

# DESY Lecture Series in Memory of Professor Dr. Willibald Jentschke

**Professor Dr. Helmut Dosch**  
Max Planck Institute for Metals Research  
Stuttgart, Germany

**“Grand Challenges for Megafacilities”**

**December 4, 2008**  
**17.00 h**  
**DESY Auditorium**



**Professor W. Jentschke**, the founding father of DESY, was appointed Professor of Physics at Hamburg University in 1955. In this position, his aim was to establish a first-rate facility of high energy physics in Germany, leading to the foundation of DESY in 1959.

Until the end of 1970 he was head of the DESY Directorate. From 1971 to 1975 he was Director General of CERN, the European Laboratory for Particle Physics. After his retirement he maintained an active interest in particle physics, and in DESY and CERN, until his death in 2002, shortly after his 90th birthday. His wisdom, his vision and his great personality in guiding DESY will always be remembered.

The most demanding challenges in science and in all key technologies of tomorrow can only be mastered by the bold exploration of nanospace. The treasure quest encompasses answers to vexing open problems as “What is the nature of dark matter and dark energy?”, “In how many dimensions do we live?”, “Do we understand complex systems?”, “Can we successfully combine concepts from physics and biology?” or “Can we control quantum states?” Progress in information technologies, medicine, as well as in environmentally friendly energy and transport strategies will critically depend on the development of novel nanomaterials with new functions. These highly competitive investigations of the different areas of nanospace require large scale facilities which provide “microscopes” with the proper spatial and temporal resolution. In this lecture, Professor Dosch will address some of the Grand Challenges in Science and discuss the role of the European Megafacilities.



Prof. Dr. Helmut Dosch  
(Photo by Max Planck Institute, Stuttgart)