

Publications Thermo-Fluid Dynamics Group

August 2, 2022

Reviewed journal articles or conference proceedings

1. A. M. Garcia, S. LeBras, J. Prager, M. Haeringer, and W. Polifke. Large eddy simulation of the dynamics of lean premixed flames using global reaction mechanisms calibrated for CH₄-H₂ fuel blends. *Physics of Fluids*, page 10, 2022.
2. J. Kuhlmann, A. Lampmann, M. Pfitzner, and W. Polifke. Assessing accuracy, reliability and efficiency of combustion models for prediction of flame dynamics with large eddy simulation. *Physics of Fluids*, page 10, 2022.
3. J. Kuhlmann, S. Marragou, I. Boxx, T. Schuller, and W. Polifke. LES based prediction of technically premixed flame dynamics and comparison with perfectly premixed mode. *Physics of Fluids*, page 10, 2022.
4. M. Rywik, P. Kasthuri, I. Boxx, I. Chtereve, W. Polifke, and R. I. Sujith. Turbulence and Heat Release Rate Network Structure in Hydrogen-enriched Combustion. *39th International Symposium on Combustion*, volume 39, page 8, Vancouver, BC, Canada, 2022. Combustion Institute.
5. G. J. J. Fournier, F. Schaefer, M. Haeringer, C. F. Silva, and W. Polifke. Interplay of Clusters of Acoustic and Intrinsic Thermoacoustic Modes in Can-Annular Combustors. *Proceedings of ASME Turbo Expo 2022 Turbomachinery Technical Conference and Exposition*, Rotterdam, NL, 2022. ASME.
6. M. Merk, P. E. Buschmann, J. P. Moeck, and W. Polifke. The nonlinear thermoacoustic eigenvalue problem and its rational approximations: Assessment of solution strategies. *Proceedings of ASME Turbo Expo 2022 Turbomachinery Technical Conference and Exposition*, GT2022-79653, Rotterdam, NL, 2022. ASME.
7. M. Haeringer and W. Polifke. Hybrid CFD/low-order modeling of thermoacoustic limit cycle oscillations in can-annular configurations. *Int. J. Spray Comb. Dynamics*, 14(1-2):143–152, 2022.
8. S. Kulkarni, C. F. Silva, and W. Polifke. Response of Spray Number Density and Evaporation Rate to Velocity Oscillations. *Int. J. Spray Comb. Dynamics*, 14(1-2):107–117, 2022.
9. G. Doehner, M. Haeringer, and C. F. Silva. Nonlinear flame response modelling by a parsimonious set of ordinary differential equations. *International Journal of Spray and Combustion Dynamics*, 14(1-2):17–29, May 2022.
10. C. Wang, T. L. Kaiser, M. Meindl, K. Oberleithner, W. Polifke, and L. Lesshafft. Linear instability of a premixed slot flame: Flame transfer function and resolvent analysis. *Comb. & Flame*, 240:112016, 2022.
11. F. Schaefer, L. Magri, and W. Polifke. A Hybrid Adjoint Network Model for Thermoacoustic Optimization. *J. Eng. Gas Turbines and Power*, 144(3), 2022.
12. N. Purwar, M. Meindl, and W. Polifke. Comparison of model order reduction methods in thermoacoustic stability analysis. *J. Eng. Gas Turbines and Power*, 144(2):021004–1–9, 2022.

13. M. McCartney, U. Sengupta, and M. Juniper. Reducing Uncertainty in the Onset of Combustion Instabilities using Dynamic Pressure Information and Bayesian Neural Networks. *Journal of Engineering for Gas Turbines and Power*, 144:011012–1–9, 2022.
14. T. Steinbacher and W. Polifke. Convective Velocity Perturbations and Excess Gain in Flame Response as a Result of Flame-Flow Feedback. *Fluids*, 7(2):61, 2022.
15. N. Tathawadekar, A. K. Doan, C. F. Silva, and N. Thuerey. Hybrid Neural Network PDE Solvers for Reacting Flows. *ArXiv*, 2021.
16. F. Schily and W. Polifke. Low-Order Model of the Dynamics and Start-up of a Pulsating Heat Pipe. *Frontiers in Heat and Mass Transfer*, 17(16):15, 2021.
17. S. Kulkarni, S. Guo, C. F. Silva, and W. Polifke. Confidence in Flame Impulse Response Estimation From Large Eddy Simulation With Uncertain Thermal Boundary Conditions. *Journal of Engineering for Gas Turbines and Power*, 143(12):121002, Dec. 2021.
18. G. J. J. Fournier, M. Meindl, C. F. Silva, G. Ghirardo, M. R. Bothien, and W. Polifke. Low-Order Modeling of Can-Annular Combustors. *Journal of Engineering for Gas Turbines and Power*, 143(12):121004, Dec. 2021.
19. S. H. van Buren and W. Polifke. Enhanced Longitudinal Heat Transfer in Oscillatory Channel Flow - A Theoretical Perspective. *Journal of Fluids Engineering*, 143(12), Aug. 2021.
20. N. A. K. Doan, W. Polifke, and L. Magri. Autoencoded Reservoir Computing Approach for Turbulence Learning. *Lecture Notes in Computer Science - ICCS 2021*, 2021.
21. A. Ghani and W. Polifke. An exceptional point switches stability of a thermoacoustic experiment. *J. Fluid Mechanics*, 920, 2021.
22. N. Purwar, M. Haeringer, B. Schuermans, and W. Polifke. Flame response to transverse velocity excitation leading to frequency doubling and modal coupling. *Combustion and Flame*, 230:111412, 2021.
23. J. Kuhlmann, S. Guo, and W. Polifke. A Top Level Parallelization and Data Fusion Approach for Identification of Flame Transfer Functions with Increased Reliability, Accuracy and Efficiency. *27th Int. Conf. Sound Vibration (ICSV27)*, Prague, CZ, 2021.
24. S. van Buren, K. Förner, and W. Polifke. Acoustic Impedance of a Quarter-Wave Resonator with Non-Uniform Temperature. *27th International Congress on Sound and Vibration Sound Vibration (ICSV27)*, Prague, CZ, July 2021.
25. S. Guo, C. F. Silva, and W. Polifke. Robust identification of flame frequency response via multi-fidelity Gaussian process approach. *Journal of Sound and Vibration*, 502:116083, June 2021.
26. S. Kulkarni, S. Guo, C. F. Silva, and W. Polifke. Confidence in Flame Impulse Response Estimation by LES with Uncertain Thermal Boundary Condition. *ASME Turbo Expo 2021*, GT2021-58352, Virtual, Online, 2021. ASME.
27. G. J. J. Fournier, M. Meindl, C. F. Silva, G. Ghirardo, M. R. Bothien, and W. Polifke. Low-Order Modeling of Can-Annular Combustors. *Volume 3A: Combustion, Fuels, and Emissions*, page V03AT04A027, Virtual, Online, June 2021. American Society of Mechanical Engineers.
28. F. Schaefer, L. Magri, and W. Polifke. A Hybrid Adjoint Network Model for Thermoacoustic Optimization. *ASME Turbo Expo 2021: Turbomachinery Technical Conference & Exposition*, GT2021-59866, 2021.

29. N. Purwar, M. Meindl, and W. Polifke. Comparison of model order reduction methods in thermoacoustic stability analysis. *ASME Turbo Expo 2021: Turbomachinery Technical Conference and Exposition*, GT2021-59972, 2021.
30. M. McCartney, U. Sengupta, and M. Juniper. Reducing Uncertainty in the Onset of Combustion Instabilities using Dynamic Pressure Information and Bayesian Neural Networks. *ASME Turbo Expo 2021: Turbomachinery Technical Conference & Exposition*, GT2021-60283, Online, 2021. ASME.
31. F. Schaefer, S. Guo, and W. Polifke. The Impact of Exceptional Points on the Reliability of Thermoacoustic Stability Analysis. *J. Eng. Gas Turbines Power*, 2020.
32. M. Haeringer, G. J. J. Fournier, M. Meindl, and W. Polifke. A Strategy to Tune Acoustic Terminations of Single-Can Test-Rigs to Mimic Thermoacoustic Behavior of a Full Engine. *Journal of Engineering for Gas Turbines and Power*, 143(7):710029, July 2021.
33. S. Guo, C. F. Silva, and W. Polifke. Reliable Calculation of Thermoacoustic Instability Risk Using an Imperfect Surrogate Model. *Journal of Engineering for Gas Turbines and Power*, Volume 143(Issue 1):011010 (9 pages), Dec. 2020.
34. G. J. J. Fournier, M. Haeringer, C. F. Silva, and W. Polifke. Low-Order Modeling to Investigate Clusters of Intrinsic Thermoacoustic Modes in Annular Combustors. *Journal of Engineering for Gas Turbines and Power*, 143(4):041025, Apr. 2021.
35. C. F. Silva, L. Prieto, M. Ancharek, P. Marigliani, G. A. Mensah, and G. A. Mensah. Adjoint-based calculation of parametric thermoacoustic maps of an industrial combustion chamber. *Journal of Engineering for Gas Turbines and Power*, 143(1):011003, 2021.
36. F. Schily, T. Komarek, and W. Polifke. A criterion for thermo-acoustic stability based on the flux of acoustic energy. *Combustion and Flame*, 227:238–254, May 2021.
37. K. J. Yong, C. F. Silva, and W. Polifke. A Categorization of Marginally Stable Thermoacoustic Modes Based on Phasor Diagrams. *Combustion and Flame*, 228:236–249, 2021.
38. S. Guo, C. F. Silva, K. J. Yong, and W. Polifke. Enhanced Gaussian Process approach for efficient thermoacoustic uncertainty quantification: A comparison study. *14th World Congress on Computational Mechanics (WCCM), ECCOMAS Congress 2021*, Paris, France, Jan. 2021.
39. S. Guo, C. F. Silva, and W. Polifke. A Gaussian-Process-based framework for high-dimensional uncertainty quantification analysis in thermoacoustic instability prediction. *Proceedings of the Combustion Institute*, 38(4):6251–6259, Jan. 2021.
40. N. A. K. Doan, S. Bansude, K. Osawa, Y. Minamoto, T. Lu, J. H. Chen, and N. Swaminathan. Identification of combustion mode under MILD conditions using Chemical Explosive Mode Analysis. *38th Symposium on Combustion*, Jan. 2021.
41. N. Tathawadekar, A. K. Doan, C. F. Silva, and N. Thuerey. Modelling of the nonlinear flame response of a Bunsen-type flame via multi-layer perceptron. *Proceedings of the Combustion Institute*, 38(4):6261–6269, January 24th to 29th, 2021.
42. A. Ghani and W. Polifke. Control of Intrinsic Thermoacoustic Instabilities using Hydrogen Fuel. *38th International Symposium on Combustion*, Adelaide, Australia, Jan. 2021.
43. M. Meindl, C. F. Silva, and W. Polifke. On the spurious entropy generation encountered in hybrid linear thermoacoustic models. *Combustion and Flame*, 223:525–540, Jan. 2021.

44. N. A. K. Doan, W. Polifke, and L. Magri. Learning Hidden States in a Chaotic System: A Physics-Informed Echo State Network Approach. *Lecture Notes in Computer Science - ICCS2020*, 12142:117–123, 2020.
45. S. Guo, C. F. Silva, and W. Polifke. Reliable Calculation of Thermoacoustic Instability Risk Using an Imperfect Surrogate Model. *Journal of Engineering for Gas Turbines and Power*, Volume 143(Issue 1):011010 (9 pages), Dec. 2020.
46. S. Guo, C. F. Silva, and W. Polifke. Reliable calculation of thermoacoustic instability risk using an imperfect surrogate model. *ASME Turbo Expo 2020: Turbomachinery Technical Conference & Exposition*, ASME GT2020-14434, Virtual, Online, 2020.
47. L. Magri and N. A. K. Doan. First-principles machine learning for COVID-19 modeling. *SIAM News*, 53(5), June 2020.
48. M. McCartney, T. Indlekofer, and W. Polifke. Online Detection of Combustion Instabilities Using Supervised Machine Learning. *ASME Turbo Expo 2020: Turbomachinery Technical Conference & Exposition*, GT2020-14834, Virtual, Online, 21. ASME.
49. F. Schaefer, S. Guo, and W. Polifke. The impact of exceptional points on the confidence of thermoacoustic stability analysis. *ASME Turbo Expo 2020: Turbomachinery Technical Conference & Exposition*, GT2020-15496, Virtual, Online, 21.
50. M. Haeringer, G. J. J. Fournier, M. Meindl, and W. Polifke. A Strategy to Tune Acoustic Terminations of Single-Can Test-Rigs to Mimic Thermoacoustic Behavior of a Full Engine. *ASME Turbo Expo 2020: Turbomachinery Technical Conference and Exposition*, GT2020-16078, Virtual, Online, 21.
51. G. J. J. Fournier, M. Haeringer, C. F. Silva, and W. Polifke. Low-Order Modeling to Investigate Clusters of ITA Modes in Annular Combustors. *Volume 4B: Combustion, Fuels, and Emissions*, page V04BT04A031, Virtual, Online, Sept. 2020. American Society of Mechanical Engineers.
52. C. F. Silva, L. Prieto, M. Ancharek, P. Marigliani, G. A. Mensah, and G. A. Mensah. Adjoint-based calculation of parametric thermoacoustic maps of an industrial combustion chamber. *ASME Turbo Expo 2020: Turbomachinery Technical Conference and Exposition*, Virtual, Online, 2020.
53. M. Meindl, A. Albayrak, and W. Polifke. A state-space formulation of a discontinuous Galerkin method for thermoacoustic stability analysis. *Journal of Sound and Vibration*, 481:115431, 2020.
54. W. Polifke. Modeling and Analysis of Premixed Flame Dynamics by Means of Distributed Time Delays. *Prog. Energy Combust. Sci.*, 79:100845, 2020.
55. C. F. Silva, P. Pettersson, G. Iaccarino, and M. Ihme. Uncertainty quantification of combustion noise by generalized polynomial chaos and state-space models. *Combustion and Flame*, 217:113–130, July 2020.
56. A. Orchini, C. F. Silva, G. A. Mensah, and J. P. Moeck. Thermoacoustic modes of intrinsic and acoustic origin and their interplay with exceptional points. *Combustion and Flame*, 211:83–95, 2020.
57. N. A. K. Doan, W. Polifke, and L. Magri. Learning Hidden States in a Chaotic System: A Physics-Informed Echo State Network Approach. *Lecture Notes in Computer Science - ICCS2020*, 12142:117–123, 2020.

58. A. Orchini, C. F. Silva, G. A. Mensah, and J. P. Moeck. Thermoacoustic modes of intrinsic and acoustic origin and their interplay with exceptional points. *Combustion and Flame*, 211:83–95, 2020.
59. S. Guo, C. F. Silva, and W. Polifke. Efficient Robust Design for Thermoacoustic Instability Analysis: A Gaussian Process Approach. *Journal of Engineering for Gas Turbines and Power*, 142(3), Mar. 2020.
60. A. Albayrak, M. P. Juniper, and W. Polifke. Propagation speed of inertial waves in cylindrical swirling flows. *J. Fluid Mech.*, 879:85–120, Nov. 2019.
61. S. van Buren, A. Cárdenas Miranda, and W. Polifke. Large Eddy Simulation of Enhanced Heat Transfer in Pulsatile Turbulent Channel Flow. *Int. J. of Heat and Mass Transfer*, 144:118585, Dec. 2019.
62. A. Avdonin, A. Javareshkian, and W. Polifke. Prediction of premixed flame dynamics using LES with tabulated chemistry and Eulerian stochastic fields. *J. Eng. Gas Turbines Power*, 141(11), 2019.
63. M. McCartney, M. Haeringer, and W. Polifke. Comparison of Machine Learning Algorithms in the Interpolation and Extrapolation of Flame Describing Functions. *J. Eng. Gas Turbines and Power*, 142:14, 2020.
64. S. Guo, C. F. Silva, K. J. Yong, and W. Polifke. Enhanced Gaussian Process approach for efficient thermoacoustic uncertainty quantification: A comparison study. *14th World Congress on Computational Mechanics (WCCM), ECCOMAS Congress 2021*, Paris, France, Jan. 2021.
65. M. Haeringer and W. Polifke. Time Domain Bloch Boundary Conditions for Efficient Simulation of Thermoacoustic Limit-Cycles in (Can-)Annular Combustors. *Journal of Engineering for Gas Turbines and Power*, 141(12):121005, 2019.
66. K. J. Yong, M. Meindl, W. Polifke, and C. F. Silva. Thermoacoustic spectrum of a swirled premixed combustor with partially reflecting boundaries. *J. Eng. Gas Turbines Power*, 142((1)):011005, 2020.
67. A. Avdonin, A. Javareshkian, and W. Polifke. Prediction of premixed flame dynamics using LES with tabulated chemistry and Eulerian stochastic fields. *ASME Turbo Expo 2019: Turbomachinery Technical Conference and Exposition*, GT2019-90140, Phoenix, USA, 2019.
68. M. McCartney, M. Haeringer, and W. Polifke. Comparison of Machine Learning Algorithms in the Interpolation and Extrapolation of Flame Describing Functions. *Proceedings of ASME Turbo Expo 2019: Turbomachinery Technical Conference and Exposition*, GT2019-91319, page 10, Phoenix, Arizona, 2019. ASME.
69. S. Guo, C. F. Silva, and W. Polifke. Efficient Robust Design for Thermoacoustic Instability Analysis: A Gaussian Process Approach. *ASME Turbo Expo 2019: Turbomachinery Technical Conference & Exposition*, GT2019-90732, Phoenix, USA, 17.
70. M. Haeringer and W. Polifke. Time Domain Bloch Boundary Conditions for Efficient Simulation of Thermoacoustic Limit-Cycles in (Can-)Annular Combustors. *ASME Turbo Expo 2019: Turbomachinery Technical Conference & Exposition*, GT2019-91604, Phoenix, Arizona, U.S.A., June 2019.

71. K. J. Yong, M. Meindl, W. Polifke, and C. F. Silva. Thermoacoustic spectrum of a swirled premixed combustor with partially reflecting boundaries. *ASME Turbo Expo 2019: Turbomachinery Technical Conference & Exposition*, GT2019-91784, Phoenix, USA, 2019. ASME.
72. A. Ghani, T. Steinbacher, A. Albayrak, and W. Polifke. Intrinsic thermoacoustic feedback loop in turbulent spray flames. *Combustion and Flame*, 205(7):22–32, 2019.
73. S. Guo, C. F. Silva, A. Ghani, and W. Polifke. Quantification and Propagation of Uncertainties in Identification of Flame Impulse Response for Thermoacoustic Stability Analysis. *J. Eng. Gas Turbines and Power*, 141(2):021032–10, Feb. 2019.
74. U. Karban, C. Schram, C. Sovardi, and W. Polifke. Prediction of ducted diaphragm noise using a stochastic approach with adapted temporal filters. *Int. J. Aeroacoustics*, 18(1):49–72, 2019.
75. T. Steinbacher, A. Albayrak, A. Ghani, and W. Polifke. Consequences of Flame Geometry for the Acoustic Response of Premixed Flames. *Combustion and Flame*, 199:411–428, Jan. 2019.
76. M. Merk, C. Silva, W. Polifke, R. Gaudron, M. Gatti, C. Mirat, and T. Schuller. Direct Assessment of the Acoustic Scattering Matrix of a Turbulent Swirl Combustor by Combining System Identification, Large Eddy Simulation and Analytical Approaches. *J. Eng. Gas Turbines and Power*, 141(2):021035–021035–9, Feb. 2019.
77. D. Rouwenhorst, J. Hermann, and W. Polifke. In situ identification strategy of thermoacoustic stability in annular combustors. *International Journal of Spray and Combustion Dynamics*, 10(4):351–361, Dec. 2018.
78. A. Albayrak, D. A. Bezgin, and W. Polifke. Response of a Swirl Flame to Inertial Waves. *Int. J. Spray and Combustion Dynamics*, 10(4):277–286, 2018.
79. N. Hosseini, V. Kornilov, I. Lopez Arteaga, W. Polifke, O. Teerling, and L. de Goey. Intrinsic thermoacoustic modes and their interplay with acoustic modes in a Rijke burner. *International Journal of Spray and Combustion Dynamics*, 10(4):315–325, Dec. 2018.
80. G. A. Mensah, L. Magri, C. F. Silva, P. E. Buschmann, and J. P. Moeck. Exceptional points in the thermoacoustic spectrum. *J. Sound Vibration*, 433:124–128, Oct. 2018.
81. A. Avdonin and W. Polifke. Quantification of the Impact of Uncertainties in Operating Conditions on the Flame Transfer Function with Non-Intrusive Polynomial Chaos Expansion. *J. Eng. Gas Turbines and Power*, 141(1):011020, 2019.
82. C. Silva, K. J. Yong, and L. Magri. Thermoacoustic Modes of Quasi-One-Dimensional Combustors in the Region of Marginal Stability. *Journal of Engineering for Gas Turbines and Power*, 141(2):021022, Feb. 2019.
83. A. Ghani, M. Haeringer, W. Polifke, N. A. Worth, J. Dawson, and T. Poinso. LES of Combustion Instabilities in Annular Combustors. *37th Int'l Symposium on Combustion*, Dublin, July 2018.
84. A. Avdonin, M. Meindl, and W. Polifke. Thermoacoustic analysis of a laminar premixed flame using a linearized reacting flow solver. *Proceedings of the Combustion Institute*, 37:5307–5314, 2019.
85. S. Guo, C. F. Silva, M. Bauerheim, A. Ghani, and W. Polifke. Evaluating the impact of uncertainty in flame impulse response model on thermoacoustic instability prediction: A dimensionality reduction approach. *Proceedings of the Combustion Institute*, 37:5299–5306, 2019.

86. M. Haeringer, M. Merk, and W. Polifke. Inclusion of higher Harmonics in the Flame Describing Function for Predicting Limit Cycles of self-excited Combustion Instabilities. *Proceedings of the Combustion Institute*, 37(4):5255–5262, 2019.
87. M. Merk, R. Gaudron, C. Silva, M. Gatti, C. Mirat, T. Schuller, and W. Polifke. Prediction of Combustion Noise of an Enclosed Flame by Simultaneous Identification of Noise Source and Flame Dynamics. *Proceedings of the Combustion Institute*, 37:5263–5270, 2019.
88. C. F. Silva and W. Polifke. Non-dimensional groups for similarity analysis of thermoacoustic instabilities. *Proceedings of the Combustion Institute*, 37:5289–5297, 2019.
89. T. Steinbacher, A. Albayrak, A. Ghani, and W. Polifke. Response of Premixed Flames to Irrotational and Vortical Velocity Fields Generated by Acoustic Perturbations. *Proceedings of the Combustion Institute*, 37(4):5367–5375, 2019.
90. M. Meindl, M. Merk, F. Fritz, and W. Polifke. Determination of acoustic scattering matrices from linearized compressible flow equations. *J. Theoretical and Computational Acoustics*, 27(3):1850027–1 – 1850027–27, June 2018.
91. M. Merk, S. Jaensch, C. Silva, and W. Polifke. Simultaneous Identification of Transfer Functions and Combustion Noise of a Turbulent Flame. *J. Sound Vibration*, 422:432–452, May 2018.
92. A. Albayrak and W. Polifke. An analytical model based on the G-equation for the response of technically premixed flames to perturbations of equivalence ratio. *Int. J. Spray Comb. Dynamics*, 10(2):103–110, June 2018.
93. T. Steinbacher, M. Meindl, and W. Polifke. Modeling the Generation of Temperature Inhomogeneities by a Premixed Flame. *International Journal of Spray and Combustion Dynamics*, 10(2):111–130, June 2018.
94. A. Avdonin and W. Polifke. Quantification of the Impact of Uncertainties in Operating Conditions on the Flame Transfer Function with Non-Intrusive Polynomial Chaos Expansion. *Proceedings of ASME Turbo Expo 2018: Turbomachinery Technical Conference and Exposition*, GT2018-75476, Lillestrom, Norway, 2018. ASME.
95. M. Merk, R. Gaudron, C. Silva, M. Gatti, C. Mirat, W. Polifke, and T. Schuller. Direct assessment of the acoustic scattering matrix of a turbulent swirl combustor by combining system identification, large eddy simulation and analytical approaches. *ASME Turbo Expo 2018: Turbomachinery Technical Conference and Exposition*, GT2018-75529, Lillestrom, Norway, 2018. ASME.
96. S. Guo, C. F. Silva, G. Abdulla, and W. Polifke. Quantification and Propagation of Uncertainties in Identification of Flame Impulse Response for Thermoacoustic Stability Analysis. *ASME Turbo Expo 2018: Turbomachinery Technical Conference & Exposition*, GT2018-75644, Lillestrøm (Oslo), Norway, 11.
97. C. Silva, K. J. Yong, and L. Magri. Thermoacoustic Modes of Quasi-1D Combustors in the Region of Marginal Stability. *ASME Turbo Expo 2018: Turbomachinery Technical Conference and Exposition*, GT2018-76921, Lillestrom, Norway, 2018. ASME.
98. A. Witte and W. Polifke. Modeling Heat Transfer and Skin Friction Frequency Responses of a Cylinder in Cross Flow - a Unifying Perspective. *Heat Transfer Engineering*, 40(13-14):1099–1110, 2018.
99. M. Merk, S. Jaensch, C. Silva, and W. Polifke. Simultaneous Identification of Transfer Functions and Combustion Noise of a Turbulent Flame. *J. Sound Vibration*, 422:432–452, May 2018.

100. A. Albayrak, T. Steinbacher, T. Komarek, and W. Polifke. Convective Scaling of Intrinsic Thermo-Acoustic Eigenfrequencies of a Premixed Swirl Combustor. *Journal of Engineering for Gas Turbines and Power*, 140(4):041510, Nov. 2017.
101. A. Avdonin, S. Jaensch, C. F. Silva, M. Češnovar, and W. Polifke. Uncertainty quantification and sensitivity analysis of thermoacoustic stability with non-intrusive polynomial chaos expansion. *Combustion and Flame*, 189:300–310, Mar. 2018.
102. S. Jaensch, M. Merk, T. Emmert, and W. Polifke. Identification of Flame Transfer Functions in the Presence of Intrinsic Thermoacoustic Feedback and Noise. *Combustion Theory and Modelling*, 22(3):613–634, Mar. 2018.
103. M. Merk, R. Gaudron, M. Gatti, C. Mirat, T. Schuller, and W. Polifke. Measurement and Simulation of Combustion Noise and Dynamics of a Confined Swirl Flame. *AIAA Journal*, 56(5):1930–1942, Jan. 2018.
104. U. Karban and C. Schram. Modal identification of aeroacoustic systems using passive and active approaches. *JASA*, 142(6), 2017.
105. S. Jaensch and W. Polifke. Uncertainty Encountered When Modelling Self-Excited Thermoacoustic Oscillations with Artificial Neural Networks. *Int. J. Spray Combust. Dyn.*, 9(4):367–379, 2017.
106. F. Caeiro, C. Sovardi, K. Förner, and W. Polifke. Shape Optimization of a Helmholtz Resonator using an Adjoint Method. *Int. J. Spray Combust. Dyn.*, 9(4):394–408, 2017.
107. D. Rouwenhorst, J. Hermann, and W. Polifke. Bifurcation study of azimuthal bulk flow in annular combustion systems with cylindrical symmetry breaking. *International Journal of Spray and Combustion Dynamics*, 9(4):438–451, Dec. 2017.
108. C. F. Silva, M. Merk, T. Komarek, and W. Polifke. The Contribution of Intrinsic Thermoacoustic Feedback to Combustion Noise and Resonances of a Confined Turbulent Premixed Flame. *Combustion and Flame*, 182:269–278, 2017.
109. K. Förner and W. Polifke. Nonlinear Aeroacoustic Identification of Helmholtz Resonators Based on a Local-Linear Neuro-Fuzzy Network Model. *J. Sound Vibration*, 407:170–190, 2017.
110. L. Tay-Wo-Chong, A. Scarpato, and W. Polifke. LES Combustion Model with Stretch and Heat Loss Effects for Prediction of Premix Flame Characteristics and Dynamics. *ASME Turbo Expo 2017: Turbomachinery Technical Conference and Exposition*, volume 50848 of *GT2017-63357*, page V04AT04A029, Charlotte, NC, USA, 2017. ASME.
111. A. Albayrak, T. Steinbacher, T. Komarek, and W. Polifke. Convective Scaling of Intrinsic Thermo-Acoustic Eigenfrequencies of a Premixed Swirl Combustor. *ASME Turbo Expo 2017: Turbine Technical Conference and Exposition*, GT2017-64929, Charlotte, NC, USA, June 2017.
112. R. Blumenthal, A. Tangirala, R. Sujith, and W. Polifke. A systems perspective on non-normality in low-order thermoacoustic models: Full norms, semi-norms and transient growth. *Int. J. Spray Combust. Dyn.*, 9(1):19–43, 2017.
113. A. Witte and W. Polifke. Dynamics of Unsteady Heat Transfer in Pulsating Flow Across a Cylinder. *Int. J. Heat and Mass Transfer*, 109(C):1111–1131, Feb. 2017.
114. P. Tudisco, R. Ranjan, S. Menon, S. Jaensch, and W. Polifke. Application of the time-domain impedance boundary condition to large-eddy simulation of combustion instability in a shear-coaxial, high pressure combustor. *Flow, Turbulence and Combustion*, 99(1):185–207, 2017.

115. C. F. Silva, L. Magri, T. Runte, and W. Polifke. Uncertainty quantification of growth rates of thermoacoustic instability by an adjoint Helmholtz solver. *J. Eng. Gas Turbines and Power*, 139(1):011901, 2017.
116. D. Rouwenhorst, J. Hermann, and W. Polifke. Online Monitoring of Thermoacoustic Eigenmodes in Annular Combustion Systems Based on a State-Space Model. *J Eng Gas Turb Power*, 139(2), 2017.
117. A. Albayrak, R. S. Blumenthal, A. Ulhaq, and W. Polifke. An Analytical Model for the Impulse Response of Laminar Premixed Flames to Equivalence Ratio Perturbations. *Proceedings of the Combustion Institute*, 36(3):3725–3732, 2017.
118. S. Jaensch, M. Merk, E. Gopalakrishnan, S. Bomberg, T. Emmert, R. Sujith, and W. Polifke. Hybrid CFD/Low-Order Modeling of Nonlinear Thermoacoustic Oscillations. *Proceedings of the Combustion Institute*, 36(3):3827–3834, 2017.
119. T. Emmert, S. Bomberg, S. Jaensch, and W. Polifke. Acoustic and Intrinsic Thermoacoustic Modes of a Premixed Combustor. *Proceedings of the Combustion Institute*, 36(3):3835–3842, 2017.
120. D. Rouwenhorst, J. Hermann, and W. Polifke. In Situ Identification of Thermoacoustic Stability in Annular Combustors. *1st Global Power and Propulsion Forum*, GPPF-2017-10, Zürich, Switzerland, Jan. 2017.
121. J. Achury and W. Polifke. Modulation of Spray Droplet Number Density and Size Distribution by an Acoustic Field. *J. of Computational Multiphase Flows*, 9(1):32–46, 2017.
122. R. A. J. Müller, J. Hermann, and W. Polifke. Direct drive valve model for use as an acoustic source in a network model. *Int'l J. Acoustics & Vibration*, 21(4):406–417, 2016.
123. J. Tournadre, K. Förner, W. Polifke, P. Martínez-Lera, and W. Desmet. Determination of Acoustic Impedance for Helmholtz Resonators Through Incompressible Unsteady Flow Simulations. *AIAA Journal*, 55(3):790–798, 2017.
124. K. Förner, J. Tournadre, P. Martínez-Lera, and W. Polifke. Scattering to Higher Harmonics for Quarter Wave and Helmholtz Resonators. *AIAA Journal*, 55(4):1194–1204, 2017.
125. T. Emmert, M. Meindl, S. Jaensch, and W. Polifke. Linear State Space Interconnect Modeling of Acoustic Systems. *Acta Acustica united with Acustica*, 102(5):824–833, 2016.
126. Lee, J. S., Violato, D, and Polifke, W. Acoustical characteristics of two-phase horizontal intermittent flow through an orifice. *Acta Acustica united with Acustica*, 102(5):804–812, 2016.
127. U. Karban, C. Schram, C. Sovardi, and W. Polifke. Tailored Green's functions for the prediction of the noise generated by single and tandem orifices in a circular duct. *Acta Acustica united with Acustica*, 102(5):779–792, 2016.
128. C. Sovardi, Y. Aurégan, and W. Polifke. Parametric LES/SI based aeroacoustic characterization of tandem orifices in low Mach number flows. *Acta Acustica united with Acustica*, 102(5):793–803, 2016.
129. C. Sovardi, S. Jaensch, and W. Polifke. Concurrent Identification of Aero-acoustic Scattering and Noise Sources at a Flow Duct Singularity in low Mach Number Flow. *J. Sound Vibration*, 377:90–105, Sept. 2016.
130. M. Meindl, T. Emmert, and W. Polifke. Efficient calculation of thermoacoustic modes utilizing state-space models. *23rd Int. Congress on Sound and Vibration (ICSV23)*, Athens, Greece, 2016.

131. L. Strobio Chen, N. Hosseini, W. Polifke, J. Teerling, V. Kornilov, I. Lopez Arteaga, and P. de Goey. Acoustic Scattering Behaviour of a 2D Flame with Heat Exchanger in Cross-Flow. *23rd Int. Congress on Sound and Vibration (ICSV23)*, Athens, Greece, July 2016. IIAV.
132. A. Albayrak and W. Polifke. Propagation Velocity of Inertial Waves in Cylindrical Swirling Flow. *23rd Int. Congress on Sound and Vibration (ICSV23)*, Athens, Greece, 2016. IIAV.
133. Lee, J. S., Violato, Daniele, and Polifke, Wolfgang. Sound generation by bubble dynamics of intermittent horizontal two-phase pipe flow through an orifice. *11th International Conference on Flow-Induced Vibration*, volume 12, The Hague, Netherlands, 4.
134. A. Witte and W. Polifke. Modeling the Heat Transfer and Skin Friction Frequency Response of a Cylinder in Cross-Flow - a Unifying Perspective. *12th Int. Conf. on Heat Transfer, Fluid Mechanics and Thermodynamics*, pages 1022–1027, Malaga, Spain, July 2016. HEFAT.
135. J. Achury and W. Polifke. Theoretical investigation of the particle response to an acoustic field. *Int. J. Spray Comb. Dynamics*, 8(4):262–270, 2016.
136. R. A. J. Müller, J. Hermann, and W. Polifke. Control authority over a combustion instability investigated in CFD. *Int. J. Spray Combust. Dyn.*, 8(1):39–52, 2016.
137. J. Achury and W. Polifke. Modulation of spray droplet number density and size distribution by an Acoustic Field. *International Conference on Multiphase Flow 2016*, Florence, Italy, May 2016.
138. Lee, J. S, Violato, D, and Polifke, W. Experimental investigation on two-phase horizontal intermittent flow through an orifice. *International Conference on Multiphase Flow (ICMF 2016)*, Florence, Italy, May 22-27. 2016.
139. L. Strobio Chen, T. Steinbacher, C. Silva, and W. Polifke. On Generation of Entropy Waves Across a Premixed Flame. *Proceedings of ASME 2016 Turbo Expo: Turbomachinery Technical Conference & Exposition*, GT2016-57026, Seoul, Korea, 2016.
140. D. Rouwenhorst, J. Hermann, and W. Polifke. Online monitoring of thermoacoustic eigenmodes in annular combustion systems based on a state space model. *Proceedings of ASME 2016 Turbo Expo: Turbomachinery Technical Conference & Exposition*, GT2016-56671, Seoul, Korea, 2016. ASME.
141. C. Silva, T. Runte, W. Polifke, and L. Magri. Uncertainty quantification of growth rates of thermoacoustic instability by an adjoint Helmholtz solver. *ASME/IGTI Turbo Expo 2016*, GT2016-57659, Seoul, Korea, 2016. ASME.
142. S. Jaensch, C. Sovardi, and W. Polifke. On the Robust, Flexible and Consistent Implementation of Time Domain Impedance Boundary Conditions for Compressible Flow Simulations. *Journal of Computational Physics*, 314:145–159, June 2016.
143. L. Strobio Chen, S. Bomberg, and W. Polifke. Propagation and Generation of Acoustic and Entropy Waves Across a Moving Flame Front. *Combustion and Flame*, 166:170–180, Apr. 2016.
144. L. Tay-Wo-Chong, M. Zellhuber, T. Komarek, H. G. Im, and W. Polifke. Combined Influence of Strain and Heat Loss on Turbulent Premixed Flame Stabilization. *Flow, Turbulence and Combustion*, 97(1):263–294, 2015.

145. C. F. Silva, T. Emmert, S. Jaensch, and W. Polifke. Numerical Study on Intrinsic Thermoacoustic Instability of a Laminar Premixed Flame. *Combustion and Flame*, 162(9):3370–3378, 2015.
146. K. Förner, A. Cárdenas Miranda, and W. Polifke. Mapping the Influence of Acoustic Resonators on Rocket Engine Combustion Stability. *Journal of Propulsion and Power*, 31(4):1159–1166, Apr. 2015.
147. P. Subramanian, R. S. Blumenthal, R. Sujith, and W. Polifke. Distributed Time Lag Response Functions for the Modelling of Combustion Dynamics. *Combustion Theory and Modelling*, 19(2):223–237, Feb. 2015.
148. S. Bomberg, T. Emmert, and W. Polifke. Thermal Versus Acoustic Response of Velocity Sensitive Premixed Flames. *Proceedings of the Combustion Institute*, 35(3):3185–3192, 2015.
149. T. Holzinger, A. Baumgartner, and W. Polifke. A quasi-one-dimensional model of thermoacoustics in the presence of mean flow. *J. Sound Vibration*, 335:204–228, Jan. 2015.
150. T. Emmert, S. Bomberg, and W. Polifke. Intrinsic Thermoacoustic Instability of Premixed Flames. *Combustion and Flame*, 162(1):75–85, 2015.
151. A. Hassabou, M. Spinnler, and W. Polifke. The role of conductive packing in direct contact regenerators within humidification-dehumidification cycles—part II: Experimental analysis. *Int. J. of Advanced Research in Engineering and Technology (IJARET)*, 5(12):97–106, 2014.
152. A. Hassabou, M. Spinnler, and W. Polifke. The role of conductive packing in direct contact humidification-dehumidification regenerators—part I: Theoretical analysis. *Int. J. of Advanced Research in Engineering and Technology (IJARET)*, 5(12):126–138, 2014.
153. S. Mondal, A. Mukhopadhyay, S. Sen, and W. Polifke. Characterization of mixing and flow properties from numerical simulation of cold flow in non-premixed combustor. *Proceedings of ASME 2014 Gas Turbine India Conference*, GTINDIA2014-8306, New Delhi, India, Dec 15–17 2014.
154. T. Acher, P. Dems, S. Lenz, C. Gobert, and W. Polifke. A quadrature method of moments for polydisperse flow in bubble columns including poly-celerity, breakup and coalescence. *The Journal of Computational Multiphase Flows*, 6(4):457–474, 2014.
155. T. Holzinger, T. Emmert, and W. Polifke. Optimizing thermoacoustic regenerators for maximum amplification of acoustic power. *The Journal of the Acoustical Society of America*, 136(5):2432–2440, Nov. 2014.
156. G. Jasor, U. Wacker, K. D. Beheng, and W. Polifke. Modeling artifacts in the simulation of the sedimentation of raindrops with a quadrature method of moments. *Meteorologische Zeitschrift*, 23(4):369–385, 09 2014.
157. C. Ziemer, G. Jasor, U. Wacker, K. D. Beheng, and W. Polifke. Quantitative comparison of presumed-number-density and quadrature moment methods for the parameterisation of drop sedimentation. *Meteorologische Zeitschrift*, 23(4):411–423, 09 2014.
158. R. Kulkarni, B. Bunkute, F. Biagioli, M. Düsing, and W. Polifke. Large eddy simulation of ALSTOM's reheat combustor using tabulated chemistry and stochastic fields combustion model. *Proceedings of ASME Turbo Expo 2014*, GT2014-26053, Düsseldorf, Germany, 2014.

159. S. Jaensch, T. Emmert, and W. Polifke. A grey-box identification approach for thermoacoustic network models. *Proceedings of ASME Turbo Expo 2014*, GT2014-27034, Düsseldorf, Germany, 2014.
160. F. Collonval and W. Polifke. Modelling the formation of oxides of nitrogen in premix combustion by extending tabulated chemistry with algebraic relations. *Proceedings of ASME Turbo Expo 2014*, GT2014-27293, Düsseldorf, Germany, 2014.
161. A. Cárdenas Miranda and W. Polifke. Combustion stability analysis of rocket engines with resonators based on nyquist plots. *Journal of Propulsion and Power*, 30(4):962–977, 2014.
162. W. Polifke. Black-Box System Identification for Reduced Order Model Construction. *Annals of Nuclear Energy*, 67C:109–128, May 2014.
163. M. Zellhuber, J. Schwing, B. Schuermans, T. Sattelmayer, and W. Polifke. Experimental and numerical investigation of thermo-acoustic sources related to high-frequency instabilities. *Int. J. Spray and Combustion Dynamics*, 6(1):1–34, Mar 2014.
164. M. Zellhuber, B. Schuermans, and W. Polifke. Impact of acoustic pressure on auto-ignition and heat release. *Combustion Theory and Modelling*, 18(1):1–31, 2014.
165. F. Selimefendigil and W. Polifke. A nonlinear, Proper-Orthogonal-Decomposition-based model of forced convection heat transfer in pulsating flow. *AIAA Journal*, 52(1):131–145, Jan 2014.
166. M. Schmid, R. Blumenthal, M. Schulze, W. Polifke, and T. Sattelmayer. Quantitative stability analysis using real frequency response data. *J. Eng. Gas Turbines Power*, 135(12):121601, 2013.
167. M. Zellhuber, C. Meraner, R. Kulkarni, W. Polifke, and B. Schuermans. Large eddy simulation of flame response to transverse acoustic excitation in a model reheater combustor. *J. Eng. Gas Turbines Power*, 135(9):091508–1–9, 2013.
168. R. Lacombe, S. Föllner, G. Jasor, W. Polifke, Y. Aurégan, and P. Moussou. Identification of aero-acoustic scattering matrices from large eddy simulation: Application to whistling orifices in duct. *J. Sound Vibration*, 332(20):5059 – 5067, Sep. 2013.
169. M. Schmid, R. Blumenthal, M. Schulze, W. Polifke, and T. Sattelmayer. Quantitative stability analysis using real frequency response data. *Proceedings of ASME Turbo Expo 2013*, GT2013-95459, San Antonio, TX, USA, 2013.
170. R. S. Blumenthal, P. Subramanian, R. Sujith, and W. Polifke. Novel perspectives on the dynamics of premixed flames. *Combustion and Flame*, 160(7):1215–1224, 2013.
171. L. Tay-Wo-Chong and W. Polifke. Large eddy simulation-based study of the influence of thermal boundary condition and combustor confinement on premix flame transfer functions. *J. Eng. Gas Turbines Power*, 135(2):021502, 2013.
172. R. Kulkarni, M. Zellhuber, and W. Polifke. LES based investigation of autoignition in turbulent co-flow configurations. *Combustion Theory and Modelling*, 17(2):224–259, Apr 2013.
173. P. Bollweg and W. Polifke. Transient two-phase boundary layer modeling for hollow cone sprays. *Int. J. of Multiphase Flow*, 52:1–12, 2013.
174. R. Kulkarni and W. Polifke. LES of Delft-Jet-In-Hot-Coflow (DJHC) with tabulated chemistry and stochastic fields combustion model. *Fuel Process. Technol.*, Special Issue: The Eleventh International Conference on Combustion and Energy Utilization:1–10, 2012.

175. P. Dems, J. N. Carneiro, and W. Polifke. Large eddy simulation of a polydisperse, evaporating spray jet with a presumed function method of moments. *12th International Conference on Liquid Atomization and Spray Systems*, ISBN 978-88-903712-1-9, Heidelberg, Germany, September 2–6 2012.
176. T. Emmert, A. Cardenas, and W. Polifke. Low-order analysis of conjugate heat transfer in pulsating flow with fluctuating temperature. *J. Phys.: Conf. Ser.*, 395(012040), 2012. presented at 6th European Sciences Conference – (EUROTHERM 2012), 4-7 September, Poitiers, France.
177. A. C. Miranda and W. Polifke. Enhanced heat transfer in laminar pulsating flow past a flat plate. *"9th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2012)"*, Malta, July 16–18 2012.
178. P. Dems, J. Carneiro, and W. Polifke. Large eddy simulation of a particle-laden swirling flow with a presumed function method of moments. *Progress Comp. Fluid Dyn.*, 12(2/3):92–102, June 25th 2012.
179. R. Keppeler, M. Pfitzner, L. Tay-Wo-Chong, T. Komarek, and W. Polifke. Including heat loss and quench effects in algebraic models for large eddy simulation of premixed combustion. *Proceedings of ASME Turbo Expo 2012*, GT2012-68689, Copenhagen, DK, 2012.
180. L. Tay-Wo-Chong and W. Polifke. LES-based study of the influence of thermal boundary condition and combustor confinement on premix flame transfer functions. *Proceedings of ASME Turbo Expo 2012*, GT2012-68796, Copenhagen, DK, 2012. (also published in *J. Eng Gas Turbines & Power*).
181. M. Zellhuber, C. Meraner, R. Kulkarni, W. Polifke, and B. Schuermans. Large eddy simulation of flame response to transverse acoustic excitation in a model reheater combustor. *Proceedings of ASME Turbo Expo 2012*, GT2012-68317, Copenhagen, DK, 2012.
182. S. Föllner and W. Polifke. Identification of aero-acoustic scattering matrices from large eddy simulation: Application to a sudden area expansion of a duct. *J. Sound Vibration*, 331(13):3096–3113, Jun 2012.
183. R. Kulkarni and W. Polifke. Large eddy simulation of auto-ignition in a turbulent hydrogen jet flame using a progress variable approach. *J. of Combustion*, 2012(Article ID 780370):1–11, 2012.
184. L. Tay-Wo-Chong, S. Bomberg, A. Ulhaq, T. Komarek, and W. Polifke. Comparative validation study on identification of premixed flame transfer function. *J. Eng. Gas Turbines Power*, 134(2):021502–1–8, 2012.
185. A. Mukhopadhyay, G. Jasor, and W. Polifke. Simulation of pure sedimentation of raindrops using quadrature method of moments. *J. Atmospheric Research*, 106:61–70, 2012.
186. F. Selimefendigil, S. Föllner, and W. Polifke. Nonlinear identification of the unsteady heat transfer of a cylinder in pulsating crossflow. *Computers and Fluids*, 53(0):1–14, 2012.
187. K. Wieczorek, C. Sensiau, W. Polifke, and F. Nicoud. Assessing non-normal effects in thermoacoustic systems with mean flow. *Phys. Fluids*, 23(10):107013–1 – 14, 2011.
188. T. Hu, A. H. Hassabou, M. Spinnler, and W. Polifke. Performance analysis and optimization of direct contact condensation in a PCM fixed bed regenerator. *Desalination*, 280(1-3):232–243, Oct. 2011.

189. F. Selimefendigil and W. Polifke. A frequency domain system model with coupled modes for limit cycle prediction of thermoacoustic systems. *Int. J. Spray Comb. Dynamics*, 3(4):303–330, 2011.
190. H. Mangesius and W. Polifke. A discrete-time, state-space approach for modelling non-normal effects in thermoacoustic systems. *Int. J. Spray Comb. Dynamics*, 3(4):331–350, 2011.
191. L. Tay-Wo-Chong, S. Bomberg, A. Ulhaq, T. Komarek, and W. Polifke. Comparative validation study on identification of premixed flame transfer function. *Proceedings of ASME Turbo Expo 2011*, GT2011-46342, Vancouver, Canada, 2011.
192. B. Kaltenbacher and W. Polifke. Some regularization methods for a thermoacoustic inverse problem. *Journal of Inverse and Ill-Posed Problems*, 18:997 – 1011, Apr 2011.
193. F. Selimefendigil, R. Sujith, and W. Polifke. Identification of heat transfer dynamics for non-modal analysis of thermoacoustic stability. *Applied Mathematics and Computation*, 217:5134–5150, 2011.
194. T. Komarek and W. Polifke. Impact of swirl fluctuations on the flame response of a perfectly premixed swirl burner. *J. Eng. Gas Turbines Power*, 132(6):061503–1,7, June 2010.
195. L. Tay-Wo-Chong, T. Komarek, R. Kaess, S. Föllner, and W. Polifke. Identification of Flame Transfer Functions from LES of a Premixed Swirl Burner. *Proceedings of ASME Turbo Expo 2010*, GT2010-22769, Glasgow, UK, June 14-18 2010. ASME.
196. R. Paggiaro, P. Bénard, and W. Polifke. Cryo-adsorptive hydrogen storage on activated carbon. I: Thermodynamic analysis of adsorption vessels and comparison with liquid and compressed gas hydrogen storage. *International Journal of Hydrogen Energy*, 35(2):638–647, 2010.
197. R. Paggiaro, F. Michl, P. Bénard, and W. Polifke. Cryo-adsorptive hydrogen storage on activated carbon. II: Investigation of the thermal effects during filling at cryogenic temperatures. *International Journal of Hydrogen Energy*, 35(2):648–659, 2010.
198. J. N. E. Carneiro, V. Kaufmann, and W. Polifke. Numerical simulation of droplet dispersion and evaporation with a moments-based CFD model. *COBEM 2009 - 20th International Congress of Mechanical Engineering*, Gramado, RS, Brazil, November, 15-20 2009.
199. P. Martínez-Lera, C. Schram, S. Föllner, R. Kaess, and W. Polifke. Identification of the aeroacoustic response of a low mach number flow through a T-joint. *J. Acoust. Soc. Am.*, 126(2):582–586, Aug 2009.
200. D. Wenger, W. Polifke, E. Schmidt-Ihn, T. Abdel-Baset, and S. Maus. Comments on solid state hydrogen storage system design for fuel cell vessels. *Int. J. of Hydrogen Energy*, 34:6265–6270, 2009.
201. F. V. Fischer, B. Muralidharan, and W. Polifke. Simulation of ternary mixing in a co-annular jet in crossflow. *JSME Int. J., J. of Fluid Science and Technology*, 4(2):379–390, 2009.
202. A. Huber and W. Polifke. Dynamics of practical premix flames, part I: Model structure and identification. *Int. J. Spray Comb. Dynamics*, 1(2):199–229, 2009.
203. A. Huber and W. Polifke. Dynamics of practical premix flames, part II: Identification and interpretation of CFD data. *Int. J. Spray Comb. Dynamics*, 1(2):229–250, 2009.
204. T. Komarek and W. Polifke. Impact of swirl fluctuations on the flame response of a perfectly premixed swirl burner. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2009-60100, Orlando, FL, U.S.A., Jun 8 – 12 2009.

205. A. Huber and W. Polifke. Impact of fuel supply impedance on combustion stability of gas turbines. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2008-51193, Berlin, 2008.
206. A. Huber, P. Romann, and W. Polifke. Filter-based time-domain impedance boundary conditions for CFD applications. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2008-51195, Berlin, 2008.
207. J. Kopitz and W. Polifke. CFD-based application of the Nyquist criterion to thermoacoustic instabilities. *J. Comp. Phys*, 227(14):6754–6778, 2008.
208. U. Neunert, J. Kopitz, T. Sattelmayer, and W. Polifke. Numerical eigen-mode analysis of an acoustic-duct system by CFD-OLG and comparison against experiment. *PAMM Proc. Appl. Math. Mech.*, volume 7, pages 4120003–4120004, Oct 2007.
209. H. Marschall, O. Hinrichsen, and W. Polifke. Numerische Simulation von Mehrphasenreaktoren mittels hybridem CFD-Modell in OpenFOAM (HIRES-TFM). *Chemie Ingenieur Technik*, 80(9):1303–1303, Sept. 2008.
210. W. Polifke and C. J. Lawn. On the low-frequency limit of flame transfer functions. *Combust. Flame*, 151(3):437–451, 2007.
211. A. Gentemann and W. Polifke. Scattering and generation of acoustic energy by a premix swirl burner. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2007-27238, Montreal, Quebec, Canada, 2007.
212. L. Durand and W. Polifke. Implementation of the thickened flame model for large eddy simulation of turbulent premixed combustion in a commercial solver. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2007-28188, Montreal, Quebec, Canada, 2007.
213. M. Brandt, W. Polifke, and P. Flohr. Approximation of joint PDFs by discrete distributions generated with Monte-Carlo methods. *Combust. Theory and Modelling*, 10(4):535 – 558, Aug 2006.
214. W. Polifke, C. Wall, and P. Moin. Partially reflecting and non-reflecting boundary conditions for simulation of compressible viscous flow. *J. Comp. Phys.*, 213(1):437–449, March 2006.
215. W. Polifke, M. Brandt, and E. Gharaibah. Modeling of mixing and reaction in turbulent multi-phase flows with distribution functions. *Chem. Eng. Technol.*, 28(6):654–659, 2005.
216. J. Kopitz, A. Huber, T. Sattelmayer, and W. Polifke. Thermoacoustic stability analysis of an annular combustion chamber with acoustic low order modeling and validation against experiment. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2005-68797 , Reno, NV, U.S.A., 2005.
217. C. Hirsch, D. Fanaca, P. Reddy, W. Polifke, and T. Sattelmayer. Influence of the swirler design on the flame transfer function of premixed flames. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT2005-68195 , Reno, NV, U.S.A., 2005.
218. W. Polifke and A. M. G. Gentemann. Order and realizability of impulse response filters for accurate identification of acoustic multi-ports from transient CFD. *Int. J. of Acoustics and Vibration*, 9(3):139–148, September 2004.
219. C. J. Lawn, S. Evesque, and W. Polifke. A model for the thermo-acoustic response of a premixed swirl burner: Part I: Acoustic aspects. *Comb. Sci. Tech.*, 176(8):1331 – 1358, August 2004.

220. C. J. Lawn and W. Polifke. A model for the thermo-acoustic response of a premixed swirl burner: Part II: The flame response. *Comb. Sci. Tech.*, 176(8):1359 – 1390, August 2004.
221. B. Ivancic, P. Flohr, B. Paikert, M. Brandt, and W. Polifke. Auto-ignition and heat release in a gas turbine burner at elevated temperature. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT-2004-53339, Vienna, Austria, 2004.
222. A. M. G. Gentemann, C. Hirsch, K. Kunze, F. Kiesewetter, T. Sattelmayer, and W. Polifke. Validation of flame transfer function reconstruction for perfectly premixed swirl flames. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT-2004-53776, Vienna, Austria, 2004.
223. M. Brandt, E. Gharaibah, and W. Polifke. Modellierung von Mischung und Reaktion in turbulenter Mehrphasenströmungen mittels Verteilungsfunktionen. *Chem. Ing. Technik*, 76(1-2):46–51, 2004.
224. M. Brandt, W. Polifke, B. Ivancic, P. Flohr, and B. Paikert. Auto-ignition in a gas turbine burner at elevated temperature. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 2003-GT-38224, Atlanta, GA, U.S.A., June 2003.
225. T. Sattelmayer and W. Polifke. Assessment of methods for the computation of the linear stability of combustors. *Combust. Sci. Tech.*, 175(3):453–476, 2003.
226. T. Sattelmayer and W. Polifke. A novel method for the computation of the linear stability of combustors. *Combust. Sci. Tech.*, 175(3):477–498, 2003.
227. W. Polifke, A. Fischer, and T. Sattelmayer. Instability of a Premix Burner with Non-Monotonic Pressure Drop Characteristic. *J. Eng. Gas Turbines Power*, 125(1):20–27, Jan. 2003. Originally published as ASME 2001-GT-35.
228. C. O. Paschereit, B. B. H. Schuermans, W. Polifke, and O. Mattson. Measurement of transfer matrices and source terms of premixed flames. *J. Eng. Gas Turbines Power*, 124(2):239–247, April 2002. Originally published as ASME 99-GT-133.
229. S. Evesque and W. Polifke. Low-Order Acoustic Modelling for Annular Combustors: Validation and Inclusion of Modal Coupling. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME GT-2002-30064, Amsterdam, NL, 2002.
230. W. Polifke, P. Flohr, and M. Brandt. Modeling of Inhomogeneously Premixed Combustion with an Extended TFC Model. *J. Eng. Gas Turbines Power*, 124(1):58–65, 2002. Originally published as ASME 2000-GT-135.
231. W. Polifke, A. Poncet, C. O. Paschereit, and K. Döbbling. Reconstruction of acoustic transfer matrices by instationary computational fluid dynamics. *J. of Sound and Vibration*, 245(3):483–510, Aug. 2001.
232. W. Polifke, C. O. Paschereit, and K. Döbbling. Constructive and Destructive Interference of Acoustic and Entropy Waves in a Premixed Combustor with a Choked Exit. *Int. J. of Acoustics and Vibration*, 6(3):135–146, 2001.
233. W. Polifke, A. Fischer, and T. Sattelmayer. Instability of a Premix Burner with Non-Monotonic Pressure Drop Characteristic. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 2001-GT-35, New Orleans, LO, 2001.
234. A. Ni, W. Polifke, and F. Joos. Ignition Delay Time Modulation as a Contribution to Thermo-Acoustic Instability in Sequential Combustion. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 2000-GT-0103, Munich, Germany, 2000.

235. W. Polifke, P. Flohr, and M. Brandt. Modeling of Inhomogeneously Premixed Combustion with an Extended TFC Model. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 2000-GT-135, Munich, Germany, 2000.
236. B. B. H. Schuermans, W. Polifke, and C. O. Paschereit. Prediction of Acoustic Pressure Spectra in Gas Turbines based on Measured Transfer Matrices. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 2000-GT-105, Munich, Germany, 2000.
237. C. O. Paschereit, B. B. H. Schuermans, W. Polifke, and O. Mattson. Measurement of transfer matrices and source terms of premixed flames. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 99-GT-133, Indianapolis, Indiana, USA, 1999.
238. B. B. H. Schuermans, W. Polifke, and C. O. Paschereit. Modeling Transfer Matrices of Premixed Flames and Comparison with Experimental Results. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 99-GT-132, Indianapolis, Indiana, USA, 1999.
239. V. A. Zimont, W. Polifke, M. Bettelini, and W. Weisenstein. An Efficient Computational Model for Premixed Turbulent Combustion at High Reynolds Numbers based on a Turbulent Flame Speed Closure. *J. Eng. Gas Turbines Power*, 120:526–532, 1998. Originally published as ASME 97-GT-395.
240. T. Sattelmayer, W. Polifke, D. Winkler, and K. Döbbeling. NO_x Abatement Potential of Lean-Premixed GT-Combustors. *J. Eng. Gas Turbines Power*, 120(1):48–59, 1998. Originally presented at ASME Turbo Asia, 1996.
241. W. Polifke, C. O. Paschereit, and K. Döbbeling. Coupling of Acoustic and Entropy Fluctuations in a Premixed Combustor with Choked Exit. *27th Symposium (International) on Combustion*, Boulder, CO, 1998. The Combustion Institute, Pittsburgh, PA.
242. W. Polifke, W. Geng, and K. Döbbeling. Optimization of Rate Coefficients for Simplified Reaction Mechanisms with Genetic Algorithms. *Combust. & Flame*, 113:119–134, 1998.
243. C. O. Paschereit and W. Polifke. Investigation of the Thermo-Acoustic Characteristics of a Lean Premixed Gas Turbine Burner. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 98-GT-582, Stockholm, Sweden, 1998.
244. F. Dinkelacker, A. Soika, D. Most, D. Hofmann, A. Leipertz, W. Polifke, and K. Döbbeling. Structure of locally quenched highly turbulent lean premixed Flames. *27th. Int. Symposium on Combustion*, Boulder, U.S.A., 1998. The Combustion Institute.
245. W. Polifke, K. Döbbeling, T. Sattelmayer, D. G. Nicol, and P. C. Malte. A NO_x Prediction Scheme for Lean-Premixed Gas Turbine Combustion Based on Detailed Chemical Kinetics. *J. Eng. Gas Turbines Power*, 118(4):765–772, 1996. Originally presented at the Int'l Gas Turbine and Aeroengine Congress & Exposition, ASME 95-GT-108, Houston, TX, USA, 1995.
246. K. Döbbeling, H. P. Knöpfel, W. Polifke, D. Winkler, C. Steinbach, and T. Sattelmayer. Low NO_x Premixed Combustion of MBTU Fuels Using the ABB Double Cone Burner (EV Burner). *J. Eng. Gas Turbines Power*, 118(1):46–54, 1996. Originally presented at the Int'l Gas Turbine and Aeroengine Congress & Exposition, ASME 94-GT-394, Birmingham, UK, 1994.
247. W. Polifke. The Statistics of Helicity Fluctuations in Homogeneous Turbulence. *Phys. of Fluids A*, 3:115–129, 1991.
248. L. Shtilman and W. Polifke. On the Mechanism of the Reduction of Nonlinearity in the Incompressible Navier-Stokes Equation. *Phys. of Fluids A*, 1(5):778–780, 1989.

249. W. Polifke and L. Shtilman. The Dynamics of Helical Decaying Turbulence. *Phys. of Fluids A*, 1(12):2025–2033, 1989.

Dissertation

250. W. Polifke. *Aspects of Helicity in Turbulence*. PhD thesis, City University of New York, New York, U. S. A., 1990.

Books and monographs

251. M. Haeringer. Self-excited Combustion Dynamics in Multiburner Systems - Final Report. Technical Report FVV 1270, TU München, 2022.
252. S. van Buren and W. Polifke. Heat Transfer in Pulsating Flow and its Impact on Temperature Distribution and Damping Performance of Resonators. W. Schröder, N. A. Adams, O. J. Haidn, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Future Space-Transport-System Components under High Thermal and Mechanical Loads*, 146 in Notes on Numerical Fluid Mechanics and Multidisciplinary Design, pages 97–111. Springer International Publishing, 2021.
253. S. van Buren and W. Polifke. Heat Transfer in Pulsating Flow and its Impact on Temperature Distribution and Damping Performance of Resonators. W. Schröder, N. A. Adams, O. J. Haidn, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Future Space-Transport-System Components under High Thermal and Mechanical Loads*, 146 in Notes on Numerical Fluid Mechanics and Multidisciplinary Design, pages 97–111. Springer International Publishing, 2021.
254. S. van Buren and W. Polifke. Enhanced Longitudinal Heat Transfer in Turbulent Oscillatory Channel Flow. C. Stemmer, N. A. Adams, O. J. Haidn, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Annual Report*, pages 35–48. Sonderforschungsbereich/Transregio 40, Nov. 2019.
255. S. van Buren and W. Polifke. Enhanced Heat Transfer in Turbulent Channel Flow Exposed to High Amplitude Pulsations. C. Stemmer, N. A. Adams, O. J. Haidn, R. Radespiel, T. Sattelmayer, W. Schröder, B. Weigand, and B. Weigand, editors, *Annual Report*, pages 39–56. Sonderforschungsbereich/Transregio 40, Oct. 2018.
256. C. F. Silva, P. Pettersson, G. Iaccarino, and M. Ihme. Generalized chaos expansion of state space models for uncertainty quantification in thermoacoustics. *Proceedings of the Summer Program*, Stanford, USA, 2018. Center for Turbulence Research, Stanford University.
257. W. Polifke and A. Albayrak. Technically Premixed Flame Response via Large Eddy Simulation. P. Bastian, D. Kranzlmüller, H. Brüche, and M. Brehm, editors, *High Performance Computing in Science and Engineering – Garching/Munich*. Garching, Germany, 2018.
258. W. Polifke and M. Merk. Determination of Combustion Dynamics and Combustion Noise in a Confined Turbulent Swirl Combustor. P. Bastian, D. Kranzlmüller, H. Brüche, and M. Brehm, editors, *High Performance Computing in Science and Engineering – Garching/Munich*, pages 162–163. Garching, Germany, 2018.
259. W. Polifke and A. Avdonin. Thermoacoustic Instabilities and Combustion Noise. Technical Report pr94ho, Leibniz Rechenzentrum, 2018.

260. M. Merk and W. Polifke. NoiseDyn: Identifikation des Verbrennungslärms und der Dynamik eingeschlossener turbulenter Flammen. Abschlussbericht DFG PO 710/16-1, DFG, June 2018.
261. K. Oberleithner and A. Albayrak. Abschätzung der Flammentransferfunktion aus stationären Strömungsfeldern. *Informationstagung Turbomaschinen, Frühjahr 2018*, volume R583, pages 1–35, Bad Neuenahr, 2018. FVV.
262. S. van Buren, K. Förner, and W. Polifke. Analytical and Numerical Investigation of the Damping Behavior of a Quarter-Wave Resonator with Temperature Inhomogeneity. C. Stemmer, N. A. Adams, O. J. Haidn, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Annual Report*, pages 35–47. Sonderforschungsbereich/Transregio 40, Oct. 2017.
263. K. Förner and W. Polifke. Nonlinear Aeroacoustic Identification of the Helmholtz Resonator Response Based on a Local Linear Neuro-Fuzzy Model. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Annual Report*, pages 35–50. Sonderforschungsbereich/Transregio 40, 2016.
264. C. Sovardi and W. Polifke. Identification of Sound Sources in Ducted Flows with an LES-SI-DMD Approach: Influence of Mesh Refinement and Subgrid Scale Models. A. Dillmann, G. Heller, E. Krämer, C. Wagner, and C. Breitsamter, editors, *New Results in Numerical and Experimental Fluid Mechanics X*, 132 in Notes on Numerical Fluid Mechanics and Multidisciplinary Design, pages 755–765. Springer International Publishing, 2016.
265. H. Bodén and W. Polifke. Uncertainty quantification applied to aeroacoustic predictions. C. Schram, editor, *Progress in Simulation, Control and Reduction of Ventilation Noise*, VKI LS 2016-02 in VKI Lecture Series 2015. Van Karman Institute, Rhode-St-Genèse, BE, 2016.
266. C. Sovardi and W. Polifke. CFD-Based Modelling of Sound Generation in Ducted Discontinuities. C. Schram, editor, *Progress in Simulation, Control and Reduction of Ventilation Noise*, volume VKI LS 2016-02 of *VKI Lecture Series 2015*. VKI, Rhode-St-Genèse, BE, 2016.
267. S. Jaensch and W. Polifke. *CFD-basierte, Niedrigdimensionale Modellierung Der Nicht-linearen Dynamik von Vormischflammen*, volume FVV-Heft Nr. 1098. 2016.
268. K. Förner, J. Tournadre, P. Martínez-Lera, and W. Polifke. Characterization of the Non-linear Response of a Helmholtz Resonator. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *SFB/TRR40 Annual Report 2015*, pages 33–45. Sonderforschungsbereich/Transregio 40, 2015.
269. S. Jaensch, M. Merk, E. Gopalakrishnan, S. Bomberg, T. Emmert, R. I. Sujith, and W. Polifke. Hybrid CFD/ low order modeling of thermoacoustic limit cycles. C. Stemmer, Adams, N. A., Haidn O.J., Radespiel, R., Sattelmayer, T., Schröder, W., and Weigand, B., editors, *SFB/TRR 40 – Summer Program Report 2015*, Garching, Germany, 2015.
270. K. Förner and W. Polifke. Aero-Acoustic Characterization of a Helmholtz Resonator in the Linear Regime with System Identification. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Annual Report*, pages 33–45. Sonderforschungsbereich/Transregio 40, 2014.
271. M. Zellhuber and W. Polifke. Large eddy simulation of high frequency flame dynamics in perfect premixed combustors with elevated inlet temperatures. J. Fröhlich, H. Kuerten,

- and V. Geurts, B.J. and Armenio, editors, *Direct and Large-Eddy Simulation IX*. Springer, 2015. Proceedings of DLES-9 Workshop in Dresden, 2013.
272. E. Courtine, L. Selle, F. Nicoud, W. Polifke, C. Silva, M. Bauerheim, and T. Poinso. Causality and intrinsic thermoacoustic instability modes. *Proceedings of the 2014 Summer Program*, Stanford, USA, 2014. Center for Turbulence Research, Stanford University.
 273. C. F. Silva, W. Polifke, J. O'Brian, and M. Ihme. Towards concurrent identification of flame dynamics and combustion noise of enclosed flames. *Proceedings of the 2014 Summer Program*, Stanford, USA, 2014. Center for Turbulence Research, Stanford University.
 274. C. Sovardi, S. Jaensch, K. Förner, F. Selimefendigil, and W. Polifke. Parametric vs. non-parametric identification of nonlinear acoustic scattering at duct discontinuities based on LES data. *Sonderforschungsbereich/Transregio 40 – Summer Program Report 2013*, Garching, Germany, 2013.
 275. K. Förner, A. Cárdenas Miranda, and W. Polifke. Mapping the influence of acoustic resonators on rocket engine combustion stability. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Annual Report*, pages 33 – 45. Sonderforschungsbereich/Transregio 40, 2013.
 276. M. Zellhuber and W. Polifke. BY 13 GV: Hochfrequente Instabilitäten der Verbrennung mit Selbstzündung. T. Sattelmayer and M. Aigner, editors, *Abschlussbericht Forschungsinitiative "Kraftwerke des 21. Jahrhunderts (KW21)"*, pages 750–769, Oct 2013.
 277. P. Dems and W. Polifke. BY 14 GV: Flammendynamik bei der Verbrennung von Flüssigbrennstoffen. T. Sattelmayer and M. Aigner, editors, *Abschlussbericht Forschungsinitiative "Kraftwerke des 21. Jahrhunderts (KW21)"*, pages 770–791, Oct 2013.
 278. A. Cárdenas Miranda and W. Polifke. On the reflection, transmission, coupling and damping of non-plane acoustic modes by resonator rings. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Sonderforschungsbereich/Transregio 40 – Annual Report*, pages 41–54. 2012.
 279. A. Cárdenas Miranda and W. Polifke. Study of enhanced heat transfer in generic configurations of pulsating flow. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Sonderforschungsbereich/Transregio 40 – Annual Report*, pages 31–42. 2011.
 280. W. Polifke. Non-normality and non-linearity in aero- and thermo-acoustic systems. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*, VKI LS 2011-01. Van Karman Inst for Fluid Dynamics., Rhode-St-Genève, Belgium, Rhode-St-Genève, BE, 2011.
 281. W. Polifke. System Identification for Thermoacoustic Instabilities. *Workshop "Advanced Instability Methods"*, Chennai, India, Jan. 2011. Indo-European network on Advanced Instability Methods.
 282. W. Polifke. Strategies for computational modelling of thermoacoustic instabilities. *Munich Centre of Advanced Computing - Summer Workshop*, Munich, July 2011. TU München.
 283. A. Cárdenas Miranda and W. Polifke. Effects of temperature inhomogeneity on the damping characteristics of quarter wave resonator rings. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Sonderforschungsbereich/Transregio 40 – Annual Report*, pages 41 – 54. 2010.
 284. S. Föllner, R. Kaess, and W. Polifke. Determination of acoustic scattering coefficients via large eddy simulation and system identification. S. Wagner, M. Steinmetz, A. Bode, and

- M. Müller, editors, *High Performance Computing in Science and Engineering*, ISBN 978-3-642-13871-3, pages 243 – 255. Springer, 2010.
285. L. Tay-Wo-Chong, R. Kaess, T. Komarek, S. Föllner, and W. Polifke. Identification of flame transfer functions using LES of turbulent reacting flows. S. Wagner, M. Steinmetz, A. Bode, and M. Müller, editors, *High Performance Computing in Science and Engineering*, ISBN 978-3-642-13871-3, pages 255–266. Springer, 2010.
286. F. Selimefendigil and W. Polifke. Non-linear, low-order model of heat transfer in pulsating flow based on proper orthogonal decomposition. N. A. Adams, R. Radespiel, T. Sattelmayer, W. Schröder, and B. Weigand, editors, *Sonderforschungsbereich/Transregio 40 - Annual Report*, pages 37–56. 2009.
287. F. V. Fischer and W. Polifke. Formulation and validation of an LES model for ternary mixing and reaction based on joint presumed discrete distributions. H. Bockhorn, D. Mewes, W. Peukert, and H.-J. Warnecke, editors, *Micro and Macro Mixing – Analysis, Simulation and Numerical Calculation*, ISBN 978-3-642-04548-6, pages 185–204. Springer Verlag, 2010.
288. W. Polifke and J. Kopitz. *Wärmeübertragung*. Maschinenbau. Pearson Education, München, 2 edition, 2009.
289. R. Kaess, W. Polifke, T. Poinsot, N. Noiray, D. Durox, T. Schuller, and S. Candel. CFD-based mapping of the thermo-acoustic stability of a laminar premix burner. *Proceedings of the 2008 Summer Program*, pages 289–302, Stanford, USA, 2008. Center for Turbulence Research, Stanford University.
290. T. Komarek, L. Tay-Wo-Chong, and W. Polifke. GV 6: Dynamik von Vormischflammen. W. M. G. Weiß, editor, *Abschlussbericht Forschungsinitiative "Kraftwerke des 21. Jahrhunderts (KW21)"*, pages 704–723, 2008.
291. W. Polifke. System modelling and stability analysis. J. Anthoine, editor, *Basics of Aeroacoustics and Thermoacoustics*, ISBN-13 978-2-930389-79-6 in VKI LS 2007-09. Von Karman Institute, Rhode-St-Genèse, BE, Dec 3-7 2007.
292. W. Polifke and J. Kopitz. *Wärmeübertragung*. Maschinenbau. Pearson Education, München, 2005.
293. W. Polifke. Combustion instabilities. J. Anthoine and A. Hirschberg, editors, *Advances in Aeroacoustics and Applications*, ISBN 2-930389-54-0 in VKI LS 2004-05. Von Karman Institute, Rhode-St-Genèse, BE, 2004.
294. W. Polifke. Numerical Techniques for Identification of Acoustic Multi-Poles. J. Anthoine and A. Hirschberg, editors, *Advances in Aeroacoustics and Applications*, VKI LS 2004-05, Rhode-St-Genèse, BE, 2004. Von Karman Institute.
295. E. Gharaibah and W. Polifke. *Bubbly Flows*, chapter "A Numerical Model of Dispersed Two Phase Flow in Aerated Stirred Vessels based on Presumed Shape Number Density Functions", pages 295–306. Springer Verlag, 2003.
296. W. Polifke and C. Wall. Non-reflecting boundary conditions for acoustic transfer matrix estimation with LES. *Proceedings of the Summer Program 2002*, pages 345–356, Stanford, USA, 2002. Center for Turbulence Research, Stanford University.

Invited talks or journal contributions

297. W. Polifke. Intrinsic thermoacoustic feedback and its consequences for combustion noise and combustion dynamics, 2022.
298. W. Polifke. Thermoacoustic stability of hydrogen flames - same same, but different?, 2021.
299. W. Polifke. Thermoacoustic Instabilities — a Fascinating Phenomenon with Important Consequences for Low-Emission Combustion Technology. *11th International Conference of Thermofluids 2020*, Yogyakarta, Indonesia, 2020.
300. W. Polifke. (Towards) Modelling and Simulation of Thermoacoustic Instabilities of Spray Flames. *GE Thermoacoustic Summit*, GE Baden, Feb. 2017.
301. W. Polifke. Consequences of Intrinsic Thermoacoustic Feedback for Combustion Dynamics and Combustion Noise. *CDCN2 - 2nd Colloquium on Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 2016.
302. W. Polifke. Thermoacoustic instability - a major challenge for gas turbine combustion technology. *German-China Workshop on Gas Turbine Technology*, Stuttgart, Germany, July 2016.
303. W. Polifke. Distributed delay and state space models in acoustics and combustion dynamics. *Linné FLOW Centre*, Annual Meeting of the Linné FLOW Centre, Skytteholm, Ekerö, Sweden, Jan. 2016.
304. C. Sovardi and W. Polifke. CFD-Based Modelling of Sound Generation in Ducted Discontinuities. *Progress in Simulation, Control and Reduction of Ventilation Noise*, VKI Lecture Series 2015, Rhode-St-Genèse, BE, Nov. 2015. VKI.
305. W. Polifke. Six Lectures on Thermoacoustic Combustion Instability. *21st CISM-IUTAM Int'l Summer School on Measurement, Analysis and Passive Control of Thermoacoustic Oscillations*, Udine, Italy, 2015, June.
306. A. Albayrak and W. Polifke. On the Propagation Velocity of Swirl Waves in Annular Flows. *22nd Int. Congress on Sound and Vibration (ICSV22)*, Florence, Italy, 2015. IIAV.
307. L. Strobio Chen, A. Witte, and W. Polifke. Thermo-acoustic characterization of a heat exchanger in cross flow using compressible and weakly compressible numerical simulation. *The 22nd International Congress of Sound and Vibration*, Florence, Italy, July 2015.
308. C. F. Silva, S. Jaensch, T. Emmert, and W. Polifke. On the autoregressive behavior of the intrinsic thermoacoustic feedback loop observed in premixed flames. *22nd International Congress on Sound and Vibration (ICSV22)*, Florence, Italy, 2015.
309. D. Iurashev, G. Campa, V. Anisimov, A. Di Vita, E. Cosatto, F. Daccà, and A. Albayrak. Turbulent Flame Models for Prediction of Pressure Oscillations in Gas Turbine Burners. *22nd International Congress on Sound and Vibration (ICSV22)*, Florence, Italy, 2015.
310. W. Polifke. Applications of System Identification in Aero- and Thermoacoustics. *FlowAirs Workshop "System Identification"*, TU München, Garching, Germany, May 12.
311. T. Emmert, S. Jaensch, C. Sovardi, and W. Polifke. taX - a flexible tool for Low-Order duct acoustic simulation in time and frequency domain. *7th Forum Acusticum*, Krakow, 7-12 September 2014 2014.

312. L. Strobio-Chen, S. Bomberg, and W. Polifke. On the jump conditions for flow perturbations across a moving heat source. *21st International Congress on Sound and Vibration (ICSV21)*, Beijing, China, 13 – 17 July 2014.
313. A. Albayrak, A. Ulhaq, R. S. Blumenthal, and W. Polifke. Analytical derivation of laminar premixed flame impulse response to equivalence ratio perturbations. *21st International Congress on Sound and Vibration (ICSV21)*, Beijing, China, 13 – 17 July 2014.
314. D. Rouwenhorst, J. Hermann, and W. Polifke. On the performance of stability margin measures for thermoacoustic instabilities in turbulent combustion systems. *21st International Congress on Sound and Vibration (ICSV21)*, Beijing, China, 13 – 17 July 2014.
315. W. Polifke. IJSCD Special Issues - Editorial. *Int. J. Spray Comb. Dynamics*, 6(1):i–iii, 2014.
316. W. Polifke. Microphone Measurements in (Thermo-)Acoustics. *TANGO Workshop “Experimental Methods in Thermoacoustics”*, IIT Madras, Chennai, India, Feb. 5.
317. W. Polifke. Black-box system identifikation für die erstellung reduzierter modelle. *Garching Seminar*. GRS, September 2013.
318. W. Polifke. Black-Box System Identifikation für die Erstellung reduzierter Modelle. *Garching Seminar*. GRS, Sept. 2013.
319. R. Kulkarni, M. Zellhuber, and W. Polifke. A model for auto-ignition and heat release in turbulent flows and its application to thermoacoustic analysis. *ERCofTAC Bulletin*, 96:29–34, Sept. 2013.
320. R. S. Blumenthal, P. Subramanian, R. Sujith, and W. Polifke. New perspectives on laminar premixed flame dynamics derived from time domain response functions. *ERCOfTAC Technologietag*, Stuttgart, Germany, Oktober 2012. ERCOfTAC.
321. W. Polifke. Black-box system identification for reduced order model construction. *Dresden Scientific Workshop On Reactor Dynamics And Safety*, Sept. 13. - 14. 2012.
322. W. Polifke. Non-normality and nonlinearity in stability analysis. *Dresden Scientific Workshop On Reactor Dynamics And Safety*, Sept. 13. - 14. 2012.
323. A. Ulhaq, S. Hemchandra, L. Tay-Wo-Chong, and W. Polifke. Multiple-input, single-output approach for identification of laminar premixed flame dynamics from direct numerical simulation. *19th International Congress on Sound and Vibration (ICSV19)*, Vilnius, Lithuania, 08 – 12 July 2012.
324. T. Holzinger, A. Baumgartner, and W. Polifke. A one-dimensional model for the thermoacoustic effect in presence of moderate mean flows. *19th International Congress on Sound and Vibration (ICSV19)*, Vilnius, Lithuania, 08 – 12 July 2012.
325. W. Polifke. Thermoakustische Verbrennungsinstabilitäten. *Kurzlehrgang Verbrennung*, Erlangen, Germany, Mar. 2012. LTT Erlangen.
326. W. Polifke. Dynamics of Turbulent Swirling Flames. IIT Madras, Chennai, India, Jan. 2012.
327. W. Polifke. IJSCD special issues - editorial. *Int. J. Spray Comb. Dynamics*, 3(4):iii–vi, 2011.
328. W. Polifke. Nonlinear identification of heat source dynamics. *Workshop “Nonlinear Thermo Acoustics and Active Instability Control”*, Munich, Germany, Mar. 2011. ifTA GmbH / LIMOUSINE.

329. P. Dems and W. Polifke. Modeling strategies and implementation challenges of moment methods for the simulation of polydisperse two-phase flows. *Multiphysical modelling in OpenFOAM*, Riga, Oct. 20,21 2011.
330. W. Polifke. A low-order thermoacoustic model for annular combustors with plenum-combustor and modal coupling. *Azimuthal Modes in Annular Chambers*, Toulouse, Nov. 2011. CERFACS.
331. W. Polifke. System Identification for Aero- and Thermo-Acoustic Applications. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*, VKI LS 2011-01, pages 1–46. Von Karman Institute, Rhode-St-Genèse, BE, 2011.
332. W. Polifke. IJSCD Special Issues - Editorial. *Int. J. Spray Comb. Dynamics*, 3(3):iii–vi, 2011.
333. W. Polifke. A frequency-domain model of thermo acoustic limit cycles with modal coupling. *Workshop "Nonlinear Thermo Acoustics and Active Instability Control "*, Munich, Germany, Mar. 2011. ifTA GmbH / LIMOUSINE.
334. W. Polifke. Thermo-Acoustic Instability Potentiality of a Premix Burner. *European Combustion Meeting, ECM2011*, Cardiff, UK, June 2011. British Section of the Combustion Institute.
335. W. Polifke. Non-normality and non-linearity in aero- and thermo-acoustic systems. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*. Van Karman Inst for Fluid Dynamics., Rhode-St-Genèse, Belgium, 2010.
336. W. Polifke. System identification for aero- and thermo-acoustic applications. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*. Van Karman Inst for Fluid Dynamics., Rhode-St-Genèse, Belgium, 2010.
337. W. Polifke. Low-order analysis tools for aero- and thermo-acoustic instabilities. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*. Van Karman Institute for Fluid Dynamics., Rhode-St-Genèse, Belgium, 2010.
338. R. Lacombe, P. Moussou, S. Föllner, G. Jasor, W. Polifke, and Y. Aurégan. Experimental and numerical investigations on the whistling ability of an orifice in a flow duct. *17th Int'l. Congress on Sound and Vibration*, Cairo, Egypt, Jul 18–22 2010. Int'l Inst. of Acoustics and Vibration.
339. W. Polifke. Thermo-Acoustic System Modelling and Stability Analysis: Conventional Approaches. *Workshop "Advanced Instability Methods"*, Chennai, India, Jan. 2010. Indo-European network on Advanced Instability Methods.
340. W. Polifke. Thermoakustische Verbrennungsinstabilitäten. *Kurzlehrgang Verbrennung*, Erlangen, Germany, Mar. 2010. LTT Erlangen.
341. W. Polifke. Low-Order Analysis Tools for Aero- and Thermo-Acoustic Instabilities. C. Schram, editor, *Advances in Aero-Acoustics and Thermo-Acoustics*, VKI LS 2011-01 in VKI Lecture Series. Van Karman Institute for Fluid Dynamics, Rhode-St-Genèse, BE, 2010.
342. D. Wenger and W. Polifke. Modellierung eines Metallhydridspeichers mit großer Dynamik. *COMSOL Multiphysics Kolloquium zur Chemical Engineering-Simulation*, Darmstadt, June 25 2009. COMSOL Multiphysics GmbH.
343. W. Polifke. Thermo-acoustic system modelling and stability analysis: Conventional approaches. *Workshop "Advanced Instability Methods"*, Chennai, India, January 2009. IIT Madras / EPSRC, scribd.

344. W. Polifke. Identification of thermo- and aero-acoustic response functions from CFD time series. *Invited Talk*, Stockholm, Sweden, Oct. 2008. Linne Flow Centre, Royal Inst. of Technology.
345. T. Komarek, L. Tay-Wo-Chong, A. Huber, and W. Polifke. Wechselwirkung von Streckung, Wärmeverlust und Reaktionsrate in nicht-adiabaten Brennkammern. *Ercoftac Technologietag*, Stuttgart, Germany, Oktober 10 2008. ERCOFTAC Pilot Center Germany South.
346. T. Komarek, L. Tay-Wo-Chong, M. Zellhuber, A. Huber, and W. Polifke. Modeling the effect of heat loss on flame stabilization in shear layers. *Int. Conf. on Jets, Wakes and Separated Flows*, Berlin, Germany, September 16-19 2008. Technical University Berlin.
347. W. Polifke. Flammenstabilität und Thermoakustik. *Kurzlehrgang Verbrennung*, Erlangen, Germany, Mar. 2008. LTT Erlangen.
348. W. Polifke. System modelling and stability analysis. J. Anthoine, editor, *Basics of Aeroacoustics and Thermoacoustics*, VKI LS 2007-09, pages 1–51. Von Karman Institute, Rhode-St-Genèse, BE, Dec. 2007.
349. W. Polifke. Novel Approach for Efficient Modelling of Mixing and Reaction in Turbulent Flow Based on Discrete Distributions. *Technologietag ERCOFTAC Süddeutschland*, Stuttgart, Germany, Sept. 2006.
350. W. Polifke. Flammenstabilität und Thermoakustik. *Kurzlehrgang Verbrennung*, Erlangen, Germany, Mar. 2006. LTT Erlangen.
351. W. Polifke. Flammenstabilität und Thermoakustik. *Kurzlehrgang Verbrennung*, Erlangen, Germany, March 2006. LTT Erlangen.
352. W. Polifke. Physikalische Mechanismen und Numerische Modelle thermo-akustischer Verbrennungsinstabilitäten. *3. Verbrennungstechnisches Kolloquium*, Erlangen, Germany, October 2005. Universität Erlangen / RWTH Aachen.
353. W. Polifke. Flame / acoustics coupling and combustion instabilities. *Large Eddy Simulation and Acoustic Analysis Tools for Unsteady Combustion*, Toulouse, Frankreich, May 2005. CERFACS / FLUISTCOM.
354. W. Polifke. Divide et Impera – Kombiniertes Einsatz von CFD, Systemidentifikation und linearen Systemmodellen zur Analyse thermo-akustischer Verbrennungsinstabilitäten. *Technologietag ERCOFTAC Süddeutschland*, Stuttgart, Sept. 2005.
355. W. Polifke. Physikalische Mechanismen und Numerische Modelle thermo-akustischer Verbrennungsinstabilitäten. *3. Verbrennungstechnisches Kolloquium*, Erlangen, Germany, Oct. 2005. Universität Erlangen / RWTH Aachen.
356. C. Heinz, M. Brandt, and W. Polifke. Optimization of global reaction mechanisms for self-ignition of hydrocarbon fuels at elevated preheat temperature. *Ercoftac Bulletin*, (64):13–18, 2005.
357. M. Brandt and W. Polifke. Monte-Carlo methods for tabulation of mean reaction rates from joint probability distributions in turbulent flow. *Chemical Kinetics & Diffusion Processes in Reactive Flows*, Istanbul, Turkey, June 7-9 2004.
358. W. Polifke. Mechanisms of flame-acoustics interaction in premix burners. *Combura 2004*, Nieuwegein, The Netherlands, Mar. 2004. STW, NVV, Dutch section of the Combustion Institute..

359. W. Polifke. Combustion Instabilities. J. Anthoine and A. Hirschberg, editors, *Advances in Aeroacoustics and Applications*, VKI LS 2004-05. Von Karman Institute, Rhode-St-Genèse, BE, 2004.
360. W. Polifke. Mechanisms of flame-acoustics interaction in premix burners. *Combura 2004*, Nieuwegein, The Netherlands, March 3 2004. STW, NVV, Dutch section of the Combustion Institute.
361. W. Polifke. Theoretical Description of Combustion Instabilities. *HDT Fachveranstaltung em Verbrennungsschwingungen - Thermoakustik*, Hamburg, Nov. 2001. Haus der Technik.
362. W. Polifke and C. O. Paschereit. Determination of thermo-acoustic transfer matrices by experiment and computational fluid dynamics. *ERCOFTAC Bulletin*, 38, September 1998.
363. W. Polifke, M. Bettelini, W. Geng, U. C. Müller, W. Weisenstein, and P. Jansohn. A Comparison of Combustion Models for Industrial Applications. *Eccomas 98*, Athens, Greece, 1998. Gordon and Breach Science Publishers Ltd.
364. C. Hirsch, W. Polifke, and F. Holzäpfel. Modelling Turbulent Swirling Flows: Can LES help? *Workshop DNS and LES of Complex Flows: Numerical and Modelling Aspects*, Univ. of Twente, Enschede, NL, 1997.
365. W. Polifke, M. Bettelini, W. Geng, J. Lloyd, and K. Döbbeling. Problems and Progress in Combustion Modelling for Gas Turbine Applications. *ERCOFTAC Summer School on Turbulent Combustion: Modelling and Diagnostics*, RWTH Aachen, Germany, 1997. ERCOFTAC.
366. W. Polifke. Fundamental and Practical Limitations of NO_x Reduction in Lean-Premixed Combustion. *Euroconference "Premixed Turbulent Combustion: Introduction to the State of the Art"*, RWTH Aachen, Germany, June 8, 9 1995.

Conference contributions

367. M. T. Rywik, D. S. da Cruz, and W. Polifke. Explaining inconsistent uncertainty quantification in neural network models of nonlinear flame response. *Internoise 2022*, page 1, 2022.
368. E. Scoletta and W. Polifke. Impact of stretch on the flame dynamics of laminar premixed flames. *Internoise2022*, IN2022_Paper_Ab933, Glasgow, Scotland, 2022.
369. P. Brokof, G. Fournier, and W. Polifke. State Space Realization of Flame Transfer Functions by Mean of the Advection/Propagation Equation. *Internoise 2022*, Glasgow, Scotland, 2022.
370. K. Niebler, P. Bonnaire, A. K. Doan, and C. F. Silva. Towards reconstruction of acoustic fields via physics-informed neural networks. *Internoise 2022*, 2022.
371. C. M. Douglas, W. Polifke, and L. Lesshafft. The effect of the Lewis number on the linear instability of jet flames. *14th ERCOFTAC SIG 33 Workshop*, Cadiz, France, 2022.
372. T. L. Kaiser, G. Varillon, K. Polifke, T. Zirwes, F. Zhang, H. Bockhorn, and K. Oberleithner. Linearizing a turbulent Bunsen flame. *18th International Conference on Numerical Combustion*, La Jolla, San Diego CA, USA, Nov. 2022.
373. G. Varillon, T.-L. Kaiser, K. Oberleithner, and W. Polifke. Linearized Reactive Flows: An Application to Swirl Flames. *18th International Conference on Numerical Combustion*, La Jolla, San Diego CA, USA, Nov. 2022. The Combustion Institute, Pittsburgh, PA.

374. M. Haeringer and W. Polifke. Self-excited Combustion Dynamics in Multiburner Systems. *FVV Informationstagung Turbomaschinen*, volume R602, page 42, Würzburg, Germany, Mar. 2022. FVV.
375. S. M. Gopinathan, M. A. Heckl, and A. Surendran. New physical insight from a nonlinear kinematic model of a laminar conical flame. *27th International Congress on Sound and Vibration, ICSV 2021*. IIAV, 2021.
376. G. Doehner, M. Haeringer, and C. F. Silva. Nonlinear flame response modeling using coupled oscillators. *SoTiC*, Online, 2021.
377. M. Haeringer and W. Polifke. Hybrid CFD/low-order modeling of thermoacoustic limit cycle oscillations in can-annular configurations. *SoTiC*, Virtual, Online, 2021.
378. S. Kulkarni, C. F. Silva, and W. Polifke. Response of Spray Number Density and Evaporation Rate to Velocity Oscillations. *SoTiC*, Virtual, Online, 2021.
379. A. Surendran, S. M. Gopinathan, and M. A. Heckl. Influence of perforated plates on the acoustic field of simple duct systems. *27th International Congress on Sound and Vibration, ICSV 2021*. IIAV, 2021.
380. S. M. Gopinathan, M. A. Heckl, and A. Surendran. New physical insight from a nonlinear kinematic model of a laminar conical flame. *27th International Congress on Sound and Vibration, ICSV 2021*. IIAV, 2021.
381. N. Balasubramanian, D. Rouwenhorst, and J. Hermann. Parametric estimation of dynamical system data using autoregressive modeling. *27th International Congress of Sound and Vibration (ICSV21)*, Online, July 2021.
382. S. van Buren and W. Polifke. Enhanced Longitudinal Heat Transfer in Oscillatory Channel Flow - a Theoretical Perspective. *ISROMAC 2020 - Int. Symposium on Transport Phenomena and Dynamics of Rotating Machinery*, Online, Nov. 2020.
383. C. Wang, T. L. Kaiser, M. Meindl, K. Oberleithner, W. Polifke, and L. Lesshafft. Identification of optimal linear perturbations in a premixed laminar flame by global resolvent analysis. *Bulletin of the American Physical Society*, Chicago, November 22nd to 24th, 2020. APS.
384. N. A. K. Doan, W. Polifke, and L. Magri. Autoencoded Reservoir Computing for the Spatio-Temporal Prediction of a Turbulent Flow. *Bulletin of the American Physical Society*, Chicago, November 22nd to 24th, 2020. APS.
385. N. A. K. Doan, W. Polifke, and L. Magri. Physics-informed echo state networks for the prediction of extreme events in turbulent shear flows. *Bulletin of the American Physical Society*, volume 64, Cambridge, MA, 2019. APS.
386. A. Ghani, I. Boxx, C. Noren, and W. Polifke. Daten-getriebene Optimierung eines nichtlinearen Modells zur Analyse und Kontrolle von Verbrennungsinstabilitäten. *29. Deutscher Flammentag*, Bochum, 2019.
387. N. A. K. Doan, W. Polifke, and L. Magri. Physics-Informed Echo State Networks for Chaotic Systems Forecasting. *Lecture Notes in Computer Science - ICCS 2019*, 11539:192–198, June 2019.
388. F. Schaefer and W. Polifke. Low-order network modeling of a duct with non-uniform cross-section and arbitrary mean temperature gradient in the presence of mean flow. *AIAA Propulsion and Energy Forum*, AIAA 2019-4376, page 5, Indianapolis, Indiana, USA, 2019.

389. W. Polifke, M. Merk, C. Silva, S. Jaensch, R. Gaudron, M. Gatti, C. Mirat, and T. Schuller. Identification of Combustion Noise and Flame Dynamics of Confined Turbulent Flames. Part II: Identification of flame dynamics and combustion noise source terms. *NC19 Seventeenth International Conference on Numerical Combustion*, Aachen, Germany, 2019.
390. T. Schuller, R. Gaudron, M. Gatti, C. Mirat, M. Merk, C. Silva, S. Jaensch, and W. Polifke. Identification of Combustion Noise and Flame Dynamics of Confined Turbulent Flames. Part I: Methodology. *NC19 Seventeenth International Conference on Numerical Combustion*, Aachen, Germany, 2019.
391. L. Magri, H. Yu, M. Juniper, W. Polifke, and N. A. K. Doan. Statistical learning by data assimilation in reacting flows. *NC19 - Seventeenth Int'l Conf. on Numerical Combustion*, Aachen, Germany, May 2019.
392. L. Magri, N. A. K. Doan, O. Schmidt, W. Polifke, and P. Schmid. Data-driven prediction of rare and extreme events in turbulent reacting flows. *Symposium on Machine Learning for Dynamical Systems*, Imperial College, London, UK, Feb. 2019.
393. N. A. K. Doan, W. Polifke, and L. Magri. Physics-Informed Echo State Networks for Chaotic Systems Forecasting. *Lecture Notes in Computer Science - ICCS 2019*, 11539:192–198, June 2019.
394. L. Dirnberger, F. Schily, and W. Polifke. Modular test rig for a pulsating heat pipe (PHP). *8th Energy Colloquium of the Munich School of Engineering*, Garching, Germany, July 2018.
395. K. Oberleithner and A. Albayrak. Vorhersage von Flammentransferfunktionen: Abschätzung der Flammentransferfunktion aus stationären Strömungsfeldern. Abschlussbericht 1151, FVV / Informationstagung Turbomaschinen, Frühjahr 2018, Bad Neuenahr, 2018.
396. M. Meindl, M. Cruz Varona, A. Castagnotto, F. Thomann, W. Polifke, and B. Lohmann. Model order reduction in thermoacoustic stability analysis. *MATHMOD 2018 Extended Abstract Volume, 9th Vienna Conference on Mathematical Modelling*, Vienna, Feb. 2018.
397. M. Meindl, M. Merk, F. Fritz, and W. Polifke. Determination of acoustic scattering matrices from linearized compressible flow equations. *Int. Conf. on Theoretical and Computational Acoustics ICTCA 2017*, Vienna, July 2017.
398. M. Merk, R. Gaudron, M. Gatti, C. Mirat, W. Polifke, and T. Schuller. Quantitative Comparisons Between LES Predictions and Experimental Measurements of Sound Pressure Spectra in a Confined Swirl Combustor. *53rd AIAA/SAE/ASEE Joint Propulsion Conference, AIAA Propulsion and Energy Forum*, Atlanta, GA, USA, July 2017. American Institute of Aeronautics and Astronautics.
399. C. Lang, S. Jaensch, A. Albayrak, K. Oberleithner, and W. Polifke. Large Eddy Simulation of Equivalence Ratio Fluctuations in a Technically Premixed Swirl Combustor with Acoustic Excitation. *CDCN2 - Second Colloquium on Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 2016.
400. M. Merk, S. Jaensch, and W. Polifke. Concurrent identification of flame dynamics and combustion noise for turbulent flames. *CDCN2 - Second Colloquium on Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 2016.
401. M. Merk, R. Gaudron, C. Mirat, M. Gatti, T. Schuller, and W. Polifke. Numerical and experimental investigation of the noise level in a confined premixed swirl-stabilized combustor. *CDCN2 - Second Colloquium on Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 2016.

402. T. Steinbacher, L. Strobio Chen, and W. Polifke. Modeling the Generation of Entropy Waves by a Premixed Flame. *CDCN2 - 2nd Colloquium on Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 2016.
403. M. Merk, S. Jaensch, and W. Polifke. On Hydrodynamic Effects During Self-Excited Thermoacoustic Oscillations. *24th ICTAM Conference*, Montreal, Canada, 2016.
404. L. Strobio Chen, N. Hosseini, W. Polifke, J. Teerling, V. Kornilov, I. Lopez Arteaga, and P. de Goey. Acoustic Scattering Behaviour of a 2D Flame with Heat Exchanger in Cross-Flow. *23rd Int. Congress on Sound and Vibration (ICSV23)*, Athens, Greece, July 2016. IIAV.
405. A. Witte, A. Cabrera, and W. Polifke. Identification of the heat transfer frequency response in pulsating laminar and subcritical flow across a cylinder. *7th European Thermal-Sciences Conference*, Krakow, Poland, 2016.
406. F. Caeiro, C. Sovardi, K. Förner, and W. Polifke. Shape Optimization of a Helmholtz Resonator using the Adjoint Method. *Int. Symp. on Thermoacoustic Instabilities in Gas Turbines and Rocket*, Garching, Germany, June 2016.
407. S. Jaensch and W. Polifke. CFD-basierte, niedrigdimensionale Modellierung der nicht-linearen Dynamik von Vormischflammen. *Informationstagung Motoren/Turbomaschinen, R574 / R575*, Bad Neuenahr, Germany, 2016. FVV.
408. C. F. Silva, M. Merk, T. Komarek, and W. Polifke. The Contribution of Intrinsic Thermoacoustic Feedback to Combustion Noise and Resonances of a Confined Turbulent Premixed Flame. *International Symposium: Thermoacoustic Instabilities in Gas Turbines and Rocket Engines*, Garching, Germany, May 2016.
409. D. Rouwenhorst, J. Hermann, and W. Polifke. Bifurcation study of azimuthal bulk flow in annular combustion systems with cylindrical symmetry breaking. *Thermoacoustic Instabilities in Gas Turbines and Rocket Engines*, GTRE-010, Garching, Germany, May 30.
410. K. Förner, J. Tournadre, P. Martínez-Lera, and W. Polifke. Scattering to Higher Harmonics for Quarter Wave and Helmholtz Resonators. *22nd AIAA/CEAS Aeroacoustics Conference*, Lyon, France, May 2016.
411. J. Tournadre, K. Förner, W. Polifke, P. Martínez-Lera, and W. Desmet. Determination of Acoustic Impedance for Helmholtz Resonators Through Incompressible Unsteady Flow Simulations. *22nd AIAA/CEAS Aeroacoustics Conference*, Lyon, France, May 2016.
412. S. Jaensch and W. Polifke. CFD-basierte, niedrigdimensionale Modellierung der nicht-linearen Dynamik von Vormischflammen. *Informationstagung Motoren/Turbomaschinen, R574 / R575*, Bad Neuenahr, Germany, 2016. FVV.
413. A. Witte and W. Polifke. Heat transfer frequency response of a cylinder in pulsating laminar cross flow. *17. STAB-Workshop*, Göttingen, 2015.
414. J. Achury and W. Polifke. Theoretical Investigation of the Particle Response to an Acoustic Field. *14th Workshop on Two-Phase Flow Predictions*, Halle, Germany, Sept. 2015.
415. A. Witte, T. Emmert, T. Holzinger, and W. Polifke. Optimization techniques for power generation from waste heat using thermoacoustic engines. *MSE Energy Colloquium*, July 2015.
416. K. Förner, M. A. Temiz, W. Polifke, I. Lopez Arteaga, and A. Hirschberg. On the Non-Linear Influence of the Edge Geometry on Vortex Shedding in Helmholtz Resonators. *22nd International Congress on Sound and Vibration (ICSV22)*, Florence, Italy, July 2015.

417. C. Sovardi and W. Polifke. Acoustic characterisation of double-orifice configurations by means of a LES-SI approach. *Euronoise 2015 – 10th European Congress and Exposition on Noise Control Engineering*, Maastricht, The Netherlands, 31st May to 3rd June, 2015. European Acoustics Association.
418. A. Ulhaq, C. F. Silva, and W. Polifke. Identification of the dynamics of technically premixed flames as multiple-input, single-output systems from LES. *Proc. 7th European Combustion Meeting*, Budapest, Hungary, Mar. 2015.
419. T. Acher, S. Lenz, C. Gobert, P. Dems, and W. Polifke. Numerische Simulation von Hydrodynamik und Stoffübergang in polydispersen Blasensäulenströmungen mit Hilfe einer Momentenmethode. *Processnet - Jahrestreffen Der Fachgruppen Computational Fluid Dynamics Und Mehrphasenströmungen*, 6092, Lüneburg, Germany, Mar 19 –20 2015. VDI.
420. A. H. Hassabou, M. Spinnler, and W. Polifke. Thermodynamic analysis of heat and mass transport phenomena in phase change regenerators with conductive packing. *Qatar Foundation Annual Research Conference*, 2014.
421. C. Sovardi and W. Polifke. Identification of sound sources in internal non-reactive turbulent flows: a LES-SI-DMD approach. *19. DGLR-Fach-Symposium der STAB*, 2014.
422. T. Emmert, S. Jaensch, C. Sovardi, and W. Polifke. taX - a flexible tool for Low-Order duct acoustic simulation in time and frequency domain. *DEGA Workshop Fahrzeugakustik/Strömungsakustik*, Stuttgart, 7 October 2014. DEGA.
423. J. S. Lee and W. Polifke. Untersuchung von Geräuschquellen im Fahrzeug- Kältekreislauf. *DEGA Workshop Fahrzeugakustik/Strömungsakustik - Stuttgart*. DEGA, 2014.
424. T. Emmert, S. Bomberg, and W. Polifke. Flame-intrinsic and acoustic modes of a pre-mix combustor. *EFMC10 – 10th European Fluid Mechanics Conference*, Copenhagen, Denmark, Sep. 14 – 18 2014.
425. S. Jaensch, T. Emmert, C. Sovardi, and W. Polifke. Identification of flame transfer functions in the presence of intrinsic feedback and noise. *EFMC10 – 10th European Fluid Mechanics Conference*, Copenhagen, Denmark, Sep. 14 – 18 2014.
426. C. Sovardi, S. Jaensch, C. F. Silva, and W. Polifke. Identification of sound sources in internal ducted flows: A large eddy simulation – system identification approach. *21st International Congress on Sound and Vibration (ICSV21)*, Beijing, China, July 13 – 17 2014.
427. U. Karban, G. Ogus, K. Kucukcoskun, C. Schram, C. Sovardi, and W. Polifke. Noise produced by a tandem diaphragm: Experimental and numerical investigations. *20th AIAA/CEAS Aeroacoustics Conference*, AIAA 1889654, Atlanta, GA, June 16–20 2014.
428. S. Jaensch and W. Polifke. CFD-basierte, niedrigdimensionale modellierung der nichtlinearen dynamik von vormischflammen. *Informationstagung Turbomaschinen*, R566/F567, Magdeburg, Germany,, 2014.
429. C. Sovardi and W. Polifke. Identification of sound sources in internal non-reactive turbulent flows. *DGLR/DEGA X-Noise Workshop Strömungsakustik*, München / Ottobrunn, 20./21. November 2013. DGLR / DEGA / X-Noise-Netzwerk.
430. A. Cárdenas Miranda and W. Polifke. On the Reflection, Transmission, Coupling and Damping of Non-Plane Acoustic Modes by Resonator Rings. *5th European Conference for Aeronautics and Space Sciences*, Munich, Germany, Juli 2013. EUCASS.

431. R. S. Blumenthal, A. K. Tangirala, R. Sujith, and W. Polifke. A Contribution to the Discussion on Thermoacoustic Energy from a Systemic Perspective. *n3I Workshop on Non-Normal and Nonlinear Effects in Aero- and Thermoacoustics*, Munich, Germany, June 2013.
432. R. A. J. Müller, C. Temmler, R. Widhopf-Fenk, J. Hermann, W. Polifke, and P. Stopford. CFD - based feasibility study of active control on a combustion instability. *20th International Congress on Sound and Vibration (ICSV20)*, Bangkok, Thailand, 07 – 11 July 2013.
433. T. Acher, P. Dems, S. Lenz, C. Gobert, and W. Polifke. Validation of a quadrature method of moments for polydisperse flow in bubble columns including poly-celerity, breakup and coalescence. *8th Int. Conf. on Multiphase Flows, ICMF 2013*, Jeju, Korea, May 26–31 2013.
434. A. H. Hassabou, M. Spinnler, and W. Polifke. Tecnoeconomic analysis of medium and large-scale desalination plants driven by concentrated solar systems in the mena region. *Energy Procedia*, 42(0):735 – 744, 2013. Mediterranean Green Energy Forum 2013: Proceedings of an International Conference MGEF-13.
435. R. S. Blumenthal, P. Subramanian, R. Sujith, and W. Polifke. A time domain perspective an the response of premixed flames to flow perturbations. *EUROMECH Colloquium 546 – Combustion Dynamics and Combustion Noise*, Villa Vigoni, Menaggio, Italy, May 13-16 2013.
436. C. F. Silva, S. Föllner, T. Emmert, A. Ulhaq, and W. Polifke. Signal generation and its influence on the concurrent identification of flame transfer function and combustion noise. *EUROMECH Colloquium 546 – Combustion Dynamics and Combustion Noise*, Menaggio, Italy, 13–16 2013.
437. M. Zellhuber and W. Polifke. Large eddy simulation of high frequency flame dynamics in perfect premixed combustors with elevated inlet temperatures. *DLES-9 Workshop*, Dresden, Apr. 3–5 2013.
438. T. Acher, S. Lenz, C. Gobert, P. Dems, and W. Polifke. Die Momentenmethode für die Simulation turbulenter Gas-Flüssigströmungen im Euler-Euler-Kontext. *Jahrestreffen der ProcessNet*, 2013.
439. R. A. J. Müller, J. Hermann, and W. Polifke. Stability limits and non-linear characteristics of a self-excited combustion instability. *19th International Congress on Sound and Vibration (ICSV19)*, Vilnius, Lithuania, 08 – 12 July 2012.
440. R. A. J. Müller, J. Hermann, and W. Polifke. Direct drive valve model used as an acoustic source in a network models. *19th International Congress on Sound and Vibration (ICSV19)*, Vilnius, Lithuania, 08 – 12 July 2012.
441. T. Holzinger and W. Polifke. Optimization of thermoacoustic stacks for maximum generation of acoustic energy. *19th International Congress on Sound and Vibration (ICSV19)*, Vilnius, Lithuania, 08 – 12 July 2012.
442. F. Collonval and W. Polifke. Introduction of differential diffusion effect in methane premixed flame simulations through tabulated chemistry. *7th OpenFOAM Workshop*, Darmstadt, Germany, June 25–28 2012.
443. R. Kulkarni and W. Polifke. LES of Delft-Jet-In-Hot-Coflow (DJHC) with tabulated chemistry and stochastic fields combustion model. *The Eleventh International Conference on Combustion and Energy Utilization (11th ICCEU)*, Coimbra, Portugal, May 9 - 13 2012.

444. F. Collonval, R. Kulkarni, and W. Polifke. Large-eddy simulation of auto-ignition processes for industrial applications. *Open Source CFD Int'l Conference*, Dolce Chantilly, Paris-Chantilly, France, Nov. 3–4 2011.
445. A. H. Hassabou, M. Spinnler, A. Hanafi, and W. Polifke. Transient analysis and optimization of a PCM-supported humidification-dehumidification solar desalination system. *IDA World Congress on Desalination and Water Reuse*, Perth, Australia, September 4 – 9 2011.
446. P. Dems, N. E. Carneiro, and W. Polifke. Large eddy simulation of particle-laden swirling flow with a presumed function method of moments. *8th International Conference on CFD in Oil & Gas Metallurgical and Process Industries*, 2011.
447. W. Polifke. Combining LES with system identification for the analysis of flame dynamics. *2011 LES Combustion Symposium*, Niskayuna, NY, USA, August 15,16 2011. General Electric Global Research.
448. R. Kulkarni, F. Collonval, and W. Polifke. Validation of the progress variable tabulation approach for the auto-ignition simulation. *COST CM 0901 – 1st Topical Workshop: Methods for model simplification, evaluation and improvement*, Cardiff, UK, June 2011. COST (European Cooperation in Science and Technology).
449. R. Kulkarni, M. Zellhuber, and W. Polifke. LES based investigation of autoignition in turbulent co-flow configurations. *European Combustion Meeting 2011*, Cardiff, UK, June 29 – Juli 1 2011. British Section of the Combustion Institute.
450. M. Zellhuber, L. Tay-Wo-Chong, and W. Polifke. Non-linear flame response at small perturbation amplitudes – consequences for analysis of thermoacoustic instabilities. *European Combustion Meeting, ECM2011*, Cardiff, UK, June 2011. British Section of the Combustion Institute.
451. M. Zellhuber, V. Bellucci, B. Schuermans, and W. Polifke. Modelling the impact of acoustic pressure waves on auto-ignition flame dynamics. *European Combustion Meeting, ECM2011*, Cardiff, UK, June 2011. British Section of the Combustion Institute.
452. A. C. Miranda and W. Polifke. Damping characteristics of resonator rings with application to low order stability prediction of rocket thrust chambers. *4TH EUROPEAN CONFERENCE FOR AEROSPACE SCIENCES*, St. Petersburg, Russia, July 4 – 8 2011.
453. S. Föllner and W. Polifke. Advances in identification techniques for aero-acoustic scattering coefficients from large eddy simulation. *18th International Congress on Sound and Vibration (ICSV18)*, Rio de Janeiro, 10 – 14 July 2011.
454. C. Ziemer, U. Wacker, and W. Polifke. Multiscale modelling of drop sedimentation with moment methods. *METSTROEM Symposium*, Berlin, Germany, June 2011.
455. G. Jasor, U. Wacker, K. Beheng, and W. Polifke. Application of quadrature method of moments for sedimentation and coagulation of raindrops. *METSTROEM Symposium*, Berlin, Germany, June 2011.
456. R. Keppeler, M. Pfitzner, L. Tay-Wo-Chong, M. Zellhuber, and W. Polifke. Accounting for the combined effects of strain and heat loss on premixed turbulent combustion in an LES model. *13th Int. Conf. on Numerical Combustion (ICNC13)*, CP030, Corfu, Greece, April 27–29 2011.
457. M. Zellhuber, L. Tay-Wo-Chong, T. Komarek, and W. Polifke. Model for the description of strain and heat loss influence on turbulent shear layer combustion in the vicinity of

- non-adiabatic combustor walls. *International Workshop on Near-Wall Reactive Flows*, Darmstadt, Germany, Nov. 2010. Center of SMART INTERFACES (CSI) / SFB568 "Flow and Combustion in Future Gas Turbine Combustion Chambers".
458. L. Tay-Wo-Chong, T. Komarek, S. Föllner, and W. Polifke. LES-based identification of the dependence of premix flame dynamics on swirler position. *EFMC-8 (8th European Fluid Mechanics Conference)*, Bad Reichenhall, Germany, 13-16 Sept 2010.
 459. R. Kulkarni and W. Polifke. Large eddy simulation of auto-ignition using progress variable approach. *EFMC-8 (8th European Fluid Mechanics Conference)*, Bad Reichenhall, Germany, 13-16 Sept 2010.
 460. R. Kulkarni and W. Polifke. LES of hydrogen auto-ignition in non-premixed case using progress variable approach. *SPEIC10 - Towards Sustainable Combustion*, Tenerife, Spain, 16-18 June 2010.
 461. J. E. Carneiro, P. Dems, V. Kaufmann, and W. Polifke. Eulerian simulations of polydisperse flows using a moments model with a relaxation approach for the moment transport velocities. *7th Int. Conf. on Multiphase Flow, ICMF 2010*, Tampa, FL, May 30 - June 4 2010.
 462. S. Föllner, W. Polifke, and D. Tonon. Aero-acoustic characterization of T-junctions based on large eddy simulation and system identification. *16th AIAA/CEAS Aeroacoustics Conference*, AIAA 2010-3985, Stockholm, Sweden, 2010.
 463. S. Föllner and W. Polifke. Determination of Acoustic Transfer Matrices via Large Eddy Simulation and System Identification. *16th AIAA/CEAS Aeroacoustics Conference*, AIAA-2010-3998, Stockholm, 2010.
 464. D. Tonon, J. Willems, A. Hirschberg, S. Föllner, and W. Polifke. Flow induced pulsations in double closed branch systems. *16th AIAA/CEAS Aeroacoustics Conference*, AIAA 2010-3930, Stockholm, Sweden, 2010.
 465. T. Holzinger, A. Cardenas, and W. Polifke. An analytical solution for acoustic wave propagation in a narrow duct with mean temperature gradient. *16th AIAA/CEAS Aeroacoustics Conference*, AIAA 2010-3891, Stockholm, Sweden, 2010.
 466. F. Selimefendigil and W. Polifke. A frequency domain system model with coupled modes for limit cycle prediction of thermoacoustic systems. *n3l – Non-Normal and Nonlinear Effects in Aero- and Thermoacoustics*, Munich, Germany, May 19–20 2010. TU München.
 467. H. Mangesius and W. Polifke. A simple state-space approach for modelling non-normal effects in thermoacoustic systems. *n3l – Non-Normal and Nonlinear Effects in Aero- and Thermoacoustics*, Munich, Germany, May 19–20 2010. TU München.
 468. K. Wieczorek, C. Sensiau, W. Polifke, and F. Nicoud. Assessing non-normal effects in thermoacoustic systems with non zero baseline flow. *n3l – Non-Normal and Nonlinear Effects in Aero- and Thermoacoustics*, Munich, Germany, May 19–20 2010. TU München.
 469. P. Martínez-Lera, C. Schram, S. Föllner, R. Kaess, and W. Polifke. Identification of the aeroacoustic response of ducted low mach number flows. *n3l – Non-Normal and Nonlinear Effects in Aero- and Thermoacoustics*, Munich, Germany, May 19–20 2010. TU München.
 470. R. Lacombe, S. Föllner, G. Jasor, W. Polifke, Y. Aurégan, and P. Moussou. Numerical investigations on the whistling ability of a single hole orifice in a flow duct. *10ème Congrès Français d'Acoustique*, Lyon, France, April 12–16 2010. Société Française d'Acoustique.

471. F. Selimefendigil, R. I. Sujith, and W. Polifke. Identification of heat transfer dynamics for nonmodal stability analysis of thermoacoustic systems. *Numerical Analysis and Applied Mathematics (AIP Conference Proceedings)*, 1168(1):605–608, 2009.
472. L. Tay-Wo-Chong, R. Kaess, T. Komarek, S. Föller, and W. Polifke. Identification of flame transfer functions using LES of turbulent reacting flows. *High Performance Computing in Science and Engineering, Garching 2009*, LRZ, Garching, Germany, Dec. 8-9 2009. Springer.
473. A. H. Hassabou, M. Spinnler, and W. Polifke. Experimental analysis of PCM-supported humidification-dehumidification desalination systems. *IDA World Congress on Desalination and Water Reuse*, IDAWC/DB09-289, Dubai on the Palm, UAE, Nov 7-12 2009.
474. F. Selimefendigil, R. I. Sujith, and W. Polifke. Identification of heat transfer dynamics for nonmodal stability analysis of thermoacoustic systems. *ICNAAM 2009 – 4th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer*, 2009.
475. P. Martínez-Lera, B. Karthik, C. Schram, S. Föller, R. Kaess, and W. Polifke. Low-order modeling of a side-branch system at low mach numbers. *15th AIAA/CEAS Aeroacoustics Conference (30th AIAA Aeroacoustics Conference)*, AIAA 2009-3263, Miami, U.S.A., 11 – 13 May 2009.
476. D. Tonon, G. Nakiboglu, J. Willems, A. Hirschberg, R. E. Leandro, W. Polifke, and H. J. Riezebos. Self-sustained aeroacoustic oscillations in multiple side branch pipe systems. *15th AIAA/CEAS Aeroacoustics Conference (30th AIAA Aeroacoustics Conference)*, AIAA 2009-3262, Miami, U.S.A., 2009.
477. L. Tay-Wo-Chong, T. Komarek, M. Zellhuber, J. Lenz, C. Hirsch, and W. Polifke. Influence of strain and heat loss on flame stabilization in a non-adiabatic combustor. *4th European Combustion Meeting*, Vienna, Austria, 2009. The Combustion Institute.
478. R. Kaess, T. Poinot, and W. Polifke. Determination of the stability map of a premix burner based on flame transfer functions computed with transient CFD. *4th European Combustion Meeting*, Vienna, Austria, 2009. The Combustion Institute.
479. H. Marschall, R. Mornhinweg, O. Hinrichsen, and W. Polifke. Numerische Simulation diperser Gas-Flüssig-Strömungen in Blasensäulen bei hohen Gasleerrohrgeschwindigkeiten mit OpenFOAM. *ProcessNet Jahrestreffen der Fachausschüsse Computational Fluid Dynamics, Mischvorgänge und Extraktion*, Fulda, Germany, 30.-31. März 2009. DECHEMA.
480. H. Marschall, O. Hinrichsen, C. Labonte, and W. Polifke. Numerische Simulation thermofluidodynamischer Phänomene an Phasengrenzflächen in Gas-Flüssig-Strömungen mit OpenFOAM. *ProcessNet Jahrestreffen der Fachausschüsse Computational Fluid Dynamics, Mischvorgänge und Extraktion*, Fulda, Germany, 30.-31. März 2009. DECHEMA.
481. J. Carneiro, V. Kaufmann, B. Felten, and W. Polifke. Development of a moments-based CFD model for polydisperse multiphase flows. *ProcessNet Jahrestreffen der Fachausschüsse Computational Fluid Dynamics, Mischvorgänge und Extraktion*, Fulda, Germany, 30.-31. März 2009. DECHEMA.
482. E. Gharaiabah and W. Polifke. Entwicklung und Validierung eines Modells polydisperser Zweiphasenströmungen unter Berücksichtigung von Koaleszenz und Dispersion. *ProcessNet Jahrestreffen der Fachausschüsse Computational Fluid Dynamics, Mischvorgänge und Extraktion*, Fulda, Germany, 30.-31. März 2009. DECHEMA.
483. V. Fischer and W. Polifke. Modelling and validation of an LES model for ternary mixing based on joint probability discrete distributions using mixing models. *ProcessNet*

Jahrestreffen der Fachausschüsse Computational Fluid Dynamics, Mischvorgänge und Extraktion, Fulda, Germany, 30.-31. März 2009. DECHEMA.

484. S. Föllner, R. Kaess, and W. Polifke. Determination of acoustic scattering coefficients via LES and system identification. *Euromech Colloquium 540 "Large-Eddy Simulation for Aerodynamics and Aeroacoustics"*, Munich, Germany, March, 23-25 2009. Euromech.
485. J. E. Carneiro, V. Kaufmann, and W. Polifke. Implementation of a Moments Model in OpenFOAM for Polydispersed Multiphase Flows. *Open Source CFD Int'l Conference*, 2008.
486. V. Fischer and W. Polifke. Modellierung der Varianz- und Kovarianztransportgleichung für Large-Eddy-Simulation (LES) mit Vermischungsvorgängen. *16. DGLR-Fach-Symposium STAB*, pages 142,143, Aachen, Nov. 3-4 2008. STAB.
487. D. Wenger, W. Polifke, and E. Schmidt-Ihn. Desorption simulation of a highly dynamic metal hydride storage system. *European COMSOL Conference 2008*, Hannover, Nov 4-8 2008.
488. J. N. E. Carneiro, V. Kaufmann, and W. Polifke. Development of a CFD-based moments model for polydispersed multiphase flows. *2nd OpenFOAM Workshop*, Milano, Italy, July 10–11 2008.
489. S. Föllner, F. Selimefendigil, and W. Polifke. Linear identification of the unsteady heat transfer of a cylinder in pulsating crossflow. *Int. Conf. on Jets, Wakes and Separated Flows*, Berlin, Germany, September 16-19 2008. Technical University Berlin.
490. F. Selimefendigil, S. Föllner, and W. Polifke. Nonlinear identification of the unsteady heat transfer of a cylinder in pulsating crossflow. *Int. Conf. on Jets, Wakes and Separated Flows*, Berlin, Germany, September 16-19 2008. Technical University Berlin.
491. F. V. Fischer, B. Muralidharan, and W. Polifke. Simulation of ternary mixing in a co-annular jet in crossflow. *Int. Conf. on Jets, Wakes and Separated Flows*, Berlin, Germany, September 16-19 2008. Technical University Berlin.
492. S. Föllner, R. Kaess, and W. Polifke. Reconstruction of acoustic transfer matrices from large-eddy-simulations of complex turbulent flows. *14th AIAA/CEAS Aeroacoustics Conference (29th AIAA Aeroacoustics Conference)*, AIAA-2008-3046, Vancouver, Canada, May 5 – 7 2008. AIAA/CEAS.
493. R. Kaess, A. Huber, and W. Polifke. A time-domain impedance boundary condition for compressible turbulent flow. *14th AIAA/CEAS Aeroacoustics Conference (29th AIAA Aeroacoustics Conference)*, AIAA-2008-2921, Vancouver, Canada, May 5 – 7 2008. AIAA/CEAS.
494. H. Marschall, O. Hinrichsen, and W. Polifke. Numerical simulation of bubble column reactors using a hybrid multiphase-CFD approach. *Jahrestreffen Reaktionstechnik*, Würzburg, Germany, 18.-20. Mai 2008. DECHEMA.
495. T. Komarek and W. Polifke. Reconstruction of premixed flame dynamics by transient CFD and system identification. *2nd GACM Colloquium on Computational Mechanics*. 2nd GACM Colloquium on Computational Mechanics, 10.-12. October, Munich, Germany, 2007.
496. R. Kaess and W. Polifke. A non reflecting boundary condition using wave masking and characteristics based filtering. *2nd GACM Colloquium on Computational Mechanics*. 2nd GACM Colloquium on Computational Mechanics, 10.-12. October, Munich, Germany, 2007.

497. A. Huber and W. Polifke. Time-domain impedance boundary conditions for computational fluid dynamics. *2nd GACM Colloquim on Computational Mechanics*. 2nd GACM Colloquim on Computational Mechanics, 10.-12. October, Munich, Germany, 2007.
498. A. Huber, P. Romann, and W. Polifke. Parameter-based identification of acoustic transfer functions and matrices. *2nd GACM Colloquim on Computational Mechanics*. 2nd GACM Colloquim on Computational Mechanics, 10.-12. October, Munich, Germany, 2007.
499. A. Huber and W. Polifke. Reconstruction of technical premixed flame dynamics by transient CFD and system identification. *11th CEAS-ASC Workshop & 2nd Scientific Workshop of X3 - NOISE: "Experimental and Numerical Analysis and Prediction of Combustion Noise"*, Lisbon, Portugal, Sep 2007.
500. L. Durand, W. Polifke, P. Griebel, and P. Siewert. Development and validation of an LES model for turbulent premixed combustion. *23. Deutscher Flammentag*, Berlin, Sep 2007.
501. P. Bollweg, A. Kaufmann, and W. Polifke. Derivation and application of a poly-celerid method for poly-dispersed two-phase flows. *ICMF 2007 - Int. Conf. on Multiphase Flow*, Leipzig, Germany, 9. -13. July 2007.
502. V. Fischer, F. Schwertfirm, M. Manhart, and W. Polifke. Statistical distributions of mixture fractions observed in DNS of turbulent ternary mixing. *11th Int. Conf. on Numerical Combustion*, Grenada, Spain, 2006. SIAM.
503. J. Kopitz, E. Bröcker, and W. Polifke. Characteristics-based filter for identification of acoustic waves in numerical simulation of turbulent compressible flow. *12th Int. Congress on Sound and Vibration (ICSV12)*, 389, Lisbon, Portugal, July 11-14 2005. IIAV.
504. J. Kopitz and W. Polifke. Stability analysis of thermoacoustic systems by determination of the open-loop-gain. *12th Int. Congress on Sound and Vibration (ICSV12)*, Lisbon, Portugal, July 11-14 2005. IIAV.
505. L. Durand, A. Huber, and W. Polifke. Implementation and validation of LES models for inhomogeneously premixed turbulent combustion. *European Combustion Meeting ECM 2005*, Louvain-la-Neuve, Belgium, April 3-6 2005.
506. C. Heinz, M. Brandt, and W. Polifke. Optimization of rate coefficients for global reaction mechanisms using a nested genetic algorithm. *European Combustion Meeting ECM 2005*, Louvain-la-Neuve, Belgium, April 3-6 2005.
507. A. M. G. Gentemann, W. Polifke, P. Flohr, B. Schuermans, W. Krebs, and J. Lepers. Flammen-Transferfunktionen basierend auf transienter CFD und Systemidentifikation. *9. Statusseminar der AG Turbo – Verbundprojekt für ein CO₂-armes Kraftwerk "500 MW auf einer Welle"*, Köln-Porz, Dec. 1-2 2004.
508. S. W. Yuen, A. M. G. Gentemann, and W. Polifke. Influence of boundary reflection coefficient on the system identifiability of acoustic two-ports. *11th Int. Congress on Sound and Vibration (ICSV11)*, pages 3501–3508, Saint-Petersburg, Russia, July 5-8 2004. IIAV.
509. W. Polifke and C. Wall. Partially reflecting and non-reflecting boundary conditions for simulation of compressible viscous flow. *11th Int. Congress on Sound and Vibration (ICSV11)*, pages 813–820, St. Petersburg, Russia, July 5-8 2004. IIAV.
510. E. Gharaibah and W. Polifke. A model for multi-phase flows based on presumed number density functions – implementation in CFX 5.7 and validation against vertical pipe flow data. *CFX User Conference*, Dresden, April 2004.

511. L. Durand, W. Polifke, D. Rieger, J. Yan, and J. Sesterhenn. Implementation and validation of models for premixed turbulent combustion in a LES/DNS solver. *SFB 568-Workshop*, Heidelberg, 2004.
512. R. Paggiaro, W. Polifke, F. Michl, W. Schütz, and P. Bénard. Cryo-adsorptive hydrogen storage in activated carbon. *Interne Arbeitssitzung DEHEMA-GVC "Adsorption"*, Leipzig, March 31 - April 03 2004. GVC.
513. A. Hanafil, E. H. Atta, W. Polifke, and M. El-Sayed. Simplified lumped model for solid oxide fuel cells. *8th Arab Conference on Materials Science, "Materials for Energy Application"*, Alexandria, Egypt, 18-20 April 2004 2004.
514. J. Pieringer, M. Brandt, W. Polifke, P. Griebel, P. Siewert, D. B. R., A. Inauen, and W. Kreutner. Anwendung von Modellen der turbulenten Flammengeschwindigkeit auf einen vorgemischten Strahlbrenner. *21. Deutscher Flammentag*, pages 629–634, Cottbus, D, September 2003.
515. W. Polifke and A. M. G. Gentemann. Order and realizability of impulse response filters for accurate identification of acoustic multi-ports from transient CFD. *10th Int. Conf. on Sound and Vibration*, pages 759–766, Stockholm, Sweden, July 2003. IIAV.
516. S. Evesque, W. Polifke, and C. Pankiewitz. Spinning and azimuthally standing acoustic modes in annular combustors. *9th AIAA/CEAS Aeroacoustics Conference*, AIAA 2003-3182, Hilton Head, S.C., U.S.A., May 2003.
517. A. M. G. Gentemann, A. Fischer, S. Evesque, and W. Polifke. Acoustic transfer matrix reconstruction and analysis for ducts with sudden change of area. *9th AIAA/CEAS Aeroacoustics Conference*, AIAA 2003-3142, Hilton Head, S.C., U.S.A., May 2003. AIAA.
518. M. Brandt, E. Gharaiabah, and W. Polifke. Anzahl- und Wahrscheinlichkeitsdichtefunktionen zur Modellierung turbulenter Strömungen mit Mischung oder Reaktion. *Arbeitssitzung GVC Fachausschüsse "Mischvorgänge" und "CFD"*, Berlin, March 2003. VDI.
519. E. Gharaiabah, M. Brandt, and W. Polifke. A numerical model of dispersed two phase flows in aerated stirred vessels based on presumed shape number density functions. *German-Japanese Workshop on Multi-Phase Flow*, pages E1–E10, Karlsruhe, Germany, August 2002. Forschungszentrum Karlsruhe GmbH.
520. M. Brandt and W. Polifke. Tabulation of Mean Reaction Rates from Multivariate, Correlated Distributions with a Monte Carlo Method. *9th Int. Conference on Numerical Combustion*, Sorrento, Italy, April 2002. SIAM.
521. M. Brandt and W. Polifke. Statistical description of mixing processes to calculate mean reaction rates using a Monte Carlo method. *1st (International) SFB 568 Workshop*, Darmstadt, 2002.
522. E. Gharaiabah and W. Polifke. A Numerical Model for the Simulation of Dispersed Two Phase Flows based on Presumed Shape Number Density Functions. *10th Workshop on Two-Phase Flow Predictions*, Merseburg, Germany, April 2002. ERCOFTAC.
523. C. Pankiewitz, S. Evesque, W. Polifke, and T. Sattelmayer. Stabilitätsanalyse der Verbrennung in Gasturbinen unter Anwendung von modalen Ansätzen und Finite-Element-Methoden. *DGLR-Fachsymposium "Berechnungsverfahren für Brennkammerströmungen in Raketen- und Gasturbinenbrennkammern"*, Stuttgart, Jan. 2002. DLR.
524. C. Pankiewitz, S. Evesque, W. Polifke, and T. Sattelmayer. Stability Analysis of Annular Gas Turbine Combustors. *LECT Workshop on Instabilities in Aero-Engine Combustors*, Stuttgart, Dec. 2001.

525. W. Polifke, C. Hirsch, A. Fischer, and T. Sattelmayer. Instabilität eines Vormischbrenners mit nicht-monotoner Druckverlust-Kennlinie. *20. VDI Flammentag*, VDI Bericht 1629, pages 277–282, Essen, September 2001.
526. W. Polifke, B. Müller, and H. K. Yee. Sound Emission of Rotor Induced Deformations of Generator Casings. *7th AIAA/CEAS Aeroacoustics Conference*, AIAA 2001-2274, Maastricht, The Netherlands, 2001.
527. W. Polifke, J. Kopitz, and A. Serbanovic. Impact of the Fuel Time Lag Distribution in Elliptical Premix Nozzles on Combustion Stability. *7th AIAA/CEAS Aeroacoustics Conference*, AIAA 2001-2104, Maastricht, The Netherlands, 2001.
528. C. O. Paschereit, P. Flohr, W. Polifke, and M. Bockholts. Fluid Dynamic Instabilities in a Swirl Stabilized Burner and their Effect on Heat Release Fluctuations. *Proceedings of Flow Induced Vibrations*, Luzern, Switzerland, 2000.
529. W. Polifke, C. O. Paschereit, and K. Döbbeling. Suppression of combustion instabilities through destructive interference of acoustic and entropy waves. *6th. Int. Conf. on Sound and Vibration*, Copenhagen, Denmark, 1999.
530. F. Dinkelacker, A. Soika, D. Most, A. Leipertz, K. Döbbeling, and W. Polifke. Untersuchungen zur verbrennungsstruktur in turbulenten industriellen drallflammen. *10. Internationale VGB-Konferenz "Forschung für die Kraftwerkstechnik 1998"*, Essen, Germany, 11./12. Februar 1998.
531. W. Polifke, M. Kranenborg, and C. O. Paschereit. Linear Stability Analysis of Viscous Swirling Flow. *Euromech Colloquium 377*, Prague, CZ, 1998.
532. D. Cokljat, W. Polifke, and P. Wild. A Non-Adiabatic Method for Calculation of Premixed Flames using Turbulent Flame Speed Closure. *7th Int. Conference on Numerical Combustion*, York, UK, 1998.
533. W. Polifke, A. Poncet, C. O. Paschereit, and K. Döbbeling. Determination of thermoacoustic transfer matrices by time-dependent numerical simulation. *7th Int. Conference on Numerical Combustion*, York, UK, 1998.
534. W. Polifke. Exploiting Radial Pressure Balance for the Prediction of Swirling Flows. *4th CFD Day*, Zürich, Switzerland, 1997.
535. C. O. Paschereit and W. Polifke. Characterization of Lean Premixed Gas Turbine Burners as Acoustic Multi-Ports. *APS/DFD Annual Meeting*, San Francisco, CA, 1997. APS.
536. W. Polifke, C. O. Paschereit, and T. Sattelmayer. A Universally Applicable Stability Criterion for Complex Thermoacoustic Systems. *18. Deutsch-Niederländischer Flammentag*, VDI Bericht, 1313, pages 455–460, Delft, NL, 1997. Verein Deutscher Ingenieure (VDI).
537. V. A. Zimont, W. Polifke, M. Bettelini, and W. Weisenstein. An Efficient Computational Model for Premixed Turbulent Combustion at High Reynolds Numbers based on a Turbulent Flame Speed Closure. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 97-GT-395, Orlando, FL, 1997.
538. M. Bettelini, W. Polifke, W. Geng, U. C. Müller, W. Weisenstein, and K. Döbbeling. Comparison of combustion models for lean premixed gas turbine combustion. *Combustion Technologies for a Clean Environment*, volume 4. Gordon and Breach Science Publishers Ltd., 1997.

539. C. O. Paschereit and W. Polifke. Some Effects of Mean Flow on Thermoacoustic Oscillations in Gas Turbines. *Euromech Colloquium 352, Mean Flow Effects in Acoustics*, Keele, UK, 1996.
540. T. Sattelmayer, W. Polifke, D. Winkler, and K. Döbbeling. NO_x Abatement Potential of Lean-Premixed GT-Combustors. *ASME Turbo Asia*, Jakarta, Indonesia, 1996.
541. A. Kieftenburg, A. Eroglu, and W. Polifke. The Influence of Mixture Fraction Fluctuations on NO_x Formation in Lean, Imperfectly Premixed Combustion. *Euromech Colloquium 340, Statistical Properties of Turbulent Gaseous Flames*, TU Delft, NL, 1995.
542. W. Polifke, K. Döbbeling, T. Sattelmayer, D. G. Nicol, and P. C. Malte. A NO_x Prediction Scheme for Lean-Premixed Gas Turbine Combustion Based on Detailed Chemical Kinetics. *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 95-GT-108, Houston, Texas, U.S.A., 1995.
543. K. Döbbeling, H. P. Knöpfel, W. Polifke, D. Winkler, C. Steinbach, and T. Sattelmayer. Low NO_x Premixed Combustion of MBTU Fuels Using the ABB Double Cone Burner (EV Burner). *Int'l Gas Turbine and Aeroengine Congress & Exposition*, ASME 94-GT-394, Birmingham, UK, 1994.
544. W. Polifke, K. Döbbeling, and T. Sattelmayer. Lean Blow-Out Limits of Thick Turbulent Premix Flames in the Limit of High Activation Energies. *Proceedings of the Anglo-German Meeting of the Combustion Institute*, Cambridge, UK, 1993. Combustion Institute.
545. S. Kampmann, T. Seeger, A. Leipertz, W. Polifke, and K. Döbbeling. CARS and 2D Rayleigh Temperature Measurements in a Turbulent Industrial Swirl Combustor. *Proceedings of the Anglo-German Meeting of the Combustion Institute*, Cambridge, UK, 1993. Combustion Institute.
546. P. Senior, E. Lutum, W. Polifke, and T. Sattelmayer. Combustion Technology of the ABB GT13E2 Annular Combustor. *20th Int. Congress on Combustion Engines*, Paper G22, London, UK, 1993. CIMAC.
547. L. Shtilman and W. Polifke. On the Energy Cascade and the Reduction of Nonlinearity in decaying Turbulence. *Proceedings of the IUTAM Symposium on "Topological Fluid Mechanics"*, Cambridge, UK, 1990. Cambridge University Press.
548. W. Polifke and E. Levich. The Entangledness of Vortex Lines in Turbulent Flow. *Proceedings of the IUTAM Symposium on "Topological Fluid Mechanics"*, Cambridge, UK, 1990. Cambridge University Press.
549. W. Polifke and L. Shtilman. Helicity and the Transfer of Energy in Decaying Turbulence. *APS/DFD Annual Meeting*, Buffalo, NY, 1988. APS.