ATTOWORLD
Laboratory for Attosecond Physics

MPQ LMU

PERSONAL DETAILS

Name: Prof. Dr. Ferenc Krausz
Date of Birth: May 1962
Place of Birth: Mór (Hungary)
Nationality: Hungarian, Austrian

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CURRENT AFFILIATIONS

Ludwig-Maximilians-Universität (LMU)
Chair of Experimental Physics – Laser Physics
Am Coulombwall 1
D-85748 Garching

Max Planck Institute of Quantum Optics (MPQ)
Hans-Kopfermann-Str. 1
D-85748 Garching

APPOINTMENTS

Since 2019	**Director** Center for Molecular Fingerprinting (CMF)
Since 2015	**Director** Centre for Advanced Laser Applications (CALA)
2010 – 2019	**Director** Munich-Centre for Advanced Photonics (MAP)
2007 – 2009	**Managing Director** Max Planck Institute of Quantum Optics (MPQ)
Since 2006	**Director** International Max Planck Research School of Advanced Photon Science (IMPRS-APS)
2006 – 2009	**Deputy Director** Munich-Centre for Advanced Photonics (MAP)
Since 2004	**Full Professor, Chair of Experimental Physics – Laser Physics** Ludwig-Maximilians-Universität München (LMU)
Since 2004	**Director** Max Planck Institute of Quantum Optics (MPQ)
1999 – 2004	**Full Professor** Vienna University of Technology, Department of Electrical Engineering
1996 – 1998	**Assistant Professor** Vienna University of Technology, Department of Electrical Engineering

ACADEMIC EDUCATION

1993	**Habilitation with distinction** Vienna University of Technology, Department of Electrical Engineering
1991 – 1993	**Postdoctoral fellow** Vienna University of Technology, Department of Electrical Engineering
1991	**Ph.D. with distinction in laser physics** Vienna University of Technology, Department of Electrical Engineering
1988 – 1991	**Ph.D. studies** Vienna University of Technology, Department of Electrical Engineering
1985 – 1987	**Ph.D. studies** Budapest University of Technology, Institute of Physics
1985	**Diploma with distinction in electrical engineering** Budapest University of Technology
1981 – 1985	**Undergraduate studies in electrical engineering** Budapest University of Technology
	Undergraduate studies in theoretical physics Eötvös Loránd University, Budapest

SCIENTIFIC INTEREST

Main Fields	Laser physics, nonlinear optics, attosecond metrology, biomedical applications
Research Focus	Synthesis of infrared/visible/ultraviolet transients of multi-octave laser light
	Sampling of the electromagnetic fields from THz to PHz frequencies
	Exploring light-matter interactions for ultra-sensitive light field probing
	Advancing electric-field molecular fingerprinting and exploring its potential for health monitoring and disease detection

MAJOR ACHIEVEMENTS

Co-invention of chirped multilayer mirrors and their use for the routine generation of few-cycle light

Generation and measurement of controlled light waveforms and isolated attosecond pulses, the use of these tools for real-time observation of the atomic-scale motion of electrons, including the first time-resolved measurement of the photo effect, inner-shell decay, optical-field-induced tunneling, valence electron motion, charge transport through atomic layers, and optical-field-induced changes in the physical properties of solids

These breakthroughs heralded the emergence of a new field: *attophysics*

For more details on research contributions, incl. peer-reviewed publications and selected talks, please visit http://www.attoworld.de/publications.html

RESPONSIBILITIES

Since 2009	Initiating and coordinating the creation of the Laboratory of Extreme Photonics (LEX-Photonics) at the LMU for the advancement of the technology of few-cycle light
	Initiating and coordinating the creation of the Centre for Advanced Laser Applications (CALA) for the development of laser-driven brilliant X-ray and particle sources and their use for early cancer detection and therapy
Since 2006	Establishing and directing the International Max Planck Research School of Advanced Photon Science, offering a world-class graduate training and education program for some 50 Ph.D. students from all over the world (www.mpq.mpg.de/APS)
	Establishing, coordinating, and (since 2010) directing the cross-disciplinary research activities of some 40 groups from 9 departments at the LMU and the Technical University of Munich, and the MPQ, in the areas of physics, chemistry, biology and medicine (www.munich-photonics.de)
Since 2004	Coordinating and directing the research of some hundred researchers and technical staff at the LMU-MPQ Laboratory for Attosecond Physics (www.attoworld.de)

HONORS

Vladilen Letokhov Medal, the European Physical Society & the Russian Academy of Sciences, 2019

János Arany Award for Outstanding Scientific Performance, the Hungarian Academy of Sciences, 2018

Member of Leopoldina, the National Academy of Germany, 2016

Thomson Reuters Citation Laureate in Physics, 2015

Listed in *The World's Most Influential Scientific Minds 2014*, Thomson Reuters, United States of America, 2014

Otto-Hahn-Preis of the DPG, GDCh and the City of Frankfurt/M, Germany, 2013

King Faisal International Prize for Science, Saudi Arabia, 2013

Knight's Cross of the Order of Merit of Hungary, 2012

Member of the Academia Europaea, United Kingdom, since 2012

Member of the European Academy of Sciences (EURASC), Belgium, since 2012

Bundesverdienstkreuz am Bande (Order of Merit of the Federal Government), Germany, 2011

Member of the Russian Academy of Sciences, Russia, since 2011

Falling-Walls Lecturer, falling-walls.com/lectures/ferenc-krausz, Germany, 2011

Honorary Professorship at the Shanghai Institute of Optics and Fine Mechanics, China, 2010

Visiting Professorship, King Saud University, Saudi Arabia, 2010

Distinguished Visiting Professorship, POSTECH, Korea, 2010

Fellow, Optical Society of America, USA, 2009

Honorary Professorship, Xian Institute of Optics, Chinese Academy of Sciences, China, 2009

Honorary Citizen, City of Mór, Hungary, 2009

ERC Advanced Investigator Grant, European Union, 2009

Member of the European Academy of Sciences and Arts, Austria, 2007

Member of the Hungarian Academy of Sciences, Hungary, 2007

Gottfried Wilhelm Leibniz-Prize, Deutsche Forschungsgemeinschaft, Germany, 2006

Prize of the City of Vienna for Natural and Technical Sciences, Austria, 2006

Progress Medal of the Royal Photographic Society, United Kingdom, 2006

Manne Siegbahn Memorial Lecture, Royal Swedish Academy of Sciences, Sweden, 2006

Max von Laue Memorial Lecture, Physikalische Gesellschaft zu Berlin, Germany, 2006

James Frank Memorial Lecture, Israel Academy of Sciences, Israel, 2006

Quantum Electronics Award, IEEE Laser and Electro-Optics Society, USA, 2006

Honorary Doctorate Degree from the Budapest University of Technology, Hungary, 2005

Honorary Professorship at the Vienna University of Technology, Austria, 2005

Member of the Austrian Academy of Science, Austria, 2003

Julius Springer Award in Applied Physics, Springer, Germany, USA, 2003

Wittgenstein Award, Federal Ministry of Science and Education, Austria, 2002

Carl Zeiss Award, Ernst Abbe Foundation, Germany, 1998

START Award, Federal Ministry of Science & Education, Austria, 1996

Fritz Kohlrausch Award, Austrian Physical Society, Austria, 1994

LIST OF PUBLICATIONS

https://www.attoworld.de/publications/ferenc-krausz.html