1114-35-295   **C V Flores*** (`cynthia.flores@csuci.edu`), One University Drive, Bell Tower East 2762, Camarillo, CA 93012, and **D L Smith**. *On the controllability and stabilization of the linearized Dispersion Generalized Benjamin-Ono equation on a periodic domain.* Preliminary report.

In this talk, solutions of the linearized Dispersion Generalized Benjamin-Ono equation are studied

$$\partial_t u(x,t) + D^{1+a} u(x,t) = f(x,t) \tag{1}$$

for $0 < a < 1$, $x \in [0, 2\pi]$ and $t \geq 0$ where D^{1+a} denotes the homogeneous derivative. We impose that

$$\frac{\partial^k u}{\partial x^k}(0,t) = \frac{\partial^k u}{\partial x^k}(2\pi,t)$$

for $k = 0, 1$, and 2 so that the process is 2π-periodic in x, and additionally, it is assumed that the distributed control f is generated by a linear feedback law conserving the volume $\int_0^{2\pi} u(x,t)dx$. Included in the discussion are the related controllability and stabilizability preliminary results. (Received August 31, 2015)