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## Curriculum Vitae Prof. Dr. Reinhard Genzel



**Name:** Reinhard Genzel

**Born:** 24 March 1952

**Research Priorities:** experimental astrophysics, black holes, galaxy nuclei, galaxy evolution, high-resolution infrared/submillimeter astronomy, star formation, extragalactic astrophysics

Reinhard Genzel is an astrophysicist. He is one of the world's leading researchers in the field of infrared and submillimeter astronomy. His primary interest is in the formation, evolution, and nuclei of galaxies such as our Milky Way. Genzel is also studying the formation and evolution of black holes and stars. Another field of his research is the interstellar medium. Genzel was awarded the Nobel Prize for Physics in 2020. He received the honor jointly with the US astronomer Andrea Ghez for the discovery of a supermassive compact object at the center of our galaxy, the Milky Way.

### Academic and Professional Career

- since 1999 Full Professor of Physics, University of California, Berkeley, USA
- 1987 - 1999 Visiting Professor, University of California, Berkeley, USA
- since 1988 Honorary Professor at the Ludwig-Maximilians-University Munich, Germany
- since 1986 Director at the Max Planck Institute for Extraterrestrial Physics in Garching, Germany
- 1985 - 1986 Full Professor, University of California, Berkeley, USA
- 1981 - 1985 Associate Professor, University of California, Berkeley, USA
- 1980 - 1982 Miller Fellow, University of California, Berkeley, USA
- 1978 - 1980 Post-Doc at the Harvard-Smithsonian Center for Astrophysics in Cambridge, MA, USA
- 1978 PhD at the Max Planck Institute for Radio Astronomy in Bonn on interstellar maser, Germany
- 1975 Diploma in Physics at the Institute for Physics and Astronomy at the University of Bonn, Germany

### **Functions in Scientific Societies and Committees (Selection)**

since 1986      Member of the Scientific Board of the Max Planck Society

### **Project Coordination, Membership in Collaborative Projects (Selection)**

GRAVITY - an adaptive optics assisted, near-infrared VLTI instrument for precision narrow-angle astrometry and interferometric phase referenced imaging of faint objects

### **Honours and Awarded Memberships**

2020              Nobel Prize for Physics (together with Andrea Ghez)

2014              Honorary doctorate (Dr. h.c.), Observatoire de Paris (OBSPM), France

2014              Grand Cross of Merit with Star of the Order of Merit of the Federal Republic of Germany

2014              Herschel Medal of the Royal Astronomical Society (RAS), London, UK

2014              Harvey Prize

2013              Order of Pour le Mérite (OPLM), Bonn, Germany

2012              Crafoord Prize, Royal Swedish Academy of Science

2012              Tycho Brahe Prize, European Astronomical Society EAS

2011              Karl Schwarzschild Medal, Astronomical Society

2008              Shaw Prize, The Shaw Prize Foundation, Hong Kong

2007              Albert Einstein Medal of the Albert Einstein Society, Switzerland

2003              Balzan Prize for Infrared Astronomy

2003              Stern-Gerlach Medal for Experimental Physics, German Physical Society

since              2002 Member of the National Academy of Sciences Leopoldina

1990              Gottfried Wilhelm Leibniz Prize of the German Research Foundation

1986              Newton Lacy Pierce Prize for Astronomy, American Astronomical Society

1984              Presidential Young Investigators Award, National Science Foundation

1980              Otto Hahn Medal of the Max Planck Society

## Research Priorities

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To study the structure and dynamics of such objects, Genzel and his colleagues have developed a number of new observation techniques and instruments in the fields of infrared, submillimeter and millimeter astronomy. They have thereby succeeded in dramatically improving sensitivity and angular resolution, especially for infrared instruments. Such measuring devices, stationed both on earth and in space, are among the most successful of their time.

With these instruments, Genzel is pursuing a particular observation strategy: Instead of statistical investigations of many objects, the goal is to use a variety of methods to gain a detailed physical understanding of a select few representative sources and thereby specifically investigate some key questions.

Genzel and his colleagues were able to prove through 20 years of award-winning observations that a black hole with 4.3 million solar masses exists at the center of our Milky Way. They thus succeeded in providing the most substantial empirical evidence to date for the existence of black holes, which had been postulated by Albert Einstein at the beginning of the 20th century as part of the general theory of relativity.