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**Jerry L Bona** (bona@math.uic.edu) and **Hongqiu Chen\*** (hchen1@memphis.edu), Department of Mathematical Sciences, University of Memphis, Memphis, TN 38152. *Well-posedness of regularized Benjamin-Ono-type equations.*

Considered here is the regularized Benjamin-Ono-type equation with an initial condition

$$u_t + u_x + uu_x + D^\alpha u_t = 0, \quad u(x, 0) = u_0(x)$$

for  $x \in \mathbb{R}$ ,  $t \geq 0$ , where the operator  $D = (-\partial_{xx})^{\frac{1}{2}}$ . The primary study shows that, if  $1 \leq \alpha \leq \frac{3}{2}$ , then the problem is locally well posed in  $H^s(\mathbb{R})$  for any  $s > \frac{3}{2} - \alpha$ . If  $\alpha > \frac{3}{2}$ , then it is globally well posed in  $H^s(\mathbb{R})$  for  $s \geq 0$ . The result is sharp. The similar results hold true in the corresponding periodic function spaces. (Received September 04, 2006)