STEADY ROTATIONAL WATER WAVES

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I will consider classical 2D traveling water waves with vorticity. By means of local and global bifurcation theory using topological degree, it is known that there exist many such waves. They are exact smooth solutions of the Euler equations with the physical boundary conditions. Some of the waves have peaks with 120° corners, some are tall and steep and some are overhanging, as distinguished from most time-dependent analytical theory. I will emphasize recent work, especially for periodic traveling waves with favorable vorticity.