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Robin Ming Chen* (chenm@math.umn.edu), 206 Church St. SE, School of Mathematics,
Minneapolis, MN 55455. *Wave-breaking for a generalized two-component Camassa-Holm system.*

We study a generalized two-component Camassa-Holm system which can be derived from the theory of shallow water waves moving over a linear shear flow. This new system also generalizes a class of dispersive waves in cylindrical compressible hyperelastic rods. We show that this new system can still exhibit the wave-breaking phenomenon. Also a sufficient condition for global solutions is established. This is a joint work with Yue Liu. (Received September 21, 2010)