



Contribution ID: 14

Type: **not specified**

## Duality symmetries and integrable deformations of dimensionally reduced GR

*Wednesday 24 September 2025 14:15 (15 minutes)*

The Kaluza-Klein (KK) reduction of pure  $D = 4$  GR along two commuting Killing isometries is well known to provide an effective  $D = 2$  integrable field theory. This is profoundly connected to the existence of hidden, infinite dimensional symmetries arising upon toroidal KK reductions of gravity to  $D = 2$ . In this talk, I will show how to exploit the power of such symmetries in order to prove the integrability of a certain class of deformations of the  $D = 2$  model, based on the introduction of auxiliary fields. I will then comment on their possible uplifts to  $D = 4$ .

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**Session Classification:** Parallel Sessions Wednesday String

**Track Classification:** Strings & Mathematical Physics