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Quiver Yangians as Coulomb branch algebras

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For a 3D N=4 gauge theory, turning on the Omega-background deforms the Coulomb branch chiral ring into the quantum Coulomb branch algebra, generated by the 1/2-BPS monopoles together with the complex scalar in the vector-multiplet. We conjecture that for a 3D N=4 quiver gauge theory with unitary gauge group, the quantum Coulomb branch algebra can be formulated as the truncated shifted quiver Yangian $Y(\hat{Q}, \hat{W})$ based on the triple quiver $\hat{Q}$ of the original quiver Q with canonical potential $\hat{W}$. The Hilbert spaces of vortices approaching different vacua at spatial infinity furnish different representations of the shifted quiver Yangian, and all the charge functions have only simple poles.

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