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A 3d topological-holomorphic integrable field theory from 2-groups

Wednesday 17 July 2024 16:00 (20 minutes)

The 2d Wess-Zumino-Witten CFT is an integrable field theory that is known to host infinitely many conserved currents that obey the affine Kac-Moody algebra. This talk is based on the joint work https://arxiv.org/abs/2405.18625 with J. Liniado, where we introduced a 3d integrable field theory which can be thought of as a topological-holomorphic analogue of the 2d WZW CFT. A detailed analysis of its conserved chiral higher currents reveals the structure of a differential graded analogue of the 2-Kac-Moody algebra akin to Hennion-Faonte-Kapranov, and their higher holonomies have interesting geometric properties.

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