Quiver representations and q-characters

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Simple modules of quantum affine algebras are important objects of study, and they are beautifully connected to combinatorics through their q-characters. Hernandez and Leclerc observed that certain q-characters can be realized geometrically as Euler characteristics of quiver Grassmannians. In the present talk, we will generalize this connection to all q-characters of simple modules, using shuffle algebras and critical K-theory.