

Editorial

# Failure Analysis of Marine Structure

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Welcome to the world of marine structures, as this fascinating compilation of cutting-edge research unfolds before your eyes. Prepare to dive deep into the fascinating realm of failure analysis, where mysteries are unraveled, and solutions emerge to repair and safeguard against future calamities [1]. This remarkable edition delves into a myriad of industrial conundrums, from awe-inspiring bridges that stand proud upon the water's surface [2,3], to the intricate network of oil and gas transmission pipelines [4,5]. Brace yourself for the adrenaline-pumping exploration of vehicles hurtling through aquatic realms at breakneck speeds [6], as well as the enigmatic realm of offshore cables [7].

Inside, you will find an all-encompassing panorama that sheds light on the fascinating realms of offshore structure design and control. Discover the pivotal role played by fatigue [8,9], corrosion [4,5], sliding wear [10], cavitation [11], and crevice erosion—the formidable foes that constantly threaten the integrity of marine structures. Be amazed as laboratory results are revealed, complemented by the wonders of finite element simulations that bring these investigations to life.

But that is not all. Embrace the revolution brought about by the marriage of research and cutting-edge technology, and witness the power of machine learning techniques such as neural networks and deep learning being harnessed to unveil precise and astute analysis [4,9]. Brace yourself as these tools form an unbreakable bond, enabling accurate predictions of system behavior under varying stress conditions.

Prepare to embark on a captivating journey that will not only equip you with a wealth of knowledge spanning multiple industries related to the sea and ocean, but will also introduce you to a range of groundbreaking research techniques [12–14]. Let your curiosity guide you as you delve into this treasure trove of articles, each an illuminating piece of the intricate puzzle under discussion. Embrace the invitation that awaits you and let the captivating revelations within these pages leave you inspired and enlightened.

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