

Curriculum Vitae

Personal Data *in table form only*

Title	Prof. Dr.-Ing.
First name	Christoph
Name	Egbers
Current position	University Professor, Head of Department of Aerodynamics & Fluid Mechanics
Current institution(s)	Brandenburg University of Technology Cottbus-Senftenberg
Identifiers/ORCID	http://ORCID.org/0000-0001-9012-782X
Date of Birth	28.08.1963

Qualifications and Career *mixture of table/free text*

Stages	Periods and Details
Degree programme	03/1989 Diploma, Mechanical Engineering University of Hannover, Germany
Doctorate	5/89 – 1/94 PhD Thesis, Dr.-Ing. Supervisor: Prof. Rath, University of Bremen, ZARM, Germany, Subject: “On instabilities in spherical Couette flow” (summa cum laude)
Stages of academic/professional career <i>(optional after doctorate)</i>	7/2000 – now Head of Department for Aerodynamics & Fluid Mechanics (W3), BTU Cottbus-Senftenberg 2/1994 – 6/2000 Scientific Assistant (C1), ZARM, University of Bremen Head of working group „Rotating Fluids“ at ZARM Lecturer: Department of Mechanical Engineering, University of Bremen 5/1989 – 1/1994 Ph.D. student, ZARM, University of Bremen 5/2002 – 12/2013 Head of Institute of Traffic Engineering, BTU Cottbus-Senftenberg 12/2002 – 12/2012 and 4/2024-3/2028 Member of the Academic Senat of BTU Cottbus-Senftenberg 2008: Guest-Professor “Fluid Mechanics”, Université LeHavre, LOMC, CNRS 2007: Appointment to a Professorship “Fluid Mechanics” at University of Siegen 2004: Appointment to a Professorship “Fluid Mechanics” at TU Freiberg

Supplementary Career Information *optional; free text*

Engagement in the Research System *optional, free text*

2016-2024	Member of DFG Review Board "Fluid Mechanics" (Fachkollegium 403/404)
2017-2018	Member of DFG Review Board of "Excellence Initiative"
since 2017	Member of Advisory Board of DEKOMECH
2014-2019	Member of Advisory Board of GAMM e.V.
since 2016	Director of DFG Core Facility Center "Physics of Rotating Fluids", BTU
2013-2020	CNRS-co-operation contract "Laboratory International Association: Instabilities in stratified and rotating fluids, LIA-Istrof", between BTU, Univ. LeHavre, Univ. Aix-Marseille
2012-2017	Member of EU-Excellence-Network EUHit (European High Performance Infrastructures in Turbulence)
2016	Organizer of 19th "Int. Taylor-Couette Workshop", ICTW, BTU
2015	Organizer of the 24th GALA-Annual Meeting, BTU
since 2012	Member of Advisory Board of GALA e.V.
since 2011	Director of BTU-wide Research Center CFTMM (Center for Flow phenomena, Transport, Modelling & Measurement)
2010-2017	Chair of Research Training Group DFG FOR 1182 "Transport properties and flow pattern of turbulent Rayleigh-Bénard-, Taylor-Couette- and pipe flows"
2010	Organizer of the 18th GALA-Annual Meeting, BTU
since 2006	Member of Editorial Board of Journal "Technische Mechanik"
2005	Organizer of the GAMM 2005 session "Viscous Flows", Luxembourg
2005	Organizer of the 13th GALA-Annual Meeting, BTU
2004	Organizer of the 4th Int. Summer School of Super Computational Fluid Dynamics, Helmholtz- (HISP) Summer School, Potsdam
Since 2000	Co-ordinator (PI) of European ESA-project "GEOFLOW" (Head of Topical Team) for preparation in the Fluid Science Laboratory of ISS
2000-2014	Member of Editorial Board of Journal "Microgravity, Science & Technology"
1999	Organizer of the „11th International Couette-Taylor workshop“, Univ. of Bremen
1998	Member of the Scientific Board for the „GAMM-Jahrestagung 1998“, Univ. of Bremen
Since 1994	Member of DPG, GAMM, VDI, ELGRA, DGLR, EUROMECH
Since 1994	Referee for the following journals: Journal of Fluid Mechanics Physics of Fluids Experiments in Fluids Archive of Applied Mechanics (AAM) Microgravity, Science & Technology Measurement, Science & Technology Flow, Turbulence and Combustion International Journal of Dynamics of Fluids International Journal Heat & Mass Transfer

Supervision of Researchers in Early Career Phases *optional, free text*

Scientific Results *Part A required, Part B optional; free text*

Category A *required, free text*

1. Froitzheim, A, Merbold, S, Egbers, Ch, "Velocity profiles, flow structures and scalings in a wide gap turbulent Taylor-Couette flow", **J. Fluid. Mech.**, **Vol. 831**, 330-357, (2017)
2. Zaussinger, F., Haun, P., Neben, M., Seelig, T., Travnikov, V., Egbers, Ch., Yoshikawa, H. & Mutabazi, I.: "Dielectrically driven convection in spherical gap geometry", **Phys. Rev. Fluids** **3**, 093501, American Physical Society, DOI: 10.1103/PhysRevFluids.3.093501, (2018)
3. Froitzheim, A., Ezeta, R., Huisman, S. G., Merbold, S., Sun, C., Lohse, D., Egbers, Ch.: "Statistics, plumes and azimuthally travelling waves in ultimate Taylor-Couette turbulent vortices", **J. Fluid. Mech.**, **vol. 876**, 773-765, (2019)
4. Froitzheim, A., Merbold, S., Ostilla-Mónico, R., & Egbers, Ch.: "Angular momentum transport and flow organization in Taylor-Couette flow at radius ratio of $\eta=0.357$ ", **Phys. Rev. Fluids** **4**, 084605 – Published August, 14 (2019)
5. Merbold, S., Hamede, M. H., Froitzheim, A., and Egbers, Ch., "Flow regimes in a very wide-gap Taylor-Couette flow with counter-rotating cylinders". In: **Phil. Trans. Roy. Society** doi: 10.1098/rsta.2022. 0113, (2023).
6. Hamede, M.H., Merbold, S., Egbers, Ch., "Experimental investigation of turbulent counter-rotating, Taylor-Couette flows for radius ratio ($\eta=0.1$).", **J. Fluid Mech.**, doi 10.1017/jfm.2023.392, (2023).
7. Meyer, A., Meier, M., Motuz, V., Egbers, Ch. "Thermo-electric convection in a cylindrical annulus during a sounding rocket flight". **J. Fluid Mech.** 972:A26, (2023a).
8. Meyer, A., Yoshikawa, H. N., Szabo, P. S., Meier, M., Egbers, Ch., & Mutabazi, I. (2023b). Thermoelectric instabilities in a circular Couette flow. **Phil. Trans. Royal Society A**, 381(2243), 20220139.
9. Gaillard, Y., Szabo, P. S., Travnikov, V., Egbers, Ch. (2024). Thermo-electrohydrodynamic convection in a rotating shell with central force field, **Int. J. Heat and Mass Transfer**, 218:124760.
10. Hamede, M.H., Roller J., Meyer, A., Heuveline, V., Egbers, Ch. (2024). Dielectrophoretic force-enhanced thermal convection within a horizontal cylindrical annulus. **Physics of Fluids** 36(12).

Betreuung von Forschenden in frühen Karrierephasen in den letzten fünf Jahren .

- Hamede, Mohammed: The Turbulent Very Wide-Gap Taylor-Couette Flow: Experimental Investigation, Diss. BTU Cottbus-Senftenberg (2023)
- Mohamed Yousry: On the influence of flow behavior over structured surfaces, Diss. BTU Cottbus-Senftenberg (2021)
- Gazi Hasanuzzaman: Experimental Investigation of Turbulent Boundary Layer with Uniform Blowing at Moderate and High Reynolds Number, Diss. BTU Cottbus-Senftenberg (2021)
- Zeinab Hallol: Behaviour of energetic coherent structures in turbulent pipe flow at high Reynolds numbers, Diss. BTU Cottbus-Senftenberg (2021)
- Sebastian Merbold: Experimental investigation on turbulent transport in Taylor-Couette flow, Diss. BTU Cottbus-Senftenberg (2019)
- Matthias Neben: 3D-CFD der Gas-Partikel-Strömung in einer Laval-Düse zur Vorhersage mechanischer Erosion, Diss. BTU Cottbus-Senftenberg, (2019)
- Marcel Jongmanns: Flow control of thermal convection using thermo electro hydrodynamic forces in a cylindrical annulus, Diss. BTU Cottbus-Senftenberg (2019)
- Andreas Froitzheim: Angular momentum transport and pattern formation in medium- and wide-gap turbulent Taylor-Couette flow, Diss. BTU Cottbus-Senftenberg (2019)

Academic Distinctions / Awards

- 2005-2009 Member of the Scientific Advisory Board of the Brandenburg Government
- 2012 German-wide Award: 365 Orte im Land der Ideen „Geoflow“
- 2014 Best paper Award 2014, (Fluid Dyn. Res. 45, 19pp., 2013)
Koch, S., Harlander, U., Egbers, Ch., Hollerbach, R., 2013, Inertial waves in a spherical shell induced by librations of the inner sphere: experimental and numerical results
- 2016 Best Book Award: Futterer, B., Yoshikawa, H., Mutabazi, I., Egbers, Ch., 2015, Facilities to alter weight - Electric Fields Generation and Applications of Extra-Terrestrial Environments on Earth, River Publishers, Aalborg, Daniel Beysens, Jacobus van Loon, S. 91-100, ISBN 978-87-93237-53-7

Data protection and consent to the processing of optional data

If you provide voluntary information (marked as optional) in this CV, your consent is required. Please confirm your consent by checking the box below.

☒ I expressly consent to the processing of the voluntary (optional) information, including “special categories of personal data”¹ in connection with the DFG’s review and decision-making process regarding my proposal. This also includes forwarding my data to the external reviewers, committee members and, where applicable, foreign partner organisations who are involved in the decision-making process. To the extent that these recipients are located in a third country (outside the European Economic Area), I additionally consent to them being granted access to my data for the above-mentioned purposes, even though a level of data protection comparable to EU law may not be guaranteed. For this reason, compliance with the data protection principles of EU law is not guaranteed in such cases. In this respect, there may be a violation of my fundamental rights and freedoms and resulting damages. This may make it more difficult for me to assert my rights under the General Data Protection Regulation (e.g. information, rectification, erasure, compensation) and, if necessary, to enforce these rights with the help of authorities or in court.

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I have taken note of the DFG’s Data Protection Notice relating to research funding, which I can access at www.dfg.de/privacy_policy and I will forward it to such persons whose data the DFG processes as a result of being mentioned in this CV.

Prof. Dr.-Ing. Christoph Egbers

¹ Special categories of personal data are those “revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and (...) genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person’s sex life or sexual orientation” (Article 9(1) GDPR).