

Professor Bernhard Peters

Foreign Member of the Lithuanian Academy of Sciences since 2025

Prof. B. Peters is an experienced engineer for multi-phase reacting flows in which one phase represents a particulate material for which he has developed the Extended Discrete Element Method (XDEM).

Qualifications:

1990 – Doktor-Ingenieur of the University of Aachen.

1986 - Diplom-Ingenieur in Mechanical Engineering of the University of Aachen.

Professional Career:

since 2007 Full Professor of Thermo-/Fluiddynamics at University of Luxembourg, Luxembourg.2001-2007 Design engineer and project leader at AVL List GmbH, Austria.

1993-2001 Group leader and project leader at Karlsruhe Institute of Technology (KIT), Germany.

1991-1993 Senior research assistant at Imperial College of Science, Technology and Medicine, University of London, United Kingdom.

1990-1991 Post-doctoral research assistant at Imperial College of Science, Technology and
Medicine, University of London by a grant of Deutsche Forschungsgesellschaft, United Kingdom.
1986-1990 Research assistant at the Institute of Applied Thermodynamics, University of Aachen,
Germany.

Education:

1980-1986 Mechanical engineering study with main subjects in turbo-machinery and combustion engines at the Rheinisch Westfälische Technische Hochschule Aachen and practical training in Hungary and Germany.

1976-1979 Aufbaugymnasium Neuerburg.

Distinctions:

1998 Elected as a member of the Scientific Program Committee of ERCOFTAC (European Research Community on Flow, Turbulence and Combustion).

1999 Awarded by the Executive Board of the Forschungszentrum Karlsruhe for excellent contributions to an interdisciplinary research project on NOx-reduction technology.2001 AVL Innovation Award for "Simulation of a Diesel Particulate Filter".

Supervision Experience:

Supervision experience includes 19 completed PhD theses at the University of Luxemburg within international collaborations and 9 co supervised PhDs. Coordinating an EU-project initiated collaborations with Prof. Galletti from the University of Pisa, Italy, and Prof. Bose, IIT Bombay from where academic visitors arrived and carried out simulation with XDEM software under his supervision. More details on on-going research projects are found at <u>www.xdem.de</u>.

Relevant books and book chapters of advisor (Bernhard Peters):

1. B. Peters, M. Baniasadi, M. Baniasadi. Iron Ores and Iron Oxide materials, chapter The eXtended Discrete Element method (XDEM): An Advanced Approach to Model Blast Furnace, IntechOpen, 2018.

2. B. Peters, A. Estupinan. Why Do Discrete Element Analysis, 2018, NAFEMS-Press.

3. B. Peters and R. Raupenstrauch. Combustion Handbook, chapter Modelling Moving and Fixed Bed Combustion. Wiley & Sons, 2010.

4. B. Peters. Encyclopedia of Thermal Stress, chapter 1st Law of Thermodynamics. 2012.

5. B. Peters and A. Dziugys. Advances in Industrial Heat Transfer, chapter Heat Transfer in Fixed and Moving Packed Beds Predicted by the Extended Discrete Element Method. CRC Press, 2012.

6. B. Peters. Thermal Conversion of Solid Fuels, 2003, WIT-Press.

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