University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Upper intermediate (B2)
Educational program and field of the educational program for which the applicant will be accepted	ENGINEERING & TECHNOLOGY 2.4.1. Theoretical and Applied Electrical Engineering
List of research projects of the potential supervisor (participation/leadership)	From the latest: • Influence of experimentally obtained forms of the lightning current pulse on the mechanical characteristics of composite structures • An advanced method for calculating electromagnetic forces in structural elements of the slot and end zone of the stator in case of sudden short circuits of the turbogenerator • Optimization of lightning protection methods considering the macroscale asymmetry of lightning discharges
List of the topics offered for the prospective scientific research	• Various aspects of designing and optimizing of renewable energy sources. • Multi-purpose optimization of power system operation modes. • Optimization of electrical devices design
	2.02. Electrical eng, electronic eng
  Research supervisor: Nikolay Korovkin, Professor, Doctor of Technical Sciences, Degree Place: Electric Machine Industry Research Institute	Supervisor's research interests Inverse problems, ill poised problems, optimal control, identification, diagnostics - everything for electrical devices and systems
	Research highlights Renewable energy sources, optimization of operating modes and designs of electrical devices and systems
	Supervisor's specific requirements: Knowledge of the basic course of theoretical electrical engineering, computational methods, possession of modern software packages for calculating electrical circuits and electromagnetic fields is desirable
	Supervisor's main publications Total - 23. The most significant: 1. Elgamal M., Elmitwally A., Korovkin N., Abdel Menaem A. Day-ahead complex power scheduling in a reconfigurable hybrid-energy islanded microgrid with responsive demand considering uncertainty

	2. Osman M.H., Seify M.A.E., Ahmed M.K., Korovkin N.V., Refaat A. Highly efficient MPP tracker based on adaptive neuro-fuzzy inference system for stand-alone photovoltaic generator system. International Journal of Renewable Energy Research. 2022. Т. 12. № 1. pp. 209-217. Q2, Impact factor 8.3
	3. Shehata A.A., Korovkin N.V., Tolba M.A., El-Rifaie A.M. Power system operation enhancement using a new hybrid methodology for optimal allocation of facts devices. Energy Reports. 2022. Т. 8. № Suppl. 1. pp. 217-238. Q2, Impact factor 6.87
	4. Shehata, A.A., Refaat, A., Ahmed, M.K., Korovkin, N.V., Optimal placement and sizing of FACTS devices based on Autonomous Groups Particle Swarm Optimization technique. Archives of Electrical Engineering, 2021, 70(1), pp. 161–172, Impact factor: 1.01.
	5. Elgamal, M., Korovkin, N., Elmitwally, A., Chen, Z., Robust multi-agent system for efficient online energy management and security enforcement in a grid-connected microgrid with hybrid resources. IET Generation, Transmission and Distribution,