



universität**bonn**

Bethe Colloquium

Michael Kramer

Max Planck Institute for Radio Astronomy, Bonn

Precision fundamental physics with astronomy

The Universe is vast. And even though we live on a tiny planet among billions of stars in a galaxy that is one of very many, we are curious enough to seek to understand its beginning and the fundamental laws that govern it: Curiosity-driven research in its purest form - and of fundamental importance. Einstein himself said that "he had no special talent" but "that he was only passionately curious". This "slight" understatement mocks the fact that his theory of general relativity (GR) represents our best understanding of gravity - by far. But whether it is also our last word, at least on macroscopic scales, remains to be seen. Radio astronomy provides a unique tool for making appropriate experiments to test gravity and to explore fundamental physics with high precision. I will present some of these tests related to radio pulsars and compare them with observations using gravitational wave detectors or experiments to image the black hole in the center of the Milky Way.

Lecture Hall 1

Physikalisches Institut - Nussallee 12 - 53115 Bonn

Thursday, 9th November, 2017, at 16 c.t.

**Bethe Center for
Theoretical Physics**

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