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Semileptonic $D \rightarrow K$ decay from full lattice QCD with HISQ

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We present a lattice QCD calculation of both scalar and vector form factors associated with the $D \rightarrow K\ell\nu$ semileptonic decay over full range of q^2 . We extract the central CKM matrix element, V_{cs} in the Standard Model, by comparing the lattice QCD results for the form factors and the experimental decay rates. This calculation has been performed on the $N_f = 2 + 1 + 1$ MILC HISQ ensembles including the ones with the physical light quark masses.

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