

Georgii A. Kurshakov

Robotics & Mechatronics Engineer

Education

- 2022–Present **Ph.D. in Computer Science**, *University of Genoa*, Italy.
Industrial PhD (with Gter s.r.l.)
- 2020–2022 **M.Sc.Eng. in Advanced Robotics**, *University of Genoa & Keio University*, Italy & Japan, *GPA: 100/100*.
JEMARO Double Degree Master's Program
- 2016–2020 **B.Sc.Eng. (Hons.) in Mechatronics and Robotics**, *St. Petersburg Polytechnic University*, Russia, *GPA: 4.97/5.0*.
Autonomous Robots Curriculum

Recent Projects

- 2024 **ASUR**, with *Gter s.r.l.*.
Development of a SLAM-based navigation algorithm for an autonomous water surface drone for shallow waters surveying.
- 2023 **REMOT**, with *Gter s.r.l.*, financed by *EUSPA*.
Development of a wearable device based on geospatial and inertial navigation, for high-precision tracking of the human body movement kinematics.
- 2022 **Dexterous tendon-driven robotic hand**, *Master's thesis*.
Comprehensive design of a robotic hand with tendon driven fingers, including mechanical design, circuitry, control algorithms and software.
- 2021 **Remote physiotherapy smartphone application**, *Course project*.
Design of a system for doing physiotherapy remotely with the doctor's feedback. Includes a smartphone app, hardware, and a business model. Leader of the project team.

Work

- 2023–Present **Teaching Assistant**, *University of Genoa*.
Modelling & Control of Manipulators
Robot Dynamics & Control.

- 2022–Present **R&D Engineer**, *Gter S.r.l.*
 PhD project in collaboration with UniGe. GNSS/INS integration for human motion reconstruction.
- 2019–2020 **Robotics Engineering Intern**, *Russian State Scientific Center for Robotics and Technical Cybernetics*.
 Research support: Design of mathematical models as a part of team working on a rescue mobile robot for extreme environment.
- 2019–2021 **Translator/Interpreter**, *Marine Propulsion Systems, Ltd.*
 Written and oral English-Russian translation of technical documentation and negotiations in a company dealing with diesel ship engines.

Professional Skills

- Engineering Mechanics, Electronics, Control Systems, Navigation
 Software Solidworks, Altium Designer, Simulink
 Programming C/C++, Matlab, Python, ROS, OpenCV, Git

Personal Skills

- Quick Learner: Rapidly grasps new concepts and technologies.
- Leadership: Experienced in leading teams and managing projects.
- Multitasking: Efficient in handling multiple tasks simultaneously.
- Effective Communicator: Clearly explains complex technical concepts.
- Adaptable: Easily adjusts to new environments and challenges.
- Linguistic Aptitude: Talented in learning and using new languages.

Languages

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| English | Proficient | <i>IELTS 8.0</i> |
| Russian | Native | |
| Italian | Upper Intermediate | <i>Con conversationally fluent</i> |
| Japanese | Intermediate | |

Publications

- **G. Kurshakov** et al., Loosely-Coupled GNSS/INS Integration for Foot Trajectory Reconstruction in Outdoor Environments, 10th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics, September 2024 (*Accepted and submitted*)
- A. Maffia, **G. Kurshakov** et al., Integrating Multi-Sensor Augmented PNT for Enhancing Outdoor Human Motion Capture using Low-Cost GNSS Receiver, Presented at the European Navigation Conference 2024, Noordwijk (*To be published*)