	BELOV, Pavel A. Doctor of Science in Technology, with distinction (second PhD), Helsinki University of Technology
Research interests	Metamaterials: ✓ Radiophysics ✓ Diffraction and scattering of electromagnetic waves ✓ Metamaterials ✓ Wireless data transmission ✓ Magnetic resonance imaging ✓ Nanoantennas
Features of the PhD program	The use of unique equipment, interaction with foreign scientists and research centers, financial support for PhD students
List of the supervisor's research projects (participation/supervision)	✓ Research of a controlled reflective surface for 5G networks ✓ Eco-friendly printing technology for optical surface labels ✓ Hybrid nanostructures for quantum-optical technologies ✓ Nanolasers and microlasers based on new nanomaterials and modern optical architectures ✓ Managed metasurfaces for wireless technologies ✓ Development of fundamental principles of technologies and materials for modern nanophotonic and microwave devices ✓ Managed metasurfaces for wireless technologies ✓ Ways to build a combined compact GNSS-LTE antenna system
List of potential thesis topics	✓ Diamagnetic levitation ✓ Designing of axions' detectors ✓ Metamaterials and its application
Publications in the last five years	180+ (Scopus / Web of Science / RSCI)
Key publications	1. Sandomirskii M., Petrova E., Kustov P., Chizhov L., Larin A., Bruyere S., Yaroshenko V., Ageev E., Belov P., Zuev D. Spectral physical unclonable functions: downscaling randomness with multi-resonant hybrid particles//Nature Communications, 2025, Vol. 16, No. 1, pp. 5097 2. Li Y., Wan S., Deng S., Deng Z., Lv B., Guan C., Yang J., Bogdanov A., Belov P., Shi J. Independent control of circularly polarized light with exceptional topological phase coding metasurfaces//Photonics Research, 2024, Vol. 12, No. 3, pp. 534-542 3. Sun I., Larin A., Mozharov A., Ageev E., Pashina O., Komissarenko F., Mukhin I., Petrov M., Makarov S., Belov P., Zuev D. All-optical generation of static electric field in a single metal-semiconductor nanoantenna//Light: Science and Applications, 2023, Vol. 12, No. 1, pp. 237 4. Zhu Y., Luo H., Yang C., Qin B., Ghosh P., Kaur S., Shen W., Qiu M., Belov P.A., Li Q. Color-preserving passive radiative

	cooling for an actively temperature-regulated enclosure//Light: Science and Applications, 2022, Vol. 11, No. 1, pp. 122 5. Song M., Jayathurathnage P., Zanganeh E., Krasikova M.V., Smirnov P.A., Belov P.A., Kapitanova P.V., Simovski C.R., Tretyakov S., Krasnok A.E. Wireless power transfer based on novel physical concepts//Nature Electronics, 2021, Vol. 4, No. 10, pp. 707-716
Key IPs	✓ Developed a certain class of metamaterials that allow transmitting images with super-resolution, which is several orders of magnitude better than the resolution of conventional optical image transmission and processing systems ✓ The author of 17 patented inventions, utility models and programs
Supervisor's specific requirements	✓ English – upper-intermediate ✓ Knowledge of the theory of electromagnetism
Code of the subject area of the PhD program	1.3.4 Radio Physics 1.3.6 Optics 2.2.14 Antennas, Microwave Equipment and Related Technology