


University	Peter the Great St. Petersburg Polytechnic University
Level of English proficiency	Fluent
Courses and fields of studies offered for applicants	2.5 Mechanical engineering. 2.5.4 Robots, mechatronics and robotic systems
Projects for potential academic supervision	Development of methods for creating and implementing cyber-physical systems. Adaptive Sensorless Control of Synchronous Electric Drives for Intelligent Robotic and Transport Systems. Control of cyber-physical systems.
Topics offered for prospective researches	Design of mechatronic systems for operation in extreme conditions. Design of biomechatronic and biomimetic systems. Research of new types of materials for mechatronic systems.
 <p>Research supervisor: Kerpeleva (Perepelkina) Svetlana, Candidate of Technical Sciences (ITMO University)</p>	<i>Mechanical engineering</i>
	Supervisor's research interests Biomechatronics, Mechatronic systems for working in extreme conditions, Materials Science, Tribology
	Study program highlights Knowledge in design, strength of materials, materials science. Ability to conduct experimental research
	Supervisor's specific requirements: English is at least Upper Intermediate level CAD and CAE software packages knowledge Characteristics: Responsibility, discipline, punctuality, creative approach to solving assigned tasks.
	Supervisor's publications There are 8 papers in Scopus in last 5 years.
	<ol style="list-style-type: none"> 1. Гапеева Е.Н., Ерофеев М.А., Мусалимов В.М., Паасуке М.А., Перепелкина (Керпелева) С.Ю., Эрелине Я.Я. Количественная оценка и моделирование биомеханических характеристик голеностопного сустава. // Научно-технический вестник информационных технологий, механики и оптики, 2024, №24, 3, с. 520 – 527. 2. Andreev Y.S., Medunetskiy V.M., Perepelkina (Kerpeleva) S.Yu. Features of the Use of Structural Polymer-Composite Materials for the Manufacture of Complex-Shaped Parts in Small-Scale Production. // Lecture Notes in Mechanical Engineering, 2022, pp. 68-75. 3. Abramchuk M., Zaharina E., Perepelkina (Kerpeleva) S. Development of the Hyperbaric Chamber for Capturing and Studying deep-sea Creatures // Lecture Notes in Electrical Engineering, 2021 №729, с. 956-966. 4. Alizadeh M., Handroos H., Korium M., Perepelkina (Kerpeleva) S., Roozbahani H. Direct Metal Laser Sintering of Precious Metals for Jewelry Applications: Process Parameter

Selection and Microstructure Analysis. // IEEE Access №9, 2021, pp. 126530-126540

5. Абдельсалам А.А., Кориум М.С., Перепелкина (Керпелева) С.Ю. Алгоритм обнаружения полосы движения // Известия высших учебных заведений, 2021, №64, с. 104-108.

6. Скорых В.А., Воднев А.А., Воднева Л.Ю., Коротков О.Б., Лопаев С.Н., Перепелкина (Керпелева) С.Ю. Многоместный аппарат с конвейерным магнитным приводом для определения кинетики растворимости фармацевтических форм. // Известия высших учебных заведений. приборостроение, 2021 г, №64, 4, с. 329-338.