



Dr. Pentti Kujala

Tenured Full Professor on Waterway Safety Management

Taltech/Estonian Maritime Academy

Review of Challenges in Developing Ships for Polar Waters

Biography: Dr. Pentti Kujala is a Professor of Waterway Safety at the Estonian Maritime Academy, Tallinn University of Technology (TalTech), and Professor Emeritus of Marine Technology at Aalto University, Finland. He received his D.Sc. (Tech.) degree from Helsinki University of Technology in 1994, following M.Sc. and Lic.Sc. degrees in marine technology.

During a career spanning more than four decades, Professor Kujala has made significant contributions to marine technology, ship safety, Arctic engineering, and maritime risk analysis. His research focuses on ship operations in ice-covered waters, ice-induced loads on ship structures, structural design, maritime traffic safety, digital twins, and autonomous shipping. He has led numerous international research projects and has supervised more than twenty doctoral dissertations in the fields of marine engineering and maritime safety.

Before joining TalTech, Professor Kujala served as Professor of Marine Technology and Vice Dean of the School of Engineering at Aalto University. He has also held positions at Lloyd's Register, VTT Technical Research Centre of Finland, Aker Yards, and Kvaerner Masa-Yards. He is the author or co-author of more than 170 scientific publications and is internationally recognized for his contributions to ship safety, Arctic shipping, and marine structural engineering.

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