



# Knowing Rogues

It doesn't take a perfect storm to generate a rogue wave—an open-ocean wave much steeper and more massive than its neighbors that appears with little or no warning. Sometimes winds and currents collide causing waves to combine non-linearly and produce these towering walls of water. Mathematicians and other researchers are collecting data from rogue waves and modeling them with partial differential equations to understand how and why they form. A deeper understanding of both their origins and their frequency will result in safer shipping and offshore platform operations.



Photo courtesy of Karsten Petersen.



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