

PUBLICATIONS

Refereed Journal Publications

- [1] Rajamanickam, P. and Daou, J. Effect of shear flow on the Darrieus–Landau instability in a Hele-Shaw channel. *Submitted (2023)*
- [2] Kelly, A., Rajamanickam, P., Daou, J. and Landel, J. Three-dimensional diffusive-thermal instability of flames propagating in a plane Poiseuille flow. *Submitted (2023)*
- [3] Daou, J. and Rajamanickam, P. Premixed flame stability under shear-enhanced diffusion: Effect of the flow direction. *Physical Review Fluids* 8, 123202 (2023).
- [4] Kelly, A., Rajamanickam, P., Daou, J. and Landel, J. Influence of heat loss on the stability of diffusion flames in a narrow-channel shear flow. *Combustion Science and Technology*, pp. 1-20 (2023).
- [5] Rajamanickam, P. and Daou, J. Effective Lewis number and burning speed for flames propagating in small-scale spatio-temporal periodic flows. *Combustion and Flame* 258, (2023).
- [6] Daou, J. and Rajamanickam, P. Diffusive-thermal instabilities of a planar premixed flame aligned with a shear flow. *Combustion Theory and Modelling*, DOI: 10.1080/13647830.2023.2254734, (2023).
- [7] Rajamanickam, P. and Daou, J. Tricritical point as a crossover between type-Is and type-IIs bifurcations. *Prog. Scale Model. Int. J.*, 4.1:2 (2023) .
- [8] Rajamanickam, P., Kelly, A. and Daou, J. Stability of diffusion flames under shear flow: Taylor dispersion and the formation of flame streets. *Combust. and Flame* 257, (2023).
- [9] Rajamanickam, P. and Daou, J. A thick reaction zone model derived in the premixed Hele Shaw burner configuration. *Combustion Theory and Modelling*, 1-21 (2023) .
- [10] Daou, J., Kelly, A. and Landel J. Flame stability under flow-induced anisotropic diffusion and heat loss. *Combustion and Flame* 248 (2023).
- [11] Xie, S., Yu, D., Daou, J. and Chen, Z. Effects of curvature on triple flame propagation in a counterflow of fuel against oxidizer. *Combustion and Flame* 245 (2022).
- [12] Daou, J. Effect of Taylor dispersion on the thermo-diffusive instabilities of flames in a Hele-Shaw burner. *Combustion Theory and Modelling*, Vol. 25.4, 765-783 (2021).
- [13] Daou, J. and Daou, R. Flame Balls in non-uniform reactive mixtures: differential diffusion, heat-loss and stability. *Combustion Theory and Modelling*, Vol. 23(5), pages 798-820, (2019).
- [14] Daou, J., Pearce, P. and Al-Malki, F. Taylor dispersion in premixed combustion: Questions from turbulent combustion answered for laminar flames. *Physical Review Fluids*, Vol. 3, No. 2, 023201 (2018).
- [15] Pearce, P. and Daou, J. Initiation and evolution of triple flames subject to thermal expansion and gravity. *Proceedings of the Combustion Institute*, Vol. 36, No. 1, 1431-1437 (2017).

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- [17] Pearce, P. and Daou, J. Taylor dispersion and thermal expansion effects on flame propagation in a narrow channel. *Journal of Fluid Mechanics*, vol. 754, 161-183 (2014).
- [18] Daou, J. and Daou, R. Flame Balls in mixing layers. *Combustion and Flame* 161, 2015–2024 (2014).
- [19] Pearce, P. and Daou, J. Rayleigh-Bénard Convection Generated by a Diffusion Flame. *Journal of Fluid Mechanics*, vol. 736, 64-494 (2013).
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- [24] Daou, J. Asymptotic analysis of flame propagation in weakly-strained mixing layers under a reversible chemical reaction. *Combustion Theory and Modelling*, 13:189-213 (2009).
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Conference Proceedings

- [50] Daou, J. and Rajamanickam, P. Premixed flame stability under shear-enhanced diffusion: effect of the flow direction. *Proceedings of the 11th European Combustion Meeting, Rouen, France, April 26-28, (2023)*.

- [51] Rajamanickam, P. and Daou, J. Asymptotic theory of thick reaction zone premixed flames in small-scale periodic flows. *Proceedings of the 11th European Combustion Meeting, Rouen, France, April 26-28, (2023)*.
- [52] Rajamanickam, P., Kelly, A. and Daou, J. Formation of diffusion flame streets due to Taylor dispersion. *Proceedings of the 11th European Combustion Meeting, Rouen, France, April 26-28, (2023)*.
- [53] Daou, J., Rajamanickam, P., Kelly, A. and Landel, J. Effect of a shear flow on the stability of premixed and non-premixed flames *Proceedings of the 14th Asia-Pacific Conference on Combustion, ADNEC, Kaohsiung, Taiwan 14th-18th May 2023*.
- [54] Xie, S., Daou, J. and Chen, Z. Effects of curvature on triple flame propagation in a counterflow. *Proceedings of the 13th Asia-Pacific Conference on Combustion, ADNEC, Abu Dhabi, UAE, 5-9 December 2021*.
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