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N-point Virasoro algebras and their dense representations.

In this talk we introduce and describe what we call the n -point Virasoro algebra which is a natural generalization of the classical Virasoro algebra and is the universal central extension of the multipoint genus zero Krichever-Novikov type algebra. We determine the necessary and sufficient conditions for such algebras to be isomorphic, their automorphisms, their derivation algebras, their universal central extensions, and some other properties. We also construct a large class of modules which we call dense modules, and determine the necessary and sufficient conditions for them to be irreducible. (Received September 20, 2010)