Researcher profile (portfolio) form for potential research supervisors of postgraduate track participants in the Global Universities Association International Olympiad for graduate and postgraduate applicants

University	Tomsk Polytechnic University
English language proficiency	B1
Applicant's postgraduate program	2.2.8 Methods and devices of control and diagnosis of materials, products, substances and natural environment
List of research projects of a potential research supervisor (participation/leadership)	Fiber -optic deformation control systems for extended objects Winding power plant monitoring systems
List of possible research topics	Hardware and software control system for mining parameters Combined heat-solar energy system
 Research supervisor: Yurchenko Alexey Vasilievich Doctor of Technical Sciences TPU	Supervisor's research interests (detailed description of research interests): *Fiber-optic deformation control systems of various long products foundations, careers, mining, etc.* *Development of forecast systems for combined energy systems based on renewable energy sources* Research highlights (if applicable): Fiber-optic control systems in the mining industry have been developed and introduced Supervisor's specific requirements: no Supervisor's main publications (specify a total number of publications in journals indexed by Web of Science, Scopus, RSCI for the last 5 years, list up to 5 most significant publications with the publication details): - Shipilov, S.E., Satarov, R.N., Yakubov, V.P., Yurchenko, A.V., Minin, O.V., Minin, I.V. Ultra-wideband radio tomographic imaging with resolution near the diffraction limit (2017) Optical and Quantum Electronics, 49 (10), № 339 - Kalytka, V.A., Korovkin, M.V., Mekhtiyev, A.D., Yurchenko, A.V. Nonlinear Polarization Effects in Dielectrics with Hydrogen Bonds (2018) Russian Physics Journal, 61 (4), pp. 757-769. - Yurchenko, A.V., Mekhtiyev, A.D., Bulatbayev, F.N., Neshina, Y.G., Alkina, A.D. The Model of a Fiber-Optic Sensor for Monitoring Mechanical Stresses in Mine Workings (2018) Russian Journal of Nondestructive Testing, 54 (7), pp. 528-533 - Kalytka, V.A. Mekhtiev, A.D. Bashirov, A.V. Yurchenko, A.V. Al'kina, A.D.Nonlinear Electrophysical Phenomena in Ionic Dielectrics with a Complicated Crystal Structure

	Russian Physics Journal, 2020, 63(2), стр. 282-289 - Fast Object Detection Using Dimensional Based Features for Public Street Environments Ivan Matveev , Kirill Karpov, Ingo Chmielewski, Eduard Siemens and Aleksey Yurchenko. Smart Cities 2020, 3(1), 93-111; https://doi.org/10.3390/smartcities3010006 • Performance improvement of solar dryer using an auxiliary heat source under different values of airflow rates / A.V. Yurchenko, L.A. Alkakhderi, J.A.-K. Mohammed, A.D. Mekhtiev [et al] // Eurasian Physical Technical Journal. 2023. Vol. 20, № 1(43). P. 42–50. DOI: 10.31489/2023No1/42-50 • Performance improvement of solar dryer using an auxiliary heat source under different values of airflow rates / A.V. Yurchenko, L.A. Alkakhderi, J.A.-K. Mohammed, A.D. Mekhtiev [et al] // Eurasian Physical Technical Journal. 2023. Vol. 20, № 1(43). P. 42–50. DOI: 10.31489/2023No1/42-50
	Intellectual property rights Certificate of state registration of rights to the object of copyright 0004. Fiber-optical sensors for the system of monitoring the state of mining and equipment in the conditions of explosion / Yurchenko A.V., Mekhtiev A.D., Bulatbaev F.N., Yugay V.V. , Neshina E.G., Alkina A.D.