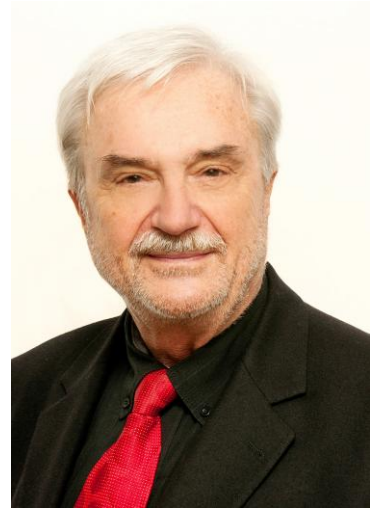


Prof. Dr.-Ing. Dr. h.c. Alfred Leipertz

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Curriculum Vitae (Status August 2025)

EDUCATION

1968 – 1974	Studies in Physics, Chemistry and Mathematics at Justus-Liebig-University Gießen, Gießen, Germany; Diplom (Master) in Physics
1979	Doctor-Degree in Mechanical Engineering at Ruhr-University Bochum
1984	Doctor-Science-Degree (Habilitation with Venia Legendi in Heat and Mass Transfer) at School and Faculty of Mechanical Engineering of Ruhr-University Bochum

EMPLOYMENT RECORD

1974	Scientist (Physicist) at German Aerospace Center (DLR), Köln-Porz
1975 – 1976	Research Assistant at Mechanical Engineering Department, Duisburg University
1977 – 1984	Research Assistant and Assistant Professor of Mechanical Engineering at Ruhr-University Bochum
1984 – 1986	University Teacher (Privatdozent) of Heat and Mass Transfer at Ruhr-University Bochum
1986 – 1988	Tenured Associate Professor of Experimental Heat and Mass Transfer at Ruhr-University Bochum

1988 – 1989	Full Professor of Laser Techniques at Ruhr-University Bochum and Member of the Board of Directors of the Institute of Thermo- and Fluid Dynamics
6/1989 – 9/2014	Chair Professor (Professor in Ordinary) of Engineering Thermodynamics at the School and Faculty of Engineering of the Friedrich-Alexander-University Erlangen-Nuremberg; Head of the Department of Engineering Thermodynamics; Member of the Board of Directors of the Institute of Chemical and Biological Engineering
10/2005 – 9/2007	Elected Dean of the School and Faculty of Engineering of the Friedrich-Alexander-University Erlangen-Nuremberg
4/2006 – 9/2014	Spokesperson and Director of the Elite Master Programme “Advanced Optical Technologies - MAOT” within the Elite Network of Bavaria at the University Erlangen-Nuremberg
11/2006 – 9/2014	Director of Erlangen Graduate School in Advanced Optical Technologies – SAOT at the Friedrich-Alexander-University Erlangen-Nuremberg (established within the framework of the Excellence Initiative of the German Federal and State Governments to Promote Science and Research at German Universities, funded until 10/2017) Principal Applicant of SAOT 2005, Founder and Coordinator 11/2006 – 9/2013 Co-Coordinator 10/2013 – 9/2014
4 – 9/2007 and 10/2009 – 9/2011	Elected Member of the Academic Senate and Member of the University Council of the Friedrich-Alexander-University Erlangen-Nuremberg
11/2007 - 2014	Principal Investigator of the Excellence Cluster “Engineering of Advanced Materials (EAM)” at the Friedrich-Alexander-University Erlangen-Nuremberg (established within the framework of the Excellence Initiative of the German Federal and State Governments to Promote Science and Research at German Universities) – Research Area Functional Particle Systems
Sept. 30, 2014	Retirement
since 10/2014	Emeritus Chair Professor of Engineering Thermodynamics at the School and Faculty of Engineering of the Friedrich-Alexander-University Erlangen-Nuremberg
since 10/2014	Director Emeritus and Ambassador of SAOT at the Friedrich-Alexander-University Erlangen-Nuremberg

since 7/2020 Senior Professor of Chemical Engineering at the School and Faculty of Engineering of the Friedrich-Alexander-University Erlangen-Nuremberg

AWARDS AND HONORS

- 3/2000 Arch T. Colwell Merit Award of the International Society of Automotive Engineers (SAE)
 “In recognition of an outstanding contribution to the SAE literature which advances the technology of self-propelled vehicles, thereby furthering the objectives of SAE”
 (Basis of the award is the publication:
 F. Rabenstein, J. Egermann, A. Leipertz und N. D’Alfonso;
 Vapor-Phase Structures of Diesel-Type Fuel Sprays: An Experimental Analysis
 SAE Technical Paper No. 982543 (1998)
 in SAE Transactions, Vol. 107, 1998, Section 4 – Journal of Fuel and Lubricants, p. 1293 – 1304)
- 3/2002 Fellow, Int. Union of Pure and Applied Chemistry (IUPAC)
 „The Fellows Program recognizes past service to the Union and facilitates continuing dialogue with individuals active in prior IUPA programs“
- 2004 Appointed Member of the Editorial Board of the international Online Journal “*diffusion.fundamentals.com*”
- 5/2007 Fellow, Optical Society of America (OSA)
 “For the development and application of linear and nonlinear light scattering techniques for studying fluids and flow and for combustion diagnostics”
 (Formal presentation May 2007)
- 2008 Appointed Member of the Publishing Council and Editorial Board of the international Journal “*Journal of Energy Technology*”
 (Faculty of Energy, University of Maribor, Slovenia)
- 2009 Appointed Member of the Editorial Board of *International Journal of Engine Research*
- 4/2009 Fellow, International Society of Automotive Engineers (SAE)
 “For his outstanding contribution to the development and application of novel optical diagnostics in combustion and engine research providing insight into and better understanding of the interaction of all subsequent steps of the functioning chain of engine combustion leading to tremendous reduction of fuel consumption and pollutant emission of modern internal combustion engines”

(Short version: “Recognized for his work in novel optical diagnostics in combustion and engine research”)

- | | |
|------------------|---|
| 1/2011 – 12/2013 | Appointed Member of the William F. Meggers Award Committee of the Optical Society of America |
| 9/2011 | Honorary Doctorate (Dr. h.c.) of the University of Maribor (Slovenia)
„For his outstanding contribution to the development of scientific research at the Faculty of Energy Technology of the University of Maribor, knowledge transfer and the promotion of international cooperation“ |
| 2018 | 2018 Yeram S. Touloukian Award of the American Society of Mechanical Engineers (ASME)
„For internationally recognized leadership in developing optical methods, particularly advanced dynamic light scattering, that have been adopted by laboratories worldwide as reliable tools for measuring a large variety of thermophysical properties“
(Formal presentation at the 20th Symposium on Thermophysical Properties in June 2018 in Boulder, Colorado) |
| 2018 | Fellow, The Combustion Institute
„For exceptional research on the fundamentals and application of laser optical methods to combustion“ in January 2018 – Official announcement in February 2018 and at the 37th International Symposium on Combustion in Dublin / Ireland (July 29 until August 3, 2018) |
| 8/2024 | Appointed “Emeritus Member” of the Int. Association for Transport Properties (IATP) – a new special category of membership created in 8/2024 by the IATP Executive to recognise those colleagues who have formerly served as Executive Members and contributed to the work and enjoyment of our informal grouping in a significant manner over many years. |

ADDITIONAL HONORS, AWARDS AND PROMINENT FUNCTIONS

- | | |
|------------|---|
| 1982 | Invited Guest Scientist in the Laboratory of Professor Richard K. Chang at Yale University, New Haven, USA, Dept. Applied Physics & Centre of Laser Diagnostics, School of Engineering (for 6 months) |
| since 1985 | Member of the expert council “Combustion” of the European Space Agency (ESA) |

1988 – 2000	Appointed member of the Subcommittee on Transport Properties of Commission 1.2 (Thermodynamics) of the Int. Union of Pure and Applied Chemistry (IUPAC) as representative of Germany
1992	Position offer of the Director of the DLR Institute of Chemical Propulsion and Technology, Lampoldshausen (declined)
since 1992	Member of the European Research Community on Flow, Turbulence and Combustion (ERCOFTAC)
1993	Offer (Call) Chair Professorship of Chemical Propulsion Engines at the University Stuttgart (declined)
1994 – 1995	Spokesperson of Collaborative Research Center (SFB) 222 of the German Research Foundation (“Heterogeneous systems under high pressure”) – SFB member since 1991
1997 & 2001	Invitation to act as a Keynote Speaker at the Gordon Research Conference on Laser Diagnostics in Combustion
2001 – 2024	Appointed Member of the Executive Board of the Int. Association for Transport Properties (IATP) – since its establishment
2003	Invitation to the Gordon Research Conference on Laser Diagnostics in Combustion as Discussion Leader of the Session “Soot and Particles”
10/2005 – 09/2007	Appointed Member of the Board of Trustees of the Fraunhofer Institute of Integrated Systems and Device Technology (IISB)
07/2006 – 2014	Appointment into the Executive Board of the Professor-Klaus-Riedle-Foundation at the FAU Erlangen-Nuremberg (since establishment)
1/2007 – 12/2011	Chairman and
since 4/2012	Honorary Member of the Scientific Working Party for Engineering (Technical) Thermodynamics (WATT e.V.) – WATT is the association of all university professors at German speaking universities in Europe who are responsible for research and education in the field of engineering thermodynamics Vice-Chairman of WATT e.V. (1/2004 – 12/2006) Elected Member of WATT e.V. (since 2000, year of establishment)
1/2007 – 11/2008	Appointed Member of the Board of Trustees of the Fraunhofer Institute of Integrated Circuits (IIS)
6/2008	Appointed Member of the German Scientific Laser Technology Society (WLT)

- 2009 Longtime Member Service Award 20 Years of the International Society of Automotive Engineers (SAE)
- 2021 Prof. Leipertz has been named in the “Stanford List” as one of the top 2% of the most-cited researchers globally.
- 1989 - 2014 Prof. Leipertz and the LTT members have been awarded more than 110 awards, prizes, honours and offers of university positions, e.g.,
 5 honorary titles as fellows, doctorates and memberships
 15 offers for positions at German and international universities
 5 appointments as editor or board member of int. journals
 24 student awards
 13 dissertation awards
 4 young professor awards
 20 research awards (including 1 ERC Starting Grant)
 6 best-paper awards
 5 prominent research scholarships

Professor Leipertz has been awarded more than 100 research grants,
 from the German National Science Foundation / DFG (more than 80),
 from the German Federal Ministry of Education, Research and Technology / BMBF and of Economics and Work / BMWa (10),
 from the Bavarian Research Foundation / BFS (9),
 from the Volkswagen Foundation (3),
 from the European Union / ESA (3),
 several DAAD funds
 and additional grants from industry summing up to a total amount of about 50 Million Euro

Professor Leipertz has published
 more than 1300 publications, more than 800 of them in peer-reviewed publications (nearly 300 of them are listed in the Web-of-Science Citation Index)
 almost 100 books or book chapters
 and more than 20 issued patents (national and international)

His publication status
 in Research Gate (August 2025): 600 Publications, 12,435 Citations, 51,973 Reads, 78 Recommendations, 5,278 RSI (ResearchIndexScore), H-Index: 55
 in Google Scholar (July 2025): 785 Publications, 16,464 Citations, H-Index:66

Professor Leipertz has delivered nearly 150 invited presentations at international conferences, at universities or research institutions all around the world with more than 40 of them as Keynote or Plenary Lectures

Professor Leipertz has supervised (until his retirement in September 2014)

5 completed Habilitation theses (Dr. Sci. theses)
 nearly 75 completed Dr.-Ing. theses
 more than 250 completed Diplom, Bachelor and Master theses

Out of the 5 persons having habilitated (one from outside the university) and of the nearly 75 successfully supervised doctoral candidates, 11 have now the position of an University Chair Professor of Thermodynamics (or adjacent fields like Heat & Mass Transfer or Combustion Technology– one has been heading an university as Rector/President) at a German university, 6 are professors at German universities of applied sciences and 6 professors at foreign universities (status 11/2025)

ADDITIONAL FUNCTIONS

Member of several scientific and technical associations,
 e.g.,

International Union Pure and Applied Chemistry - IUPAC (Fellow)
 Optical Society of America – OSA (Fellow)
 Int. Society of Automotive Engineering – SAE (Fellow)
 The Combustion Institute – CI (Fellow)
 European Optical Society - EOS
 Verein Deutscher Ingenieure – VDI (since 01/1976)
 Deutsche Physikalische Gesellschaft - DPG (since 08/1977)
 Deutsche Gesellschaft Angewandte Optik – DGaO (since 06/1981)
 DECHEMA (since 01/1992)
 Kompetenznetz Verfahrenstechnik Pro3 – als Teil der Mitgliedschaft der Universität Erlangen-Nürnberg (since 2000)
 Society of Photo-Optical Instrumentation Engineers – SPIE (1979 – 2000)
 Deutsche Gesellschaft für Sonnenenergie – DGS (1981 - 2013)
 New York Academy of Sciences (1982 – 2014)
 Deutscher Kälte- und Klimatechnischer Verein – DKV (1993 – 2013)
 International Institute of Refrigeration (1994 - 2013)
 American Association for the Advancement of Science – AAAS (2001 – 2007)
 Gesellschaft Deutscher Chemiker (2005 - 2014)

Editor Scientific Book Series “Berichte zur Energie- und Verfahrenstechnik (BEV)” / “Reports on Energy and Process Engineering“, ESYTEC Energie- und Systemtechnik GmbH, Erlangen, Germany (more than 100 books issued until the end of 2016)
 since 2017 with co-editor Prof. Dr.-Ing. habil Andreas P. Fröba

Special Issue Guest Editor of the Special Issues “ENCOM2015” and “ENCOM2017” of the International Journal of Engine Research

Organizer and Chair of the biannual “International Congress on Engine Combustion Processes” in cooperation with Haus-der-Technik Essen (in 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017 & 2019)

Member Editorial Board of
International Journal of Engine Research (since 2009)
Journal of Energy Technology (since 2008)
International Online journal “diffusion.fundamentals.org” (since 2004)

Member Reviewer Panel of nearly 50 scientific journals and reviewed conference proceedings, e.g.,
Advances in Materials Science and Engineering, AIAA Journal, Applied Optics, Applied Physics B – Lasers and Optics, Applied Spectroscopy, Atomization and Sprays, Automotive and Engine Technology, Chemical Engineering Science, Chemie Ingenieur Technik, Combustion and Flame, Combustion Science and Technology, Energy & Fuels, Experimental Thermal and Fluid Science, Experiments in Fluids, Flow Measurement and Instrumentation, Fluid Phase Equilibria, Int. Conference on Laser Assisted Net Shape Engineering (LANE), Int. Journal of Engine Research, Int. Journal of Heat and Fluid Flow, Int. Journal of Heat and Mass Transfer, Int. Journal of Numerical Methods for Heat & Fluid Flow, Int. Journal of Refrigeration, Int. Journal of Thermal Sciences (formely: Revue Generale de Thermique), Int. Journal of Thermophysics, Int. Journal of Transport Phenomena, Int. Symposium on Applications of Laser Techniques to Fluid Mechanics, Int. Symposium on Combustion, Journal of Aerosol Science, Journal of Chemical and Engineering Data, Journal of Heat Transfer, Journal of Molecular Liquids, Journal of Physics D: Applied Physics, Journal of Physical and Chemical Reference Data, Journal of Raman Spectroscopy, Measurement Science and Technology, Microgravity Science and Technology, Optics Communications, Optics Express, Optics Letters, Particle & Particle Systems Characterization, Plasma Chemistry and Plasma Processing, SAE Technical Paper Series, Shock Waves, Surface and Coatings Technology, The Canadian Journal of Chemical Engineering, The European Physical Journal – Applied Physics, VDI Wärmeatlas, Zeitschrift für Flugwissenschaft und Weltraumforschung

Surveyor Academic Ranking of World Universities (ARWU) – conducted by Center for World-Class Universities of Shanghai Jia Tong University

QS Global Academic Survey

Reviewer for nearly all governmental and public funding institutions, e.g., German Research Foundation (DFG), v. Humboldt Foundation, Volkswagen Foundation, BMBF, BFS, AiF, NATO, DAAD, EU-ESA/ESTEC, Krupp Foundation, State Governments, ...

and

numerous foreign funding institutions, e.g.,
 National Science Foundation (NSF), USA
 European Science Foundation (ESF)
 European Space Agency (ESA), Noordwijk, The Netherlands
 European Space Research and Technology Center (ESA-ESTEC), Noordwijk, The Netherlands
 NATO Scientific Affairs Division
 NATO Science Committee – NATO Advanced Study Institutes / Advanced Research Workshops
 Japan Society for the Promotion of Science, Japan
 Irish Research Council, Ireland
 National Institute of Standard and Technology (NIST), Boulder, CO, USA
 Royal Society of Chemistry, London, UK
 Royal Society of Edinburgh, Scottish National Academy
 Technology Foundation STW, Netherlands
 Swedish Foundation for Strategic Research, Stockholm, Sweden
 National Agency for the Evaluation of Universities and Research Institutes, ANVUR, Italy
 Agence Nationale de la Recherche (ANR) – French National Research Agency, France
 Fond zur Förderung der wissenschaftlichen Forschung, Austria
 Christian Doppler Forschungsgesellschaft, Wien, Austria
 Competence Center Energy & Mobility (CCEM), Switzerland
 Czech Science Foundation, Czech Republic
 Deutsch-Israelische Stiftung für Forschung und Entwicklung
 Ministry of Education, Science and Sport, Slovenia
 National Center of Science and Technology Evaluation, Kazakhstan
 Optical Society of America (OSA)
 Society of Automation Engineering (SAE)

... and others

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and

in numerous doctoral and university search procedures at German and foreign universities, e.g., at the international universities

Aristotle University of Thessaloniki, Greece
 Imperial College of Science, Engineering and Medicine, London, UK
 Indian Institute of Technology Madras, Chennai, India

Jordan University of Science and Technology, Irbid, Jordan
 Kingston University London, UK
 New York University, New York, USA
 Ryerson University, Toronto, Canada
 Purdue University, USA
 Shanghai Jiao Tong University, Shanghai, China
 Stanford University, USA
 Technical University of Sofia, Bulgaria
 Texas A&M University, USA
 The University of Jordan, Amman, Jordan
 Universidade Nova de Lisboa, Lisbon, Portugal
 Université Catholique de Louvain, Louvain-la-Neuve, Belgium
 University of Aberdeen, Scotland, UK
 University of Adelaide, Australia
 University of Birmingham, UK
 University of Cambridge, UK
 University of Illinois at Chicago, USA
 University of Lund (Lund Institute of Technology), Sweden
 University of Maribor, Slovenia
 University of Nottingham, UK
 University of Oxford, UK
 University of Pune, India
 University of Strathclyde, Glasgow, Scotland, UK
 University of Sydney, Australia

POSITIONS OUTSIDE ACADEMIA

1981 – 1989	Founding Member and Managing Director of the non-profit Association “Institute of Heat and Air Conditioning Technology”, Bochum (external member until 2014)
10/1992 – 12/2007	Technical Director and
1/2008 – 12/2023	Chief Executive Officers (CEO) of the company ESYTEC Energie- und Systemtechnik GmbH, Erlangen
1995 – 1998	Head of the Board of Governors of the company INNEX Wärmeübertragungssysteme AG, Wiesenth