


Portfolio of the academic advisor of the participants of the International Olympiad of the Global Universities Association on the track of postgraduate studies in 2022-2023

	<p>Aleksandr L. Gelgor, PhD, Assistance Prof. of Higher School of Applied Physics & Space Technologies Lead Researcher of “Industrial Internet of Things” Lab</p>
University	Peter the Great St.Petersburg Polytechnic University, Russia
English proficiency	Intermediate
Field of study on which the postgraduate student will be enrolled	<p><u>ENGINEERING & TECHNOLOGY</u> 2.1.13. Radio engineering, including television systems and devices</p>
List of research projects of a potential supervisor (participation / supervision)	<ol style="list-style-type: none"> 1. New FBMC modulation as a replacement for OFDM in fiber optic communications (participant). 2. Underwater acoustic communications with ZeroPadded OFDM (supervision). 3. Layered Division Multiplexing for satellite digital video broadcasting (supervision). 4. PR-SEFDM signaling for 5G (supervision). 5. RTK to enhance GNSS positioning accuracy (supervision).
List of possible research topics	<ol style="list-style-type: none"> 1. New waveforms for physical layer of mobile communications.
Field of study	Digital communications
Supervisor’s research interests	Signaling with ISI, Power Domain Multiplexing, Underwater Acoustic Communications, Real Time Kinematic
Research highlights	MATLAB/PYTON simulation modeling, deep theoretical understanding, understanding of current trends in wireless communications
Supervisor’s specific requirements	Hard knowledge of the digital communications, probability theory and mathematical statistics.
Supervisor’s main publications	19 Scopus publications for last 5 years
Results of intellectual activity	4 certificates of state registration of the computer program in last 5 years