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Dimitar Grantcharov* (grandim@uta.edu), Department of Mathematics, UT Arlington, Arlington, TX 76019, and **Ji Hye Jung, Seok-Jin Kang, Masaki Kashiwara** and **Myungho Kim**. *Highest weight modules and crystal bases for quantum queer superalgebras.*

The Lie superalgebra $q(n)$ is the second super-analogue of the general Lie algebra $gl(n)$. Due to its complicated structure, $q(n)$ is usually called “the queer superalgebra”. In this talk we will discuss the structure of highest weight modules over the quantum queer superalgebra $U_q(q(n))$. We will also explain how to develop crystal basis theory for $U_q(q(n))$. (Received August 09, 2010)