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On the Minkowski problem with respect to a mixed Euclidean-Gaussian density

I will discuss a new class of Minkowski problems corresponding to the mixed Euclidean-Gaussian volume, inspired by the isoperimetric problem studied by Fusco-Maggi-Pratelli (2011). Using the flow method, we prove the existence of smooth normalized solutions for the corresponding Monge-Ampere-type equation in the symmetric case. By approximation, we obtain the existence of origin-symmetric solutions to the mixed Euclidean-Gaussian Minkowski problem. This is joint work with Lei Qin and Sinan Wang.