

Univ.-Prof. Dr.-Ing. Dieter Brillert

Location: University Duisburg-Essen
Institute for Energy and Environmental Process Engineering
Chair of Turbomachinery
Lotharstraße 1, D-47057 Duisburg
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1) Industrial & Academic Career

- since 01/2014 Head of Chair of Turbomachinery, University Duisburg-Essen
- 09/2000 - 12/2013 Siemens AG
- Offenbach am Main (2006 – 2013)
- a) Service Head of Sales North-/South Asia, Long Term Programs for Gas Turbines, ca. 3 ½ years
- b) Technical Sales Manager Asia & Europe for Combine Cycle Power Plants, ca. 4 years
- Orlando, USA (2003 – 2006 Siemens Westinghouse)
- Project lead rotor development Gas Turbine SGT5-8000H / „New Gas Turbine Family“, 3 years
- Mülheim an der Ruhr (2000 – 2003)
- Development engineer for thermodynamic optimisation of the secondary air system of Gas Turbines, ca. 2½ years
- 01/1996 - 08/2000 PhD student at the Chair of Turbomachinery, University Duisburg

2) Academic Education

Study Mechanical Engineering (10/1991 - 12/1995) University Duisburg,

Thesis: Mechanical Engineering - Turbomachinery, University Duisburg, 2001,
Supervisor: Prof. Dr.-Ing. H. Simon

3) Miscellaneous

- since 2019 Member in Euroturbo Committees of the European Turbomachinery Conference (ETC)
- since 2018 Chair of the European Conferences on Supercritical CO₂ (sCO₂) and European sCO₂ Research & Development Alliance
- since 2015 Member at Verein Deutscher Ingenieure, VDI GmbH

4) Publications

- [1] Schröder, T. R.; Dohmen H. J.; Brillert D.; Benra F.-K.: Impact of Leakage Inlet Swirl Angle in a Rotor-Stator Cavity on Flow Pattern, Radial Pressure Distribution and Frictional Torque in a Wide Circumferential Reynolds Number Range. In: International Journal of Turbomachinery, Propulsion and Power, 5(2), DOI:10.3390/ijtp5020007.
- [2] Hacks, A. J.; Schuster, S.; Brillert, D.: Stabilizing Effects of Supercritical CO₂ Fluid Properties on Compressor Operation. International Journal of Turbomachinery, Propulsion and Power 2019, 4(3), DOI:10.3390/ijtp4030020.
- [3] Strätz, M.; Starflinger J.; Mertz, R.; Brillert D.: Cycle Calculations of a Small-Scale Heat Removal System With Supercritical CO₂ as Working Fluid, ASME Journal of Nuclear Engineering and Radiation Science 2019, 5(1), DOI : 10.1115/1.4039884.
- [4] Hacks, A.; Schuster, S.; Dohmen, H. J.; Benra, F.-K.; Brillert, D.: Turbomachine Design for Supercritical Carbon Dioxide within the sCO₂-HeRo.EU Project, Journal of Engineering for Gas Turbines and Power 2018, 140(12), DOI:10.1115/1.4040861
- [5] Domnick, C.; Brillert, D.: Flow Induced Steam Valve Vibrations – A Literature Review of Excitation Mechanisms, Preventive Measures and Design Improvements, Journal of Engineering for Gas Turbines and Power 2018, DOI: 10.1115/1.4041253

- [6] Schuster, S.; Brillert, D.; Benra, F.-K.: Condensation in Radial Turbines – Part II: Application of the Mathematical Model to a Radial Turbine Series. *Journal of Turbomachinery* 2018, 140(10), DOI: 10.1115/1.4040935
- [7] Schuster, S.; Brillert, D.; Benra, F.-K.: Condensation in Radial Turbines – Part I: Mathematical Modeling, *Journal of Turbomachinery* 2018, 140(10), DOI: 10.1115/1.4040934
- [8] Hu, B.; Brillert, D.; Dohmen, H.J.; Benra, F.-K.: Investigation on Thrust and Moment Coefficients of a Centrifugal Turbomachine, *Int. J. Turbomach. Propuls. Power* 2018, 3(2), 9, DOI:10.3390/ijtp3020009
- [9] Domnick, C., Benra, F.-K., Brillert, D., Dohmen, H.J., Musch C., 2017, Investigation on flow induced vibrations of a steam turbine inlet valve considering fluid structure interaction effects, *Journal of Engineering for Gas Turbines and Power* Vol. 139, Issue 2, GTP-16-1260, DOI 10.1115/1.4034352
- [10] Schuster, S.; Benra, F.-K.; Brillert, D.: Droplet deposition in radial turbines, *European Journal of Mechanics - B/Fluids* Volumen 61, Part 2, (January-February 2017) Pages 209–346, *Rotating Flows* Edited by Olivier Coutier-Delgosha, DOI 10.1016/j.euromechflu.2016.09.002