

Publikationen

Name / Title	Prof. Dr.-Ing. Hannah Böhrk
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AUSGEWÄHLTE VORTRÄGE

„Thermalschutzsysteme für den Hyperschallflug“, Vortragsreihe “2D, 3D, 4D X-Ray Imaging in Life Sciences and Materials Research”, Karlsruher Institut für Technologie (KIT), Mai 2019

„Materials Engineering: High End Design for Hypersonic Flight“, Vortragsreihe “Materials Engineering”, Universität Augsburg, Juli 2018

„Systemanalyse Hochtemperaturmanagement“, Vortragsreihe “Systemanalyse Raumtransport”, Institut für Raumfahrtssysteme, DLR und Universität Bremen, Juni 2016

„Transpiration-Cooling with Ceramic Matrix Composites in Hypersonic Flow“, in der NATO STO/AVT Lecture Series „Porous media interaction with high temperature and high speed flows“, von Karman Institut, Rhodes St. Genève, Belgien, September 2015

„Material-Tailored Thermo-Mechanical Design“, NATO RTO / AVT Lecture Series „Engine Intake Aerothermal Design“, von Karman Institut, Rhodes St. Genève, Belgien, November 2011

„Shaping the Future – SHEFEX and REX-Free Flyer: The DLR Re-Entry Program“, Plenarvortrag beim 7th Aerothermodynamic Symposium, ESA SP-692, Brugge, Belgien, Mai 2011

„Plasmaquellen für die Simulation von Rückkehrflügen aus dem Weltraum“, Hauptvortrag, DPG-Frühjahrstagung – Plasmaphysik, extraterrestrische Physik und Kurzzeitphysik, Greifswald, März 2009

BUCHBEITRÄGE

Peichl, J., Schwab, A., Selzer, M., Böhrk, H., von Wolfersdorf, J., “Innovative Cooling for Rocket Combustion Chambers” in Adams, N.A., Schröder, W., Radespiel, R., Haidn, O.J., Sattelmayer, Th., Stemmer, C., Weigand, B. (Eds.), “Future Space-Transport-System Components under High Thermal and Mechanical Loads”, Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 146, Springer, ISBN 978-3-030-53847-7, 2021

Böhrk, H., „Heat Flux Reduction by Transpiration-Cooling of CMC for Space Applications” in Bafekrpour, E., „Advanced Composite Materials: Manufacturing, Properties, and Applications”, De Gruyter Open Ltd., ISBN 978-3-11-057443-2, 2017

Barth, T., Gehre, R., Eggers, T., Martinez Schramm, J., Wagner, A., Hannemann, K., Kaufmann, R., Böhrk, H., „Experimental and Numerical Analysis of SHEFEX-II” in Dillmann, A., Heller, G, Kreplin, H.P., Nitsche, H., Peltzer, I. (Hrsg.), “New Results in Numerical and Experimental Fluid Mechanics VIII: Contributions to the 17th STAB/DGLR Symposium Berlin, Germany 2010”, Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Springer, Vol. 121, 2013

Böhrk, H., Auweter-Kurtz, M., “Velocity and Total Pressure Measurement in the Two-Stage Hybrid Thruster TIHTUS” in DeLuca, L.T., Bonnal, C., Haidn, O., Frolov,

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S.M., (Hrsg.) "EUCASS Advances in Aerospace Sciences Vol. 1 – Propulsion Physics", ISBN 978-2-7598-0411-5, Torus Press, pp. 381-398, 2009

ZEITSCHRIFTENBEITRÄGE

Boehrck, H., Weihs, H., & Elsässer, H. "Hot Structure Flight Data of a Faceted Atmospheric Reentry Thermal Protection System". International Journal of Aerospace Engineering, 2019.

Prokein, D., Dittert, C., Böhrck, H., von Wolfersdorf, J. "Numerical simulation of transpiration cooling experiments in supersonic flow using OpenFOAM". CEAS Space Journal, pp. 1-19, 2019

Stäbler, T., Böhrck, H., Voggenreiter, H. "Characterisation of Electrical Resistance for CMC Materials up to 2000 K." Composites Part A: Applied Science and Manufacturing, Volume 112, pp. 25-31, 2018

Munk, D.J., Selzer, M., Böhrck, H., Schweikert, S., Vio, G.A.: „Numerical Modeling of Transpiration-Cooled Turbulent Channel Flow with Comparisons to Experimental Data" Journal of Thermophysics and Heat Transfer, Vol. 32, No. 3, pp. 713-735, 2018

Stäbler, T., Böhrck, H., Voggenreiter, H. "Characterisation of Electrical Resistance for CMC Materials up to 2000 K." Journal of Physics: Conference Series, Volume 939, conference 1, 2018

Dittert, C., Selzer, M., Böhrck, H.: "Flowfield and Pressure Decay Analysis of Porous Cones", AIAA Journal, Vol. 55, No. 3, pp.874-882, 2017

Löhle, S., Jenniskens, P., Bauer, T., Böhrck, H., Elsässer, H., Sears, D.W., Zolensky, M.E., Shaddad, M.H., "Thermophysical Properties of of Almahata Sitta Meteorites (asteroid 2008 TC3) for High-Fidelity Entry Modeling", Meteoritics & Planetary Science, The Meteoritical Society, doi: 10.1111/maps.12788, 2016

Böhrck, H., Jemmali, R., "Time Resolved Quantitative Imaging of Charring in Materials under Temperatures above 1000K", Review of Scientific Instruments, Vol. 87 (073701), doi: 10.1063/1.4955441, 2016

Böhrck, H., "Transpiration-Cooled Hypersonic Flight Experiment: Setup, Flight Measurement and Reconstruction", Journal of Spacecraft and Rockets. Vol 52, No. 3, pp. 674-683, 2015

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Böhrck, H., Leschinski, P., Reimer, T. "Electrical Resistivity Measurement of Ceramic Matrix Composites under Thermo-Mechanical Load", Composite Science and Technology, Vol. 76, pp. 1-7, 2013

Böhrck, H., Lau, M., Herdrich, G., Hald, H. "A Porous Flow Control Element for Pulsed Plasma Thrusters", CEAS Space Journal, Vol. 3, No. 1-2, pp. 1-6, 2012

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Böhrck, H., Beyermann, U., "Secure Tightening of a CMC Fastener for the Heat Shield of Re-Entry Vehicles", Composite Structures, Vol. 92, pp. 107-112, 2010

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Leiter, H., Bock, D., Böhrk, H., Auweter-Kurtz, M., „Elektrische Antriebe für die Raumfahrt“, Vakuum in Forschung und Praxis, Vol. 20, No. 5, pp. 6-12, Sep. 2008

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