Mirko Gamba

Education

The University of Texas at Austin	Mechanical Engineering	MSE	2002
Politecnico di Milano	Mechanical Engineering	Laurea	2003
The University of Texas at Austin	Aerospace Engineering	Ph.D.	2009

Professional Experience

2018 –	Associate Professor, Aerospace Engineering, University of Michigan
2019 –	Associate Direction, University of Michigan Space Institute
2012 – 2018	Assistant Professor, Aerospace Engineering, University of Michigan
2009 – 2012	Postdoctoral Scholar, Stanford University

Awards and Honors

- AIAA High Speed Air Breathing Propulsion Best Paper, AIAA Scitech Forum, 2019
- U.S. Air Force Summer Faculty Fellowship, 2015
- U.S. Air Force Summer Faculty Fellowship, 2014
- AFOSR Young Investigator Award, 2014
- AIAA Propellants and Combustion Best Paper, AIAA Scitech Forum, 2011
- AIAA Aerodynamic Measurement Technology Best Paper, AIAA Scitech Forum, 2011
- ENI Fellowship in Mechanical Engineering, Politecnico di Milano, Italy, 2000-2002

Select Publications

(1) F. C. Alex Feleo and M. Gamba. "Effects of heat release distribution on detonation properties in a H_2/air rotating detonation combustor from OH* chemiluminescence". In 2019 AIAA Propulsion and Energy Conference (2019).

(2) F. Chacon and M. Gamba. "Detonation wave dynamics in a rotating detonation engine". In AIAA Scitech 2019 Forum, Paper No. AIAA-2019-0198 (2019).

(3) F. Chacon and M. Gamba. "Study of parasitic combustion in an optically accessible continuous wave rotating detonation engine". In 2019 AIAA Scitech Forum, Paper No. AIAA-2019-0473 (2019).

(4) F. Chacon and M. Gamba. "Effects of secondary waves on rotating detonation combustor properties". In 27th International Colloquium on the Dynamics of Explosions and Reactive Systems (2019).

(5) J. Duvall, F. Chacon, C. Harvey, and M. Gamba. "Study of the effects of various injection geometries on the operation of a rotating detonation engine". In 2018 AIAA Scitech Forum, Paper No. AIAA-2018-0631 (2018).

(6) R. L. Hunt, J. F. Driscoll, and M. Gamba. "On the origin and propagation of perturbations that cause shock train inherent unsteadiness". Journal of Fluid Mechanics, 861:815-859 (2018).

(7) R. L. Hunt and M. Gamba. Shock train unsteadiness characteristics, oblique-to-normal transition, and three-dimensional leading shock structure. AIAA Journal, pages 1-19, 2017.

(8) Y. Abul-Huda and M. Gamba. Flow characterization of a hypersonic expansion tube facility. J. Propulsion Power, 2017.
(9) Y. Abul-Huda and M. Gamba. Test-model-induced interference effects in expansion tube flows. AIAA J., 54(7):2171-2178, 2016.
(10) R. R. Morajkar, R. L. Klomparens, W. E. Eagle, J. F. Driscoll, M. Gamba, and J. A. Benek. Relationship between intermittent separation and vortex structure in a low-aspect ratio 3D shock wave-boundary layer interaction. AIAA J., 54(6):1862-1880, 2015.
(11) V. A. Miller and M. Gamba. Flow field and turbulence characterization of a counter impinging jet reactor using PIV. J. Fluids Eng., 135(9):091203-091203-10, 2013.
(12) M. Gamba, N. T. Clemens, and O. A. Ezekoye. Volumetric PIV and 2D OH PLIF imaging in the far field of a low-Reynolds number nonpremixed jet flames. Meas. Sci. Technol., 24:024003, 2013.

Synergistic Activities

Teaching: Introduction to Gas Dynamics, Compressible Flow.
Reviewing: Experiments in Fluids, Measurement Science and Technology, AIAA Journal, Experimental Thermal and Fluid Science, Advances in Mechanical Engineering.
Member: AIAA, APS, CombustionInstitute, SigmaXi