

	<p>BELOV, Pavel A. Doctor of Science in Technology, with distinction (second PhD), Helsinki University of Technology</p>
<p>Research interests</p>	<p>Metamaterials:</p> <ul style="list-style-type: none"> ✓ Radiophysics ✓ Diffraction and scattering of electromagnetic waves ✓ Metamaterials ✓ Wireless data transmission ✓ Magnetic resonance imaging ✓ Nanoantennas
<p>Features of the PhD program</p>	<p>The use of unique equipment, interaction with foreign scientists and research centers, financial support for PhD students</p>
<p>List of the supervisor's research projects (participation/supervision)</p>	<ul style="list-style-type: none"> ✓ 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
<p>List of potential thesis topics</p>	<ul style="list-style-type: none"> ✓ Diamagnetic levitation ✓ Designing of axions' detectors ✓ Metamaterials and its application
<p>Publications in the last five years</p>	<p>180+ (Scopus / Web of Science / RSCI)</p>
<p>Key publications</p>	<ol style="list-style-type: none"> 1. A. Poddubny, I. Iorsh, P. Belov, and Yu. Kivshar, "Hyperbolic metamaterials", <i>Nature Photonics</i>, Vol. 7, pp. 958-967, 2013 DOI: 10.1038/nphoton.2013.243 2. S. B. Glybovski, S. A. Tretyakov, P. A. Belov, Yu. S. Kivshar, C. R. Simovski, "Metasurfaces: From microwaves to visible", <i>Physics Reports</i>, vol. 634, pp. 1-72, 2016 DOI: 10.1016/j.physrep.2016.04.004 3. A.P. Slobozhanyuk, A.N. Poddubny, A.J.E. Raaijmakers, C.A.T. van den Berg, A.V. Kozachenko, I.A. Dubrovina, I.V. Melchakova, Yu.S. Kivshar, and P.A. Belov, "Enhancement of magnetic resonance imaging with metasurfaces", <i>Advanced materials</i>, 2016 DOI: 10.1002/adma.201504270 4. D. Sakhno, E. Koreshin, P. Belov "Longitudinal electromagnetic waves with extremely short wavelength", <i>Physical Review B</i>, vol. 104, 2021 DOI: 10.1103/physrevb.104.1100304

	<p>5. Millar A., Anlage S., Balafendiev R., Belov P.A., Van Bibber K., Conrad J., Demarteau M., Droster A., Dunne K., Rosso A., Gudmundsson J., Jackson H., Kaur G., Klaesson T., Kowitt N., Lawson M., Leder A., Miyazaki A., Morampudi S., Peiris H., Roising H., Singh G., Sun D., Thomas J., Wilczek F., Withington S., Wooten M., Dilling J., Febbraro M., Knirck S., Marvinney C. Searching for dark matter with plasma haloscopes//Physical Review D, 2023, Vol. 107, No. 5, pp. 055013 DOI: 10.1103/physrevd.107.055013</p>
Key IPs	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ English – upper-intermediate ✓ Knowledge of the theory of electromagnetism
Code of the subject area of the PhD program	<p>1.3.4 Radio Physics 1.3.6 Optics 2.2.14 Antennas, Microwave Equipment and Related Technology</p>