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Casimir conformal blocks from meromorphic connections over curves.

Casimir W -algebras are associative extensions of the Virasoro infinite-dimensional algebra of conformal transformations of the plane at integer central charge, and associated to simply-laced simple Lie algebras. We will describe how to construct families of co-invariants of certain representations of those algebras, so-called conformal blocks, associated to configurations of points on compact Riemann surfaces, together with some Lie theoretic data. To do so, we will consider deformations of meromorphic connections in principal bundles over compact Riemann surfaces, and give a quantum flavour to their geometry.