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## Recent Advances on Safe Maritime Operations under Extreme Conditions

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Increased activity in the Arctic involves hazards such as a harsh environment, especially the ice cover and cold temperature, remoteness, a lack of infrastructure, and lack of information about bathymetry, among other challenges. Ice cover is also highly variable and dynamic, with increasing variation in the future; due to the changing effects of the world climate, the ice conditions on all ice-covered areas are also under dynamic change. This book presents a collection of papers which focus on scenario-based risk management for polar shipping and risk-based guidelines. Topics discussed by internationally renowned authors involve the description of ice conditions, ship-ice contact and associated loading, numerical models/idealizations, definitions of limit states for ice-strengthened structures, and holistic risk/reward analyses for polar navigation. From an overall perspective, this work contributes toward international research efforts to safeguard maritime operations in ice-infested waters. This book may be of interest for maritime industry practitioners, regulators, academics, researchers and postgraduate students.

