



PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 11.11.2015, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



Prof. Dr. Theo Geisel

Max Planck Institute
for Dynamics and Self-Organization

&

Bernstein Center for Computational Neuroscience,
Göttingen

"A Golden Era of Neurophysics"

Scientific progress can develop particularly well when theoretical approaches happen to be synchronized with experimental developments. When I was hired as professor of theoretical physics at JWGU in 1989, a new experimental technique was implemented in a neighboring institute that made it possible to optically image pattern forming processes involving millions of nerve cells in the brain - a prerequisite for testing theories of neuronal circuit formation, neuronal plasticity, and learning. Meanwhile new experimental techniques are giving access to neuronal firing activity at high (single neuron) spatiotemporal resolution and are promising to unravel the many body dynamics of neuronal circuits underlying perception and cognition. In this colloquium I will discuss the past, present, and future of theoretical and experimental neurophysics.

Die Dozenten der Physik