

**Journal and Conference Contributions (peer-reviewed)**

2012

- [1] **Engelmann, D.**, Kalkkuhl, T., Polklas, T. and Mailach, R., **2012**: "Influence of Shroud Cavity Jet and Steam Admission through a Circumferential Slot on the Flow Field in a Steam Turbine", ASME Paper No. GT2012- 68465, ASME Turbo Expo, June 12-15, 2012, Copenhagen, Denmark.
- [2] Kalkkuhl, T., **Engelmann, D.**, Harbecke, U. and Mailach, R., **2012**: "Numerical Analysis of Partial Admission Flow in an Industrial Steam Turbine", ASME Paper No. GT2012-68482, ASME Turbo Expo, June 12-15, 2012, Copenhagen, Denmark.

2013

- [3] **Engelmann, D.**, Schramm, A., Polklas, T., Schwarz, M. A. and Mailach, R., **2013**: "Enhanced Loss Prediction for Admission through Circumferential Slots in Axial Steam Turbines", 10th European Turbomachinery Conference, April 15.-19, 2013, Lappeenranta, Finland.
- [4] Schramm, A., **Engelmann, D.**, Polklas, T., Brunn, O. and Mailach, R., **2013**: "Influence of Vane Carrier Design in Steam Extraction Modules on the Flow Conditions of the Subsequent Turbine Stage", 10th European Turbomachinery Conference, April 15.-19, 2013, Lappeenranta, Finland.
- [5] **Engelmann, D.**, **2013**: "Strömungsmechanische Untersuchung einer Industriedampfturbine mit Fokus auf die Rückführung von Leckagedampf", Dissertation, Ruhr-Universität Bochum.

2014

- [6] **Engelmann, D.**, Schramm, A., Polklas, T. and Mailach, R., **2014**: "Losses of Steam Admission in Industrial Steam Turbines Depending on Geometrical Parameters", ASME Paper No. GT2014- 25172, ASME Turbo Expo, June 16-20, 2014, Düsseldorf, Germany.

2015

- [7] **Engelmann, D.** and Mailach, R., **2015**: "A detailed View on the Mixing and Loss Generation Process during Steam Admission concerning Geometry, Temperature and Pressure", 11th European Turbomachinery Conference, March 23-27, 2015, Madrid, Spain.

2017

- [8] Winhart, B., Micallef, D. and **Engelmann, D.**, **2017**: "Application of the Time Transformation Method for the Detailed Analysis of Multistage Blade Row Interactions in a Shrouded Turbine", 12th European Turbomachinery Conference, April 03-07, 2017, Stockholm, Sweden.
- [9] Sinkwitz, M., **Engelmann, D.** and Mailach, R., **2017**: "Experimental investigation of periodically unsteady wake impact on the secondary flow in a 1.5 stage full annular LPT cascade with modified T106 blading", ASME Paper No. GT2017-64390, ASME Turbo Expo, June 26-30, 2017, Charlotte, USA.

- [10] Sembritzky, M., Micallef, D. and **Engelmann, D.**, **2017**: "Prediction of heat transfer for a highly loaded transonic turbine guide vane with the usage of a GPU based 3D RANS solver", ASME Paper No. GT2017-63581, ASME Turbo Expo, June 26-30, 2017, Charlotte, USA.
- [11] Iseni, S., Micallef, D., **Engelmann, D.**, Mailach, R., Nicke, E. and di Mare, F., **2017**: "Influence of Casing Contouring on Flutter Boundaries of a Jet Engine Fan", DLRK2017\_450105, Deutscher Luft- und Raumfahrtkongress, September 5-7, 2017, München, Germany.
- [12] Sinkwitz, M., Winhart, B., **Engelmann, D.**, di Mare, F. and Mailach, R., **2017**: "Experimental and Numerical Investigation of Secondary Flow Structures in an Annular LPT Cascade under Periodical Wake Impact - Part 1: Experimental Results", 17th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC), December 16-21, 2017, Maui, Hawaii, USA.
- [13] Winhart, B., Sinkwitz, M., Schramm, A., **Engelmann, D.**, di Mare, F. and Mailach, R., **2017**: "Experimental and Numerical Investigation of Secondary Flow Structures in an Annular LPT Cascade under Periodical Wake Impact – Part 2: Numerical Results", 17th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC), December 16-21, 2017, Maui, Hawaii, USA.
- [14] Hodzic, O., Sinkwitz, M., Schramm, A., Iseni, S., **Engelmann, D.**, di Mare, F. and Mailach, R., **2017**: "Design of a low pressure turbine stage with control stage characteristics for investigations of partial admission effects", 17th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC), December 16-21, 2017, Maui, Hawaii, USA.
- [15] Kowalski, J., Lauer, M., **Engelmann, D.**, Mailach, R., Cagna, M. and di Mare, F., **2017**: "Development of a Novel Test Rig to Investigate Explosion Safety in Gas Turbine Enclosures", 17th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery (ISROMAC), December 16-21, 2017, Maui, Hawaii, USA.
- 2018
- [16] Hodzic, O., Winhart, B., Sinkwitz, M., **Engelmann, D.**, di Mare, F. and Mailach, R., **2018**: "Experimental and Numerical Investigations of a Low-Pressure Turbine Control Stage", GPPS-2018-98, Proceedings of GPPS Forum 18, Global Power and Propulsion Society, May 7-9, 2018, Montreal, Canada.
- [17] Sinkwitz, M., Winhart, B., **Engelmann, D.**, di Mare, F. and Mailach, R., **2018**: „On the Periodically Unsteady Interaction of Wakes, Secondary Flow Development and Boundary Layer Flow in an Annular LPT Cascade. Part 1 – Experimental Investigation“, ASME Paper No. GT2018-76802, ASME Turbo Expo, June 11-15, 2018, Oslo, Norway.
- [18] Winhart, B., Sinkwitz, M., **Engelmann, D.**, di Mare, F. and Mailach, R., **2018**: „On the Periodically Unsteady Interaction of Wakes, Secondary Flow Development and Boundary Layer Flow in an Annular LPT Cascade. Part 2 – Numerical Investigation“, ASME Paper No. GT2018-76873, ASME Turbo Expo, June 11-15, 2018, Oslo, Norway.
- [19] Iseni, S., Micallef, D., **Engelmann, D.**, Mailach, R., Nicke, E. and di Mare, F., **2018**: "Influence of Casing Contouring on Flutter Boundaries of a Jet Engine Fan", CEAS

Aeronautical Journal, Vol. 9, pp.1-11, 2018, Springer Vienna, doi.org/10.1007/s13272-018-0351-y.

#### 2019

- [20] Sinkwitz, M., Winhart, B., **Engelmann, D.**, di Mare, F. and Mailach, R., **2019**: "Experimental and Numerical Investigation of Secondary Flow Structures in an Annular LPT Cascade under Periodic Wake Impact – Part 1: Experimental Results", ASME. J. Turbomach. 2019; 141(2): 021008-021008-8, doi:10.1115/1.4042284.
- [21] Winhart, B., Sinkwitz, M., Schramm, A., **Engelmann, D.**, di Mare, F. and Mailach, R., **2019**: "Experimental and Numerical Investigation of Secondary Flow Structures in an Annular LPT Cascade under Periodic Wake Impact – Part 2: Numerical Results", ASME. J. Turbomach. 2019; 141(2): 021009-021009-9, doi:10.1115/1.4042283.
- [22] Schramm, A., **Engelmann, D.** and di Mare, F., **2019**: „A Novel Modular Test Rig for Experimental Investigation of Mixing and Separation Processes in Turbomachines“, 13th European Turbomachinery Conference, April 08-12, 2019, Lausanne, Switzerland.
- [23] Sinkwitz, M., Winhart, B., **Engelmann, D.**, di Mare, F. and Mailach, R., **2019**: "On the Periodically Unsteady Interaction of Wakes, Secondary Flow Development, and Boundary Layer Flow in An Annular Low-Pressure Turbine Cascade: An Experimental Investigation", ASME. J. Turbomach. 2019; 141(9):091001-091001-8. doi:10.1115/1.4043577.

#### 2020

- [24] Sinkwitz, M., Winhart, B., **Engelmann, D.** and di Mare, F., **2020**: "Time-Resolved Measurements of the Unsteady Boundary Layer in an Annular Low-Pressure Turbine Configuration With Perturbed Inlet", ASME Paper No. GT2020-15319, ASME Turbo Expo, September 21-25, 2020, Virtual, Online.

#### 2021

- [25] **Engelmann, D.**, Sinkwitz, M., di Mare, F., Koppe, B., Mailach, R., Ventosa-Molina, J., Fröhlich, J., Schubert, T. and Niehuis, R., **2021**: "Near-Wall Flow in Turbomachinery Cascades – Results of a German Collaborative Project", Int. J. Turbomach. Propuls. Power. 2021; 6 (2), 9. doi: 10.3390/ijtpp6020009.

#### 2022

- [26] Sinkwitz, M., Winhart, B., **Engelmann, D.** and di Mare, F., **2022**: "Time-Resolved Measurements of the Unsteady Boundary Layer in an Annular Low-Pressure Turbine Configuration with Perturbed Inlet", ASME J. Turbomach. January 2022; 144 (1): 011001. doi: <https://doi.org/10.1115/1.4051711>.

#### **Lectures**

- [1] Kowalski, J., Lauer, M., **Engelmann, D.** and Mailach, R., **2017**: "Entwicklung eines neuen Prüfstandes zur Untersuchung der Explosionssicherheit in Gasturbinen-Schallschutzhauben", 1st Symposium on Turbomachinery Test Facilities, Ruhr-Universität Bochum, May 11-12, 2017, Bochum, Germany.
- [2] Hodzic, O., **Engelmann, D.** and Mailach, R., **2017**: "Datenübertragung aus rotierenden Systemen bei hoch instationären Strömungsfeldern", 1st Symposium on

Turbomachinery Test Facilities, Ruhr-Universität Bochum, May 11-12, 2017, Bochum, Germany.

- [3] Sinkwitz, M., **Engelmann, D.** and Mailach, R., **2017**: "Realisierung eines Ringgitterwindkanals zur zeitaufgelösten Analyse der Sekundärströmungs-Nachlauf-Interaktion", 1st Symposium on Turbomachinery Test Facilities, Ruhr-Universität Bochum, May 11-12, 2017, Bochum, Germany.
- [4] **Engelmann, D.**, **2018**: „Vorstellung der experimentellen Aktivitäten am Lehrstuhl für Thermische Turbomaschinen und Flugtriebwerke“, Konferenz der Leiter der Institute für Thermische Turbomaschinen - Halbjahrestreffen 2018, June 29, 2018, Bochum, Germany.
- [5] Sinkwitz, M., Winhart, B., **Engelmann, D.** and di Mare, F., **2018**: „Periodisch instationäre Interaktion zwischen Nachläufen, der Entwicklung von Sekundärströmung und Grenzschichten in einem Niederdruck-Turbinen-Ringgitter“, Konferenz der Leiter der Institute für Thermische Turbomaschinen - Halbjahrestreffen 2018, June 29, 2018, Bochum, Germany.
- [6] Sinkwitz, M., **Engelmann, D.** and di Mare, F., **2021**: "Boundary Layers and Secondary Flow Structures within the T106RUB LPT Cascade under Periodic Perturbation", Workshop Near-Wall Flow in Turbomachinery Blade Rows, January 28-29, 2021, Virtual Event.

#### **Research reports**

- [1] Polklas, T. and **Engelmann, D.**, **2013**: „Expansionsoptimierung in einer Kompressorantriebs-Modellturbinen“. Abschlussbericht, Forschungsvorhaben COORETEC-turbo, Verbundprojekt: CO<sub>2</sub>-Reduktions-Technologien, Vorhaben-Nr. 4.2.4 A, 01.04.2008 - 31.12.2012, Ruhr-Universität Bochum, Lehrstuhl für Thermische Turbomaschinen, Technische Informationsbibliothek und Universitätsbibliothek, Bochum, Germany.