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Cristina Stoica* (cstoica@wlu.ca), Department of Mathematics, Wilfrid Laurier University, 75 University Ave. West, Waterloo, Ontario N2L 3C5, Canada. *N-body problems and fluids mechanics.*

It is well known that the N -vortex problem shares many common features with the N -body of celestial mechanics. In this talk I will present other examples of N -point systems which are either simplified or truncated models of fluid motion. These models display similar properties (Hamiltonian structure, continuous symmetries), as inherited from the original fluid system. Also, when present, discrete symmetries allow the study of these N -point systems by employing the same methods. (Received September 09, 2014)