1154-51-633 **Adam-Christiaan van Roosmalen**, **Réamonn Ó Buachalla** and **Zhaoting Wei*** (zwei3@kent.edu). *Idempotent elements and holomorphic structures on quantum complex projective spaces.* Preliminary report.

The quantum complex projective space $\mathbb{C}P_q^n$ is defined as the quotient of quantum groups $SU_q(n+1)/U_q(n)$. It is already known that $\mathbb{C}P_q^n$ has a noncommutative holomorphic structure. In this talk we will give explicit constructions of non-trivial idempotent elements on $\mathbb{C}P_q^n$. Inspired by a work of Polishchuk in 2006 we use these idempotent elements to construct non-standard holomorphic structures on $\mathbb{C}P_q^n$. (Received September 09, 2019)