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Katie Oliveras* (oliveras@seattleu.edu), Seattle university, Mathematics Department, 901 12th Ave, Seattle, WA 98122, and **Vishal Vasan**. *Water Waves: Reconstructing the Surface Elevation from Pressure Data*.

We discuss several new methods to recover the water-wave surface elevation from pressure data obtained at any depth below the fluid surface. The new method requires the numerical solution of a nonlocal nonlinear equation relating the pressure and the surface elevation which is obtained from the Euler formulation of the water-wave problem without approximation. This new approach is compared with other approaches currently used in field observations. (Received September 18, 2015)