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On the Generalization of Homogeneous Coordinate Scaling in Density Functional Theory¹ LAZARO CALDERIN, The Pennsylvania State University — The scaling properties of functionals find direct applications in the design, testing and use of approximated kinetic-energy and exchange-correlation functionals. Methods, such as the so called orbital-free, benefit from approximations to both functionals, while Kohn-Sham Density Functional Theory approximates only the exchange-correlation functional. In this talk we will introduce a generalization of the uniform scaling of coordinates, that not only embodies all previously known scaling and related results, but also leads to new and important properties of functionals.

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