1132-35-326 **A. David Trubatch*** (david.trubatch@montclair.edu), Department of Mathematical Sciences, Montclair State University, Montclair, NJ 07043. *Reduced models for recurrence in the Korteweg-de Vries equation and related systems.* Preliminary report.

The observation of repeated approximate recurrence of initial conditions for nonlinear systems goes back to groundbreaking numerical simulations by Fermi, Pasta, Ulam (and Tsingou). By restricting the number of modes considered, Infeld obtained a reduced model of the nonlinear Schrödinger equation that gave good estimates for the FPU-like recurrence observed in that system [PRL v. 47 (1981) p. 717]. We explore application of the reduced-model approach to the prediction of recurrences in the Korteweg-de Vries equation and related systems. (Received July 25, 2017)