



Water Waves on Vortical Flows

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Deadline for manuscript
submissions:

closed (30 September 2021)

Message from the Guest Editor

Generally, in coastal and ocean waters, current velocity profiles are established by bottom friction and/or wind stress at the sea surface and are consequently depth-dependent. Ebb and flood currents due to the tide may have an important effect on water wave properties. In any region where the wind blows, the generated current affects the kinematics and dynamics of the surface water waves. For example, the current velocity profile at Columbia river mouth reported by Dong and Kirby (Proceedings of the 33rd Conference on Coastal Engineering, 2012) shows the existence of a strong vertical shear on the upper layer of the water flow near the free surface, which was high enough to affect the kinematics of water wave of wavelengths up to tens of meters.

Water waves on rotational flows have attracted much less attention than those on irrotational flows. The objective of this Special Issue is to increase our knowledge on the interaction between surface water waves and vortical flows.





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Message from the Editor-in-Chief

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