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JOHANNES GUTENBERG
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Theorie-Palaver

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Lorentz room (Staudingerweg 7, 5th floor)

Rachel Houtz
Durham U. and IPPP

Machine Learning a Manifold

In this talk, I present a simple method to identify a continuous Lie group symmetry in a data set through regression by an artificial neural network. The proposal takes advantages of the order ϵ^2 scaling under infinitesimal symmetry transformations. The main advantages of this methodology are that it does not rely on binning of the data set and no assumptions about the symmetry need to be made. The method is demonstrated in the SU(3)-symmetric (non-) linear sigma model.

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