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Title: The Caffarelli-Kohn-Nirenberg inequality for submanifolds in Riemannian manifolds.

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Abstract: After works by Michael and Simon, Hoffman and Spruck, and White, the celebrated Sobolev inequality could be extended to submanifolds in a huge class of Riemannian manifolds. The universal constant obtained by them depends only on the dimension of the submanifold. A sort of applications to the submanifold theory and geometric analysis have been obtained from that inequality. It is worthwhile to point out that, by a Nash Theorem, every Riemannian manifold can be seen as a submanifold in some Euclidean space. In the same spirit, Carron obtained a Hardy inequality for submanifolds in Euclidean spaces. In this talk, we will speak about the Hardy, the weighted Sobolev and the Caffarelli-Kohn-Nirenberg inequalities, as well as some of their derivatives, as Galiardo-Nirenberg and Heisenberg-Pauli-Weyl inequalities, for submanifolds in a class of Riemannian manifolds, that include, the Cartan-Hadamard ones.