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D-meson semileptonic decays with highly improved staggered quarks

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We present new results on semileptonic decays of D-mesons using the highly improved staggered quark (HISQ) action for both valence and 2+1+1 sea quarks. Our calculation uses lattice spacings ranging from 0.12 fm down to 0.042 fm, including several ensembles with physical-mass pions. The focus on the talk will be on the vector and scalar form factors (f_+ and f_0) for the decays $D \rightarrow \pi$, $D \rightarrow K$ and $D_s \rightarrow K$. Phenomenological applications will be discussed.

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