

# COLLOQUIUM

## Peaked solitons and beyond

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**Abstract:** In this talk, we will introduce integrable shallow water wave models given in scalar form, which possess peaked solitons (peakons), including the well-known Camassa-Holm (CH), the Degasperis-Procesi (DP), and other new peakon equations developed in recent years. In particular, the CH peakon equation is able to be extended to the DP, the b-family, the FORQ, the Novikov, the modified CH (MOCH), and other higher order models with peakons or pseudo-peakons. Open problems will also be addressed for discussion in the end. Some work is joint with UTRGV former students Miguel Rodriguez, Zhenteng Zeng, former postdoc Baoqiang Xia, and Enrique Reyes.

