CURRICULUM VITAE



Prof. Dr.-Ing. Christian Cierpka

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EMPLOYMENTS SINCE UNIVERSITY STUDIES

12/2024 – today 2017-2021	Director of the Institute of Thermodynamics and Fluid Mechanics at Technische Universität Ilmenau
10/2016 – today	Full Professor and head of the group of Engineering Thermodynamics at Technische Universität Ilmenau
01/2009 – 09/2016	Researcher and team leader at the Institute for Fluid Mechanics and Aerodynamics, Universität der Bundeswehr München
08/2005 – 12/2008	Researcher at Forschungszentrum Dresden-Rossendorf, Group of Magnetohydrodynamics

ACADEMIC EDUCATION

24.03.2009	Dissertation “Aktive Strömungskontrolle mittels Lorentzkräften in schwach leitfähigen Fluiden” supervised by Prof. R. Grundmann, TU Dresden, referees: Prof. R. Grundmann, Prof. J. Fröhlich, Dr. G. Gerbeth, Grade: summa cum laude, acknowledged with the price for PhD-candidates of Forschungszentrum Dresden-Rossendorf
01.07.2005	Post-graduate Diploma Course (Research Master) “Hot water spray characterization by rainbow thermometry and Phase Doppler anemometer”, von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium, Grade: 81/100 (superior performance)
15.09.2004	Diploma thesis “Messungen des Geschwindigkeitsfeldes an einer angestellten Platte unter dem Einfluss zeitlich periodischer Lorentzkräfte”, TU Dresden, Grade: sehr gut
10/2001 - 09/2004	Studies of Aerospace Engineering at TU Dresden
10/1999 - 09/2001	Studies of Mechanical Engineering at TU Dresden

INTERNATIONAL COLLABORATION / MOBILITY

7/2024 - 07/2026	Organizer of the international workshop “Future perspectives on defocus particle tracking” and the 1st Defocus Particle Tracking Challenge, https://www.tu-ilmenau.de/defocus with Prof. M. Rossi, University of Bologna
03/2023 – 07/2023	Visiting researcher in the Department of Biomedical Engineering in the group of Prof. Per Augustssons, at Lund University, Sweden
01/2017, 04/2018, 03/2026	Joint experiments and journal publications in preparation on redox magnetohydrodynamically driven flow in microsystems with Prof. Ingrid Fritsch, University of Arkansas, Fayetteville, USA
10/2013 - 07/2014	Team member for the organisation and evaluation of the 4th international PIV Challenge for the comparison of recent PIV algorithms http://www.pivchallenge.org/pivchallenge4.html
01/2011 - 02/2014	Participation in the project management, organisation and reporting for an international workshop in the frame of the EU project 265695: “Advanced Flow Diagnostics for Aeronautical Research”

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11/2012 - 02/2013	Researcher in the Department of Aeronautics and Astronautics in Prof. Dana Dabiri's group at University of Washington, Seattle, USA
06/2009 - 07/2010	Joint experiments and journal publications on electrokinetically driven microvortices with Prof. Steven Wereley, Purdue University, West Lafayette, USA
09/2004 - 07/2005	Post graduate diploma course (with fellowship) at von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium
04/2003	Conducting two-phase fluid dynamic experiments under microgravity during the 34th ESA parabolic flight campaign in Bordeaux, France
RESEARCH INTERESTS	Energy storage (thermal, electrochemical, chemical), microfluidics, thermally driven flow, optical measurement techniques (PIV, 3D3C PTV, BOS, LIF), multi-phase flows, magneto-hydrodynamics, surface acoustic waves, electrochemistry, flow control, applications of neural networks, spin-hydrodynamics
PUBLICATIONS	>120 peer-reviewed journal papers, > 300 conference proceedings / presentations, 14 reports, 8 data/software contributions H-Index: 38 (accessed 24.08.2026 Google Scholar), 31 (accessed 24.09.2025 ISI Web of Knowledge, Researcher ID: C-2725-2011, ORCID: 0000-0002-8464-5513)
REFEREE SERVICE	Experiments in Fluids (Editorial Advisory Board 2020-2025, Guest editor since 2024, Editor since 2025) Experimental Thermal and Fluid Science (Editorial board 2023-2024, Editorial Advisory Board since 2025) Microfluidics and Nanofluidics, European Journal of Mechanics B/Fluids, International Journal of Thermal Sciences, Chemie Ingenieur Technik, Langmuir, Systems Journal of Industrial and Engineering Chemistry, Optics Express, Small, PLOS One, Applied Mathematics and Computation, International Journal of Hydrogen Energy, Microsystem Technologies, Experimental Thermal and Fluid Science, Sensors & Actuators: B Chemical, Journal of Fluids and Structures, Computers and Geosciences, Chemical Papers, Journal of Power Sources, International Journal of Multiphase Flow, Water Research, Chemical Engineering Journal, Journal of Energy Storage, Journal of Sensors and Sensor Systems, Scientific Reports, Measurement Science and Technology, Machine Learning: Science and Technology, Sensors and Actuators: A. Physical, Journal of Biomechanical Engineering, Nature Review Methods, Energy Conversion and Management: X, Chemical Engineering Science, Flow Measurement and Instrumentation, Journal of Energy Storage, Machine Learning: Science and Technology, Results in Engineering, International Communications in Heat and Mass Transfer
	German Science Foundation - Deutsche Forschungsgemeinschaft DFG, Czech Science Foundation - GACR, Austrian Science Foundation - Wissenschaftsfonds FWF, Netherlands Organisation for Scientific Research (NWO), Alexander von Humboldt Foundation (AvH), European Research Council (ERC), Fulbright Germany (PhD program), Helmholtz Impuls- und Vernetzungsfonds (young investigator groups)

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THIRD-PARTY FUNDING

since 2016	approx. 6.7 Mio. € with the group of engineering thermodynamics mainly for basic research for projects funded by DFG, participant in three priority programs (PPs 1881, 2045, 2403)
2015	AIF joint proposal with ZBT Duisburg "*Development of a heating system for a direct methanol fuel cell*", UniBW approx. 250.000 €
2013	DFG Emmy-Noether-Research-Group "*More efficient electrochemical energy conversion through near-wall flow control*", approx. 1.3 Mio. €

FOREIGN LANGUAGES English (fluent), French (basic knowledge), Swedish (basic knowledge)

Ilmenau, 24.08.2026