Joint IRPC/Oceanography Seminar

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"Ocean Surface Currents and Applications: Progress and Challenges"

Ocean currents are important in transporting objects floating on or near the sea surface. Yet, surface currents remain difficult to observe and to describe, leading often to significant biases in the OGCMs (ocean general circulation models) and therefore creating problems with their application.

Here we present an empirical diagnostic model of surface currents (SCUD), built using historical trajectories of Lagrangian drifters and data of remote sensing, as well as an innovative technique allowing derivation of probable trajectories using incomplete or inaccurate observations. Results of the model simulations of the drift of marine debris generated by the 2011 Japan tsunami will be shown and verified using observational reports. Safety of navigation, biofouling, alien species transport and other applications will be discussed.