Abstract for an Invited Paper for the MAR09 Meeting of The American Physical Society

## Nicholson Medal Talk: Hydrodynamic Turbulence

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This talk will be an introduction on hydrodynamic turbulence to a non-specialist audience. It will summarize the essential developments in the field, and only modest emphasis will be placed on the speaker's own work. Hydrodynamic turbulence may be said to have begun as a subject of scientific study with Osborne Reynolds' classical paper towards the end of the nineteenth century, but it is a subject of great interest in the 21st century. The intent is to highlight the principal accomplishments in a way that draws attention to their connections to other areas of physics, where possible.