

Virasoro Algebra and Loewner Chains

Alexander Vasil'ev

University of Bergen.

We discuss connections between the Virasoro Algebra and the Loewner equations, in partial derivatives and its characteristic equation in ordinary derivatives. It turns out that the Virasoro Generators become conservative quantities for a partially integrable Hamiltonian system for the Loewner ODE, and the Loewner PDE becomes a change-of-variable formula for a trajectory in the space of univalent functions from the canonical affine basis to the basis given by Virasoro Generators.