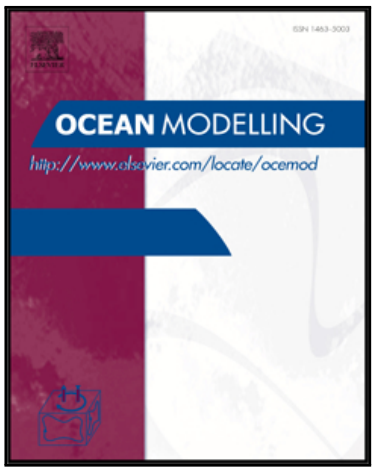

Wave–current dynamics and interactions near the two inlets of a shallow lagoon–inlet–coastal ocean system under hurricane conditions

Miaohua Mao , Meng Xia

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Highlights

- A 3D wave–current system was applied to paired inlets under hurricane conditions.
- Tide and swell dominate inlet dynamic while wind control wave dynamic behind inlet.
- Wave–current interactions (WCI) are significant to nearshore and inlet dynamics.
- WCI mainly include depth variation-induced breaking and wave-induced circulation.
- Inlet dynamics resemble one-inlet but OCI circulation is affected by closing CI.