1099-76-380   **Sergey A. Dyachenko*** (`sdyachen@unm.edu`), 1855 Girard Blvd NE, apt 16, Albuquerque, NM 87106, and **Pavel M. Lushnikov** and **Alexander O. Korotkevich**. *Finding the Stokes wave: From Low Steepness to Almost Limiting Wave.*

Stokes wave is a fully nonlinear wave propagating on the surface of deep water. We solve free surface hydrodynamic equations in the framework of conformal variables via Generalized Petviashvili and Newton Conjugate Gradient methods and find Stokes waves in high nonlinearity regimes and study their Pade approximants to infer the analytic structure of Stokes waves. (Received February 11, 2014)