

**Classical integrable many-particle systems**  
**V. Inozemtsev (BLTP JINR, Dubna, Russia)**

**Abstract**

New integrable  $(N + 1)$ -particle systems with binary interaction are found ( $N \geq 2$ ). The corresponding Hamiltonians describe the motion of  $N$  interacting particles with mass equal 1 in the field created by one particle of infinite mass. The integrals of motion for these systems are in involution, and the solutions of the equations of motion can be found analytically in principle (Liouville theorem).