

Publications List – Gershon Kats

Peer reviewed journals

• פרסומים לפני הדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats**, J.B. Greenberg, *Application of a non-asymptotic approach to prediction of the propagation of a flame through a fuel and/or oxidant droplet cloud*, Applied Mathematical Modeling 37, pp. 7427-7441, 2013.
2. **G. Kats**, J.B. Greenberg, *On Laminar Rich Premixed Polydisperse Spray Flame Propagation with Heat Loss*, Journal of Combustion, Volume 2016, Article ID 1069873, 14 pages, 2016.

• פרסומים מהדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats**, J.B. Greenberg, *Stagnation-point spray flame ignition by an isothermal surface*, Journal of Engineering Mathematics, Vol. 110(1) pp. 181-194, 2018.
2. **G. Kats**, J.B. Greenberg, *Forced thermal ignition of a polydisperse fuel spray*, Combustion Science and Technology Vol. 190 (5), pp. 849-877, 2018.
3. **G. Kats**, J.B. Greenberg, *Stagnation-point polydisperse spray flame ignition*, Combustion Theory and Modeling, 23(5), pp. 771-797, 2019.
4. **G. Kats**, J.B. Greenberg, *An Improved Model for Investigating the Effect of Spray Polydispersity on Laminar Premixed Spray Flame Ignition*, Atomization and Sprays, 30(12), pp. 895 – 911, 2020.
5. **G. Kats**, J.B. Greenberg, *Polydisperse spray flame ignition by a pulsed heat flux*, International Journal of Spray and Combustion Dynamics, Volume 13 , Issue 1-2, pp. 35-53, 2021.

Conference proceedings(*Oral Presenter)

• פרסומי כנסים לפני הדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats***, J.B. Greenberg, *Analysis of a non-premixed edge-flame with a fuel spray in a counter flow*, 50th Israel Annual Conference on Aerospace Sciences 2010 Proceedings, Tel Aviv, Israel.
2. **G. Kats***, J.B. Greenberg, *Application of a new approach to the analysis of premixed spray flames*, 51st Israel Annual Conference on Aerospace Sciences 2011 Proceedings, Tel Aviv, Israel.
3. **G. Kats***, J.B. Greenberg, *A non-asymptotic mathematical analysis of a double spray premixed flame*, 52nd Israel Annual Conference on Aerospace Sciences 2012 Proceedings, Tel Aviv, Israel.
4. **G. Kats***, J.B. Greenberg, *A non-asymptotic mathematical analysis of premixed spray flame propagation with heat loss*, 55th Israel Annual Conference on Aerospace Sciences 2015 Proceedings, Tel Aviv, Israel.
5. **G. Kats***, J.B. Greenberg, *Volumetric and spray-related heat loss effects in flame ignition*, 29th Annual Symposium of the Israeli Section of the Combustion Institute, December 10th 2015, Tel Aviv, Israel.

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6. **G. Kats***, J.B. Greenberg, *Analysis of the ignition of a combustible fuel spray-oxidant mixture*, AIAA paper 2016-1209, 54th AIAA Aerospace Sciences Meeting 4-8 January 2016, San Diego, California, USA.
7. **G. Kats***, J.B. Greenberg, *Volumetric and spray-related Heat Loss effects in Laminar Premixed Polydisperse Spray Flame Propagation*, 56th Israel Annual Conference on Aerospace Sciences 2016 Proceedings, Tel Aviv, Israel.
8. **G. Kats***, J.B. Greenberg, *Spray Ignition by a Heated Slab*, 27th Annual Conference on Liquid Atomization and Spray Systems, 4-7 September 2016, Brighton, UK.
9. **G. Kats***, J.B. Greenberg, *On conditions for forced ignition of a fuel spray/oxidant mixture*, 57th Israel Annual Conference on Aerospace Sciences 2017 Proceedings, Tel Aviv, Israel.
10. **G. Kats***, J.B. Greenberg*, *Theory of stagnation point spray flame ignition*, 28th Annual Conference on Liquid Atomization and Spray Systems, September 2017, Valencia, Spain.
11. **G. Kats***, J.B. Greenberg, *Influence of Polydispersity on Spray Ignition*, 31st Annual Symposium of the Israeli Section of the Combustion Institute, December 2017, Tel Aviv, Israel.

• פרסומי כנסים מהדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats***, J.B. Greenberg, *Influence of mixture stoichiometry on stagnation-point spray flame ignition*, 58th Israel Annual Conference on Aerospace Sciences 2018 Proceedings, Tel Aviv, Israel.
2. **G. Kats***, J.B. Greenberg, *Polydisperse Spray Stagnation Point Ignition: Analytical and Numerical Studies*, 59th Israel Annual Conference on Aerospace Sciences 2019 Proceedings, Haifa, Israel.
3. **G. Kats***, J.B. Greenberg, *On the critical Heat Energy Flux for Spray Ignition by a semi-Infinite Heated Surface*, 33rd Annual Symposium of the Israeli Section of the Combustion Institute, December 2019, Tel Aviv, Israel.
4. **G. Kats***, J.B. Greenberg, *Development of Fuel Spray Flame Ignition by a Heated Surface*, 60th Israel Annual Conference on Aerospace Sciences 2020 Proceedings, Tel Aviv, Israel.
5. **G. Kats***, J.B. Greenberg, *Laminar Multi-Component Spray Diffusion Flame*, 35th Annual Symposium of the Israeli Section of the Combustion Institute, December 2021, Tel Aviv, Israel.

Posters

• פוסטרים לפני הדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats***, J.B. Greenberg, *Stagnation-Point Ignition of a Fuel Spray-oxidant Mixture*, 30th Annual Symposium of the Israeli Section of the Combustion Institute, December 2016, Tel Aviv, Israel.

• פוסטרים מהדרגה האחרונה (2018 - דרגת ג'ויס)

1. **G. Kats***, A. Shimony, *Dual-mode structure merger dynamics on flame fronts due to Darrieus-Landau instability*, 33rd Annual Symposium of the Israeli Section of the Combustion Institute, December 2019, Tel Aviv, Israel.