

**19-22.03.2025**

Photonics School 2025

# Waveguides

Lviv

Школа фотоніки 2025

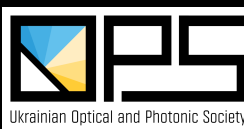
# Хвилеводи

Львів

**SPIE. STUDENT CHAPTER**  
V.N. KARAZIN KHARKIV NATIONAL UNIV.

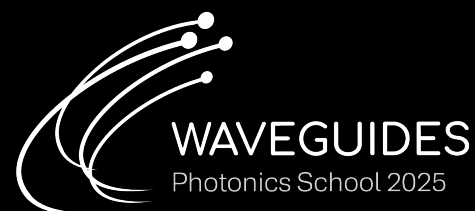
**OPTICA**  
Advancing Optics and Photonics Worldwide

Kharkiv National University  
Optica Student Chapter



# DAY 1

## 19/03 (Wed)



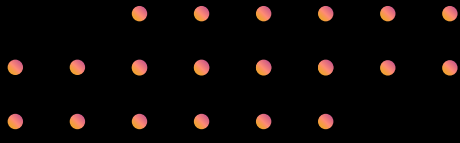
Time	Event	Speaker
09:30-10:00	Registration of participants	
10:00-10:40	Opening ceremony	
10:40-11:40	Lecture #1. <b>General theory of waveguides</b>	Anton Hlushchenko, NSC KIPT
11:40-12:00	Group photo	
12:00-12:30	Coffee break	
12:30-13:30	Practical Session #1. <b>Parallel-plane hollow waveguide</b>	Anton Hlushchenko, NSC KIPT
13:30-14:30	Lunch	
14:30-15:30	Practical Session #2. <b>Parallel-plane dielectric waveguide</b>	Anton Hlushchenko, NSC KIPT
16:00-18:00	Poster session	
18:00-19:00	Scientific discussions	

# DAY 2

## 20/03 (Thu)



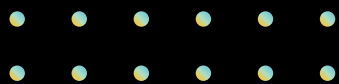
Time	Event	Speaker
09:00-10:00	Lecture #2. <b>Optical fiber: applications and prospects</b>	Oleh Yermakov, KhNU
10:15-11:15	Lecture #3. <b>Hollow-core waveguides: principles and applications</b>	Markus Schmidt, Leibniz-IPHT
11:15-11:45	Coffee break	
11:45-13:30	Practical Session #3. <b>Photonic crystal waveguides</b>	Oleh Yermakov, KhNU
13:30-14:30	Lunch	
14:30-16:00	Lab tour	
16:30-19:00	Social leisure	



21/03 (Fri)



Time	Event	Speaker
09:00-10:30	Lecture #4. <b>Metamaterial waveguides and metasurfaces</b>	Vladimir Tuz, KhNU
10:30-11:30	Practical Session #4. <b>Meta-waveguides</b>	Oleh Yermakov, KhNU
11:30-12:00	<b>Coffee Break</b>	
12:00-13:00	Lecture #5. <b>Inverse design methods for waveguides design</b>	Anton Ovcharenko, KhNU
13:00-14:00	<b>Lunch</b>	
14:00-15:45	Practical Session #5. <b>Automatic waveguide designing</b>	Anton Ovcharenko, KhNU
15:45-16:00	<b>Distribution by scientific projects</b>	
16:00-16:30	<b>Coffee Break</b>	
16:30-19:00	<b>Research work in scientific groups</b>	



22/03 (Sat)



Time	Event	Speaker
09:00-11:00	<b>Research work in scientific groups</b>	
11:00-11:30	<b>Coffee break</b>	
11:30-13:00	<b>Scientific projects reports</b>	
13:00-14:00	<b>Lunch</b>	
14:00-15:30	Lecture #6. <b>Magnetic semiconductor waveguides</b>	Vladimir Tuz, KhNU
15:30-16:00	<b>Closing ceremony</b>	

**Lecturers:**



**Markus Schmidt**  
Leibniz Institute  
of Photonic Technology, Germany



**Anton Hlushchenko**  
NSC "Kharkiv Institute of  
Physics and Technology"



**Anton Ovcharenko**



**Vladimir Tuz**

V. N. Karazin Kharkiv National University



**Oleh Yermakov**

**General Chair**  
Oleh Yermakov

V. N. Karazin Kharkiv National University  
Leibniz Institute of Photonic Technology

**Program and Organizing Committee**  
(V. N. Karazin Kharkiv National University):

Vlad Guz, Artem Hrinchenko, Oleh Demianyk, Anton Ovcharenko

**Local organizing committee (Lviv Polytechnic National University):**

Iryna Yaremchuk (chair), Tetiana Bulavinets, Serhii Melnykov

**Sponsors:**

Student Society "Karazin Photonics" (SPIE and Optica student chapters)

Ukrainian Optical and Photonic Society

Photonics Cluster Ukraine

EU-funded HELIOS project

Lviv Polytechnic National University

V. N. Karazin Kharkiv National University