Alex Himonas: *"The initial value problem for the CH and DP equations".*

Abstract. We shall consider the Cauchy problem for the Camassa-Holm (CH) and Degasperis-Procesi (DP) equations and discuss their well-posedness properties in Sobolev spaces H^s. For $s > 3/2$ these equations are well-posed in the sense of Hadamard. When $s < 3/2$, both CH and DP are ill-posed in Sobolev spaces H^s. This will be the main focus of our presentation. The talk is based on work in collaboration with Carlos Kenig, Gerard Misiołek, Curtis Holliman and Katelyn Grayshan.