1127-35-78   **Olivier Goubet*** (`olivier.goubet@u-picardie.fr`), LAMFA CNRS UMR 7352, Université de Picardie, 33 rue Saint-Leu, 80039 Amiens, France, and **Imen Manoubi**. *A water wave model with a non local viscous dispersive term.*

We study the water wave model with a nonlocal viscous term

$$u_t + u_x + \beta u_{xxx} + \frac{\sqrt{\nu}}{\sqrt{\pi}} \frac{\partial}{\partial t} \int_0^t \frac{u(s)}{\sqrt{t-s}} ds + uu_x = \nu u_{xx},$$

where $\frac{1}{\sqrt{\pi}} \frac{\partial}{\partial t} \int_0^t \frac{u(s)}{\sqrt{t-s}} ds$ is the Riemann-Liouville half-order derivative. Here x belongs to $I\!R$ and $\nu > 0, \beta$ are parameters. We study the initial value problem and the decay rate of solutions to the equilibrium. We follow here the references below.

References

[1] I. Manoubi, Theoretical and numerical analysis of the decay rate of solutions to a water wave model with a nonlocal viscous dispersive term with Riemann-Liouville half derivative, *DCDS serie B*, **19**, (2014), n 9, 2837–2863.

[2] O. Goubet and I. Manoubi, Theoretical analysis of a water wave model with a nonlocal viscous dispersive term using the diffusive approach, to appear in *Advances in Nonlinear Analysis*.