:30	15:00 – 15:30	Weiqiang Ding HIT	Ultrafast distributed Brillouin optical fiber sensor based on optical chirp chain	Yongkang Dong Professor, Deputy Director of National Key Laboratory, HIT
2	10:30 – 11:00	15:30 – 16:00		Fiber Bragg gratings: inscription technology and applications	Varvara Kulikova Engineer, Institute “Higher School for Engineering and Technology”, ITMO Sergei Varzhel Associate Professor, Head of Laboratory Research Institute for Lightguide Photonics, ITMO
3	11:00 – 11:30	16:00 – 16:30		Special optical elements in optical system design	Elena Tsyganok Associate Professor, Institute “Higher School for Engineering and Technology”, ITMO
Coffee Break					
4	11:40 – 12:10	16:40 – 17:10	Anna Voznesenskaya ITMO	Computational optical imaging: scanning mode optimization and automatic positioning	Zhengjun Liu Professor, Head of Department of Optoelectronic Science and Engineering, HIT
5	12:10 – 12:40	17:10 – 17:40		Optical design of spectral devices for in-line process monitoring	Alexandra Bobe Engineer, Research Institute for Lightguide Photonics, ITMO Anna Voznesenskaya Associate Professor, Vice-Director of Institute “Higher School for Engineering and Technology”, ITMO
6	12:40 – 13:10	17:40 – 18:10		Design of optical instruments for astronomy	Dmitrii Kukushkin Head of Laboratory, Centre for Applied optics, ITMO Alexey Bakholdin Associate Professor, Director of Centre for Applied Optics, ITMO
Coffee Break					
7	13:20 – 13:50	18:20 – 18:50	Peng Tan HIT	Computational meta-optics for imaging processing and advanced imaging	Xumin Ding Associate Professor, School of Instrumentation Science and Engineering Alla Uvarova
8	13:50 – 14:20	18:50 – 19:20		Wide-spectrum microlenses: opportunities, applications, limitations	Engineer, Centre for Applied optics, ITMO Alexey Bakholdin Associate Professor, Director of Centre for Applied Optics, ITMO
9	14:20 – 14:50	19:20 – 19:50		FPGAs in the heart of modern fiber optic sensor systems	Ivan Deyneka, Associate Professor Vladimir Kuznetsov, Engineer Sofya Sycheva, Engineer Institute “Higher School for Engineering and Technology”, ITMO
10	14:50 – 15:00	19:50 – 20:00	Hao Tian HIT	Closing Ceremony	

