

Markus Buchholz

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<https://markusbuchholz.github.io/>

Research Interests

Robotics, autonomous systems, robot motion control, whole-body dynamics, trajectory optimization, and simulations.

Education

Gdansk University of Technology

Jan 2010 – Dec 2012

Ph.D. in Mechatronics

Research: Real-time algorithm to control nonlinear robot systems.

Gdansk University of Technology

Sep 1998 – Jun 2003

Master's in Electronics, Telecommunication, and Computer Science

Grade: A

Gdansk University of Technology

Mar 2002 – Mar 2004

Master's in Economy and Management

Grade: A

Professional Experience

Postdoctoral Researcher in Underwater Robotics

Sep 2023 – Present

Heriot-Watt University, Scotland

Senior Software Engineer - Robotics

Mar 2023 – Sep 2023

Yaskawa Robotics, Germany

Founder

Jul 2020 – Sep 2023

Buchholz Robotics, Norway

Senior Robotics Engineer

Mar 2022 – Sep 2022

Zivid, Norway

Principal Software Engineer

Jan 2018 – Jul 2020

Canrig Robotics, Norway

R&D Senior Engineer - Motion Control

Mar 2014 – Dec 2017

ABB Robotics, Norway

Senior Engineer - Subsea Control Systems

Mar 2012 – Feb 2014

Equinor (Statoil), Norway

R&D Senior Engineer - Ship Electrical Power Systems

Jan 2011 – Feb 2012

Rolls-Royce, Norway

Senior Engineer - Subsea Control Systems

Apr 2008 – Dec 2010

General Electric, Norway

Electrical Engineer (Shipyard)

Apr 2006 – Dec 2007

Rysjedal Elektro AS, Norway

Teaching and Courses

Teaching Assistant - Robotics Systems Science Heriot-Watt University	Sep 2023 – Present
Technical Support, BSc Project, Chen XIANGRU LLM-Driven Behavior Trees for Autonomous Underwater Robotics Missions Heriot-Watt University	Jan 2024 – Present
Technical Support, MSc Project, Baudouin BELPAIRE Waste Collection Pipeline on BlueBoat Heriot-Watt University	2024
Creator (Online Course): Behavior Trees for ROS2 The ConstructSim	2022
Creator (Online Course): Reinforcement Learning for Robotics (ROS) The ConstructSim	2020
Creator (Online Course): Machine Learning for Robotics (ROS) The ConstructSim	2020

Fellowships and Awards

Golden Award from the Rector of Gdansk University of Technology	2004
Scholarship, Gdansk University of Technology (Computer Science)	1998–2003
Scholarship, Gdansk University of Technology (Economy)	2002–2004

Publications

All publications are available online at: <https://scholar.google.com/citations?user=YnoZFwxwAAAA&hl=no>

Technical Skills

C++, Python, ROS 2, Docker, Linux, MATLAB, StoneFish, GazeboSim, MoveIt2, Pinocchio, Crocodyl, ArduPilot.

Passions

Robotics, Cycling, Linux, ROS 2.