Markus Buchholz

Home: 4032 Stavanger, Dronningåsen 73, Norway
Tel: +[47 46 42 90 97]
markus.x.buchholz@gmail.com
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   **Sep 2023 – Present**
Heriot-Watt University

Technical Support, BSc Project, Chen XIANGRU   **Jan 2024 – Present**
LLM-Driven Behavior Trees for Autonomous Underwater Robotics Missions
Heriot-Watt University

Technical Support, MSc Project, Baudouin BELPAIRE   **2024**
Waste Collection Pipeline on BlueBoat
Heriot-Watt University

Creator (Online Course): Behavior Trees for ROS2   **2022**
The ConstructSim

Creator (Online Course): Reinforcement Learning for Robotics (ROS)   **2020**
The ConstructSim

Creator (Online Course): Machine Learning for Robotics (ROS)   **2020**
The ConstructSim

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=YnoZFxwAAAAJhl=no

Technical Skills

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

Passions

Robotics, Cycling, Linux, ROS 2.