

Numerical Simulation for Renewable Energy using Ocean Waves

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During the last 30 years the use of the ocean waves to produce electricity has gained momentum. Many challenges have still to be overcome. The first wave farm in Portugal was shut down due to financial and technical problems two months after its opening in 2008. Experimental testing is necessary but very expensive. Here, numerical methods could help to overcome these problems. In this talk we address the challenges in numerical simulations in the transport of energy by ocean waves as well as possible solutions using high performance computing.