

## Seismic Hazard Assessment of Offshore Platforms

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**Abstract :** This paper examines the effects of pile-soil-structure interaction on the dynamic response of offshore platforms under the action of near-fault earthquakes. Two offshore platforms models are investigated, one with completely fixed supports and one with piles which are clamped into deformable layered soil. The soil deformability for the second model is simulated using non-linear springs. These platform models are subjected to near-fault seismic ground motions. The role of fault mechanism on platforms' response is additionally investigated, while the study also examines the effects of different angles of incidence of seismic records on the maximum response of each platform.

**Keywords :** hazard analysis, offshore platforms, earthquakes, safety

**Conference Title :** ICSCCE 2019 : International Conference on Structural and Civil Engineering

**Conference Location :** Paris, France

**Conference Dates :** June 25-26, 2019