Hongzhong Zhu

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Summary

Over 13 years of experience working in control engineering, ocean engineering, and system science. Research of Interests includes hybrid wind-wave energy harvesting system, digital twin for floating offshore wind turbine, novel wind turbine concepts, floating offshore multibody dynamics, ship towing system, floater optimization, vortex induced vibration (VIV), and so on.

Competencies: data science, mathematical optimization, embedded system, MATLAB/Simulink, Python, C++.

Experience

Associate Professor
Kyushu University
May 2023 - Present (6 months)

Senior Engineer
OWC Japan
Apr 2022 - May 2023 (1 year 2 months)

Assistant Professor
Kyushu University
Jan 2015 - Apr 2022 (7 years 4 months)
Optimal design and modeling of offshore overhead power transmission system;
Modeling and control of floating offshore wind turbine;
Modeling and control of hybrid wind/wave energy converters;
Drivetrain vibration suppression for large-scale wind turbines;
Ship towing system;

Postdoctoral Fellow
The University of Tokyo
Apr 2014 - Dec 2014 (9 months)
Modeling and control of high-precision ball-screw stages

Process Engineer
China Guodian Corporation
Aug 2003 - Nov 2008 (5 years 4 months)
Senior operator of subcritical coal power plant unit. Daily works included the operation&maintenance of the power plant.

Education

The University of Tokyo

Doctor of Philosophy (Ph.D.), Electrical and Electronics Engineering

2011 - 2014

Research on robust friction compensation of ball-screw-driven stages; Quantization noise suppression using l1-norm regularization.

Kyoto University

Master's Degree, Mechatronics, Robotics, and Automation Engineering

2009 - 2011

Smooth output reconstruction of linear systems with quantized measurements.

Skills

MATLAB • Research Skills • Data Analysis • Statistics • C++ • Mathematical Modeling • Programming • LaTeX • Analytical Skills • Education

Honors & Awards

Best Dissertation of the Department of Electrical Engineering - Department of Electrical Engineering, The University of Tokyo

Mar 2014

Outstanding Self-supporting International Students - China Scholarship Council

Mar 2014

Research Award - the Society of Automotive Engineers of Japan, Inc.

Mar 2014

Best Session Paper Award - the 13th International Workshop on Advanced Motion Control (AMC2014)

Mar 2014

Best Session Paper Award - the 39th Annual Conference of the IEEE Industrial Electronics Society (IECON2013)

Nov 2013

Research Award - the SICE Annual Conference on Control Systems

Mar 2012

Research Paper Award - the IEE of Japan

Sep 2012

Best Presentation Award - the 38th Annual Conference of the IEEE Industrial Electronics Society (IECON2012)
Nov 2012

AEON scholarship - AEON
Apr 2010

Shanghai outstanding undergraduate
Jun 2003