

# FOUNDATIONS OF PHYSICS

2013

29-31 July

The 17th UK and European Meeting  
Munich  
Center for  
Mathematical  
Philosophy

Evening Lecture at Deutsches Museum, 29 July 2013, 8pm

## The Mystery of Time and Size in Einstein's Theory of Gravity

Julian Barbour

A century ago Einstein and Minkowski changed the world view of physics with the notion of spacetime, according to which there is no universal Now. Forty years later the great British quantum physicist Paul Dirac found evidence within the very structure of Einstein's wonderful theory which suggests that the notion of Now should be restored to the universe. Dirac's proposal is intimately related to the puzzle of the expanding universe: with respect to what is its size increasing? My talk will cover aspects of this fascinating story. In the words of Winston Churchill "It is a riddle, wrapped in a mystery, inside an enigma. I cannot forecast to you the action of Russia. It is a riddle, wrapped in a mystery, inside an enigma; but perhaps there is a key. That key is Russian national interest."

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