From Nash to Onsager, I

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In this series of lectures we will:

- give a complete proof of Nash's theorem on the existence of C^1 isometric embeddings in codimension 2
- discuss briefly Kuiper's improvement and how to modify Nash's approach to achieve $C^{1,\alpha}$ embeddings
- give a complete proof of the existence of bounded nontrivial compactly supported solutions of the Euler equations, using the Baire Category method and the Lipschitz convex integration method
- draw a parallel between the two problems, motivating the second part of the course given by Laszlo Szekelyhidi Jr.