

Publications Wolfgang Polifke

August 19, 2019

Reviewed journal articles or conference proceedings

1. M. Meindl, A. Albayrak, and W. Polifke. A discontinuous Galerkin finite element method for thermoacoustic stability analysis based on the linearized Navier-Stokes equations. *under review for J. Sound Vib*, 2019.
2. S. van Buren, A. Cárdenas Miranda, and W. Polifke. Large Eddy Simulation of Enhanced Heat Transfer in Pulsatile Turbulent Channel Flow. *Int. J. Heat Mass Transfer*, 2019. submitted.
3. A. Albayrak, M. P. Juniper, and W. Polifke. Propagation speed of inertial waves in cylindrical swirling flows. *J. Fluid Mech.*, accepted, 2019.
4. A. Ghani, T. Steinbacher, A. Albayrak, and W. Polifke. Intrinsic thermoacoustic feedback loop in turbulent spray flames. *Comb. and Flame*, 205(7):22–32, 2019.
5. A. Avdonin, A. Javareshkian, and W. Polifke. Identification of premixed turbulent flame dynamics from an LES with stochastic fields and tabulated chemistry. *ASME Turbo Expo 2019: Turbomachinery Technical Conference and Exposition*, GT2019-90140, Phoenix, USA, 2019.
6. M. McCartney, M. Häringer, Matthias, 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, Pheonix, Arizona, 2019. ASME.
7. 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, June 2019. ASME.
8. M. Häringer 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.
9. 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.
10. M. Merk, R. Gaudron, C. Silva, M. Gatti, C. Mirat, T. Schuller, and W. Polifke. 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.
11. 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.
12. 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.

13. 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.
14. D. Rouwenhorst, J. Hermann, and W. Polifke. In Situ Identification of Thermoacoustic Stability in Annular Combustors. *Int. J. Spray and Combustion Dynamics*, 10(4):351–361, 2018.
15. 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.
16. 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. *Int. J. Spray Combust. Dyn.*, 2018.
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20. A. Ghani, M. Häringer, 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.
21. A. Avdonin, M. Meindl, and W. Polifke. Thermoacoustic analysis of a laminar premixed flame using a linearized reacting flow solver. *37th Int'l Symposium on Combustion*, Dublin, Ireland, 2018.
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26. 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.
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28. 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.
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35. 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, 2019.
36. 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.
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