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Spinor Camassa-Holm Equations

I will outline a construction of spinor analogs of the Camassa-Holm equation. In essence, to each orthogonal group, one can associate a Camassa-Holm-type equation that has a complex internal structure. I will motivate this generalization using the example of spectral deformations of the Euler-Bernoulli beam problem, which corresponds to the Clifford algebra on two generators with Minkowski signature. The talk is based on recent work with R. Beals and ongoing research with A. Hone and V. Novikov.