The Heisenberg... what?

Giovanni Canarecci

Department of Mathematics and Statistics
University of Helsinki

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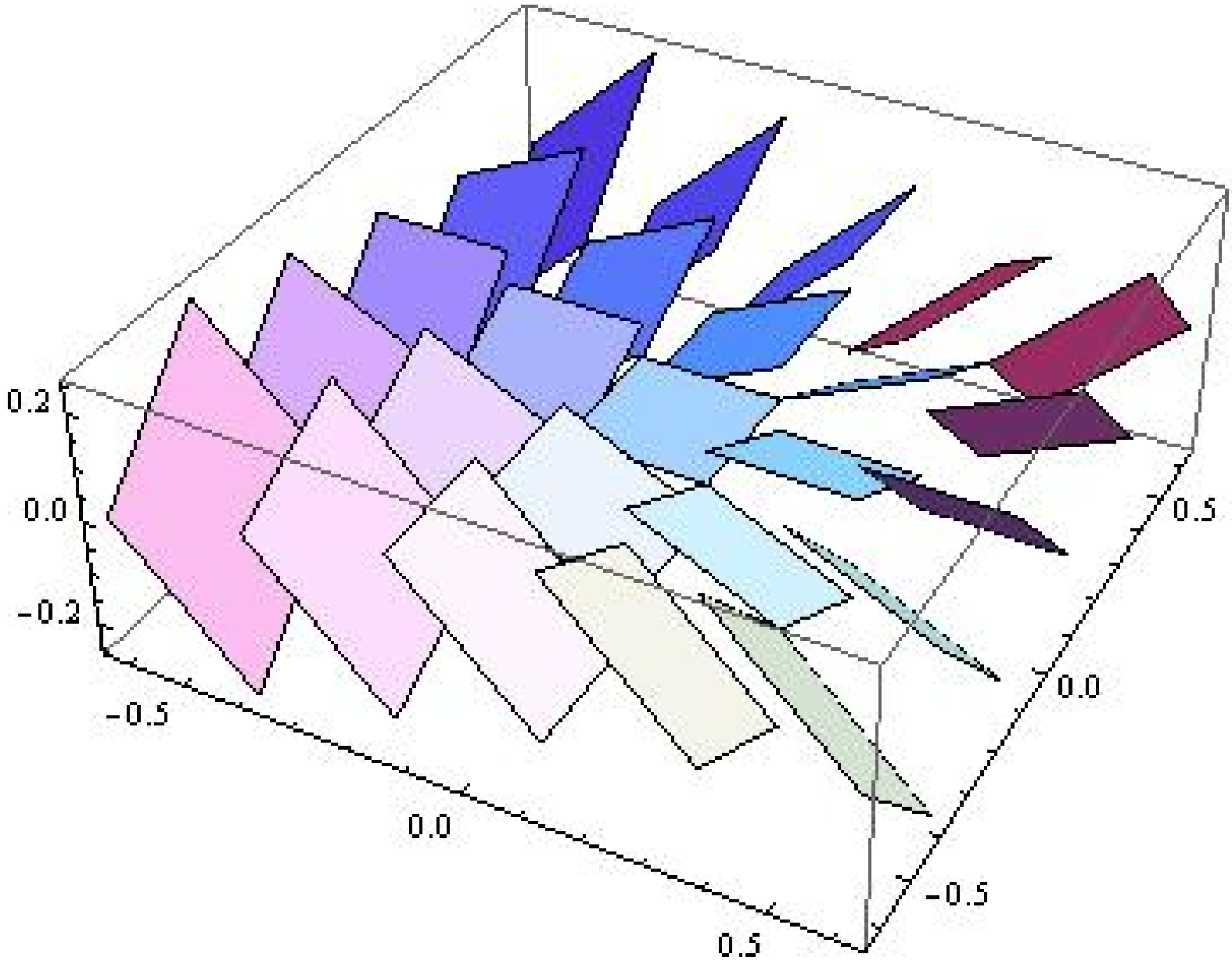
The first Heisenberg Group is a three dimensional manifold

$$\mathbb{H}^1 = (\mathbb{R}^3, g_{cc})$$

that carries a natural intrinsic metric g_{cc} called the Carnot–Carathéodory metric. This metric gives an orthonormal

basis for the tangent space as

$$\begin{cases} X = \partial_x - \frac{1}{2} y \partial_t \\ Y = \partial_y + \frac{1}{2} x \partial_t \\ T = \partial_t \end{cases}$$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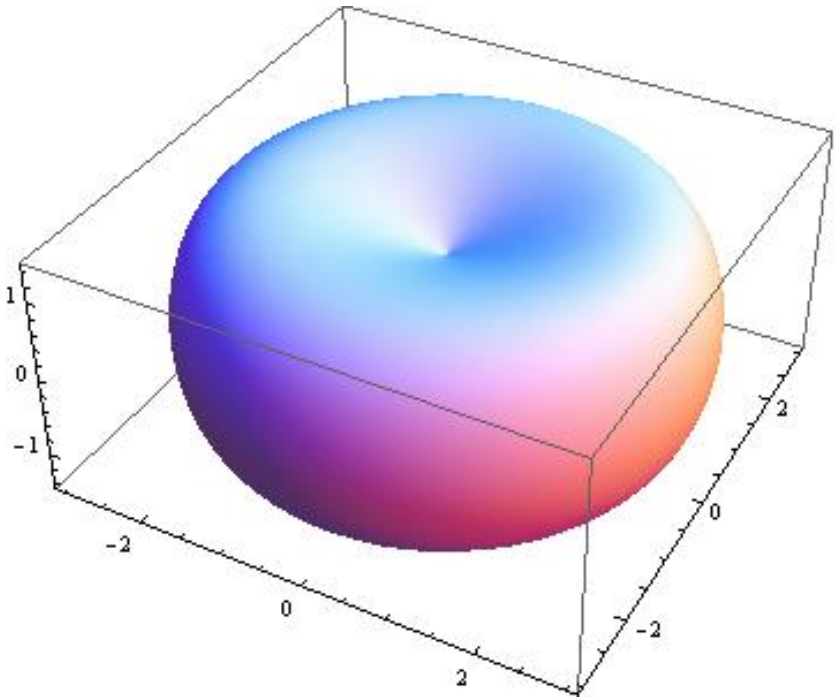
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0
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-2
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2
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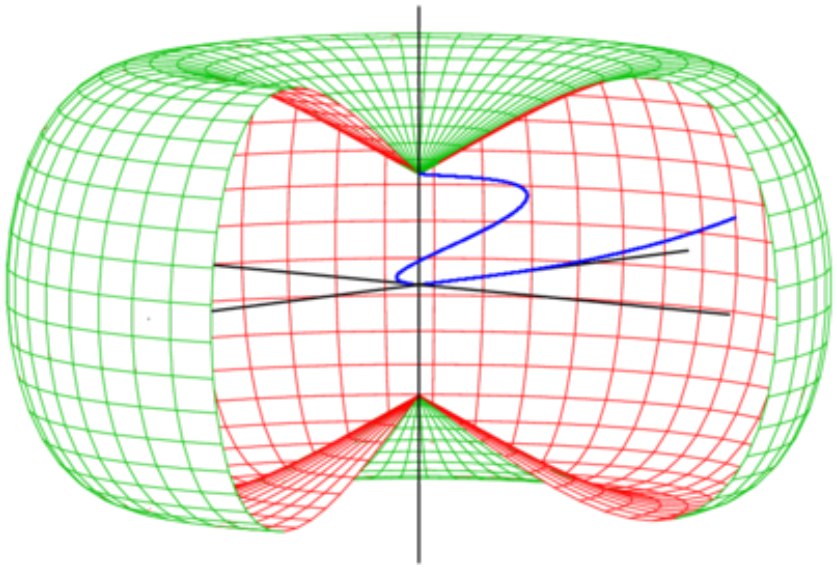

Kiitos paljon!

Thank you!

Grazie mille!