

• **Articles in international and national conferences and other general articles**

1. Santosh Paidi, B. Amrutha, M. Akram, Sudarshan Kumar, "Laminar burning velocity of H_2-N_2/CO_2 -air mixtures at elevated temperatures," *24th International Colloquium on Dynamics of Reactive and Explosive Systems*, Taipei, Taiwan, July 28th – August 3rd, 2013.
2. M. Akram and Sudarshan Kumar, "On the variation of laminar burning velocity temperature exponent with equivalence ratio," *24th International Colloquium on Dynamics of Reactive and Explosive Systems*, Taipei, Taiwan, July 28th – August 3rd, 2013.
3. Santosh Paidi, B. Amrutha, M. Akram, Sudarshan Kumar, "9th Asia Pacific Combustion Conference, Gyeongju Hilton, Gyeongju, South Korea 19th – 22nd May 2013.
4. M. Akram, Sudarshan Kumar, "Laminar Burning Velocity of Hydrocarbon Fuel-Air Mixtures at Elevated Temperatures," 9th Asia Pacific Combustion Conference, Gyeongju Hilton, Gyeongju, South Korea 19th – 22nd May 2013.
5. V. Mahendra Reddy, Sudarshan Kumar, "Development of high intensity ultra-low emission combustor with biodiesel," 4th International symposium on Energy and Environment: ACCESS. Dec 9-12, 2012, IIT Bombay, India.
6. Ajit K Dubey, Sudarshan Kumar, "Large eddy simulations of vortical instabilities in segmented solid rocket motors," 26th National Convention of Aerospace engineers, Nov 24-25, 2012, Hyderabad, India.
7. Sudipto Das, Sudarshan Kumar, "Numerical simulation of an optimized strut-based fuel-injection system for a scramjet combustor," 26th National Convention of Aerospace engineers, Nov 24-25, 2012, Hyderabad, India.
8. Jasmine Kaur, M. Akram, S. Minaev, R. Fursenko, Sudarshan Kumar, "On the formation of FREI inside preheated mesoscale tube," National Propulsion Conference, Feb 21-23, 2013, IIT Madras, India.
9. Darshan Sawant, V Mahendra Reddy, Sudarshan Kumar, "Development of combustor for achieving flameless combustion of liquid fuels," National Propulsion Conference, Feb 21-23, 2013, IIT Madras, India.
10. S. Sarkar, Arun Jaura, Sudarshan Kumar, "Evolution of Aircraft Gas Turbine Power Management System," 2013 IEEE aerospace conference, March 2- 9, 2012, Montana, USA.
11. M. Akram, P. Saxena, Sudarshan Kumar, "Laminar burning velocity of LPG-air mixtures at elevated temperatures," ASME 2012 Gas Turbine India Conference, Dec 1, 2012, Mumbai, Maharashtra, India
12. V. Mahendra Reddy, Darshan Sawant, Sudarshan Kumar, "Study on optimization of a liquid fuel based low emission combustor," ASME 2012 Gas Turbine India Conference, Dec 1, 2012, Mumbai, Maharashtra, India
13. Akram Mohammad, Sudarshan Kumar, V Ratna Kishore, "Measurement of Laminar burning velocity for Propane/ CO_2/N_2 / air mixtures at elevated temperatures" WiPP Progress poster W2P047, 34th International Symposium on Combustion, 29th July -3rd August Warsaw, Poland, 2012.

14. Akram Mohammad, Sudarshan Kumar, Priyank Saxena, "Laminar burning velocity of methane-air mixtures at elevated temperatures" WiPP Progress poster W5P004, 34th International Symposium on Combustion, 29th July -3rd August Warsaw, Poland, 2012.
15. M. Akram, Priyank Saxena, Sudarshan Kumar, "Laminar burning velocity of LPG-air mixture at elevated temperatures," ASME 2012, Gas Turbine Conference, Dec. 1, 2012, Mumbai India.
16. V. Mahendra Reddy, Darshan Sawant, Darshan Trivedi, Sudarshan Kumar, "Studies on Optimization of a Liquid Fuel Based Low Emission Combustor," ASME 2012, Gas Turbine Conference, Dec. 1, 2012, Mumbai India.
17. R. N. Roy, S. Kumar and S. Sreedhara, "CMC modeling of turbulent lifted methane air flame in vitiated coflow," International Congress on Computational Mechanics and Simulation (ICCMS), IIT Hyderabad, 10-12 December 2012.
18. Nandan Kulkarni, Sudarshan Kumar, "A Novel Concept of Active Combustion Instability Control in Solid Rocket Motors through H₂O₂ Capillary Injection," *18th AIAA/CEAS Aeroacoustics Conference*, 4-6th June 2012, Colorado Springs, Colorado, USA
19. S. Minaev, R. Fursenko, A. Fan, **Sudarshan Kumar**, Kaoru Maruta, "Oscillating and rotating flame patterns in Microchannels," *8th International conference on flow dynamics*, Tohoku University, Sendai Japan Nov. 9-11 2011.
20. M. Akram, R. Fursenko, S. Minaev, **Sudarshan Kumar**, "Flame propagation in diverging microchannels" *8th International conference on flow dynamics*, Tohoku University, Sendai Japan Nov. 9-11 2011.
21. N. Sachdeva, U. W. Taywade, A. Deshpande, **Sudarshan Kumar**, "Experimental studies on flame stabilization in a three step microcombustor," *22nd National conference on I. C. Engines and Combustion*, 10-13th Dec 2011, NIT Calicut, India.
22. D. Sawant, V. M. Reddy, D. Trivedi, **Sudarshan Kumar**, "Computational analysis to determine the optimal burner geometry for achieving flameless combustion with liquid fuels," *22nd National conference on I. C. Engines and Combustion*, 10-13th Dec 2011, NIT Calicut, India.
23. R. Jithendra, S. Kumar, **Sudarshan Kumar**, "Active control of lean premixed combustion instabilities in a notional gas turbine combustor," *22nd National conference on I. C. Engines and Combustion*, 10-13th Dec 2011, NIT Calicut, India.
24. V M Reddy, D. Trivedi, **Sudarshan Kumar**, "Investigation of lifted flame dynamics with biodiesel in coflow field," International Conference on Advances in Energy Research, Indian Institute of Technology Bombay, Dec., 9-11, 2011.
25. M. Akram, **Sudarshan Kumar**, "Laminar burning velocity of LPG-air mixtures using mesoscale diverging channel," International Conference on Advances in Energy Research, Indian Institute of Technology Bombay, Dec., 9-11, 2011.
26. Nandan Kulkarni, **Sudarshan Kumar**, "Investigating the role of H₂O₂ injection on the combustion of composite propellants," *8th international high energy materials conference and exhibit*, TBRL, Chandigarh, 10-12 Nov. 2011.
27. P. Sunitha, Z. Jelic, **Sudarshan Kumar**, H.Amer, Adalat Ali¹, J.RamMohan, "Analysis on grain structural integrity of gun launched rocket assisted projectile – range enhanced projectile (REP)," *8th international high energy materials conference and exhibit*, TBRL, Chandigarh, 10-12 Nov. 2011.
28. A. Dixit, **Sudarshan Kumar**, "Numerical Simulation scheme for Nose shaped Charge for analysis, design and performance optimization," *8th international high energy*

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29. A. A. Deshpande, **Sudarshan Kumar**, "Experimental studies on flame stabilization in backward facing step microcombustors," 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, San Diego, USA, (2011).
 30. M. Akram, **Sudarshan Kumar**, "Experimental Studies on the Dynamics of Premixed Methane-Air Flames in Various Aspect Ratio Channels," 23rd International Colloquium on Dynamics of Reactive and Explosive Systems, University of California, Irvine, USA, 24-29 July 2011.
 31. V. M. Reddy, Darshan Trivedi, **Sudarshan Kumar**, "Experimental investigations on lifted spray flames in a co-flow field," 23rd International Colloquium on Dynamics of Reactive and Explosive Systems, University of California, Irvine, USA, 24-29 July 2011.
 32. S Sheelam and Sudarshan Kumar, "Optimization of a strut based fuel injection system for a supersonic combustor," 8th Asia Pacific Conference on Combustion Hyderabad India (2010).
 33. M Akram and Sudarshan Kumar, "Flame dynamics in mesoscale diverging channels," 8th Asia Pacific Conference on Combustion Hyderabad India (2010).
 34. Prashant B. Nehe, Dr. Sudarshan Kumar and Dr. D.R. Pangavhane, "Flame Stability in Swiss-roll Microcombustors and their application in Micro-reformers for Syngas Generation," *PEA-AIT International Conference on Energy and Sustainable Development: Issues and Strategies (ESD 2010, Chiang Mai, Thailand)*.
 35. B. Khandelwal, **Sudarshan Kumar**, "Flame stabilization studies on a backward facing step configuration based microcombustor," 6th International Conference on Flow Dynamics, Tohoku University, Sendai Japan, November 4-6, 2009.
 36. Prashant B. Nehe, **Sudarshan Kumar**, "Numerical modeling of flame stabilization in Swiss-roll combustors," 21st National Conference on IC engines and Combustion, BIET, Davangere, 10th -12th Dec. 2009.
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 38. S. K. Goel, **Sudarshan Kumar**, "Modeling of lifted jet flames using a new flame extinction flame model." 22nd International Colloquium on Dynamics of Reactive and Explosive Systems, Luikov Heat and Mass Transfer Institute, Minsk, Belarus, 27-31st July 2009.
 39. **Sudarshan Kumar**, "Flame stabilization characteristics in diverging channels," International Conference and Exhibition on Aerospace Engineering, Indian Institute of Science Bangalore, India, May 18-22, 2009.
 40. **Sudarshan Kumar**, A. Fan, S. Minaev, K. Maruta, "Effect of wall temperature gradient on the stability of cylindrical flames," Proceedings of Combustion Institute, WiPP 12-19 (2008), McGill University, Montreal, Canada.
 41. Karan Govil, and **Sudarshan Kumar**, "Analysis of non-recoverable stall and other instabilities using Moore Greitzer model," 44th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit, 20 - 23 July (2008).
 42. S. Rajkumar, A. Dudi, **Sudarshan Kumar**, I N Namboothiri, "Synthesis and evaluation of polycyclic high energy density fuels," [The 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008.](#)

43. A. Fan, S. Minaev, **Sudarshan Kumar**, W. Liu, K. Maruta, "Pattern transitions from traveling flames to rotating Pelton like flames in a radial microchannel," Seventh International symposium on Advanced Fluid Information and Fourth International symposium on Transdisciplinary Fluid Integration, Sendai, Japan, December 14-16, 2007.
44. **Sudarshan Kumar**, A. Fan, S. Minaev, K. Maruta, "Numerical analysis of heat transfer for an externally heated radial microchannel," The fourth International conference on Flow dynamics, Sendai Japan, September 26-28, 2007.
45. A. Fan, S. Minaev, **S. Kumar**, W. Liu, K. Maruta, "On the transition from a circular flame to a traveling flame in a radial microchannel," Fourth International conference on Flow dynamics, Sendai Japan, September 26-28, 2007.
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56. **Sudarshan Kumar**, P J Paul, H S Mukunda, "High Intensity-Low emission Burners, Insights through Experiments and Computations," International Workshop on Modern Advances in Combustion, IIT Madras 31st Aug.-1st Sept. 2001.
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