

## LIST OF PUBLICATIONS

### Refereed Journals

- S. Nogar, A. Serrani, **A. Gogulapati**, J. J. McNamara, M. W. Oppenheimer, and D. B. Doman, "Design and Evaluation of a Model-Based Decoupling Controller for Flapping Wing Micro Air Vehicles," Articles in Advance, Online Print, AIAA Journal of Guidance, Navigation, Control, and Dynamics, 2018.
- K. R. Brouwer, **A. Gogulapati**, and J. J. McNamara, "Interplay of Surface Deformation and Shock-Induced Separation in Shock/Boundary Layer Interactions," AIAA Journal, Vol. 55, No. 12, 2017, pp. 4258-4273.
- S. Nogar, **A. Gogulapati**, J. J. McNamara, and A. Serrani, "Comprehensive Modelling of Flapping Wing Micro Air Vehicles," Vol. 40, No. 7, AIAA Journal of Guidance, Navigation, Control, and Dynamics, 2017, pp. 1664-1679.
- R. Deshmukh, Z. Liang, **A. Gogulapati**, J. J. McNamara, and J. Z. Kolter, "Basis Identification for Reduced Order Modeling of Unsteady Flows Using Sparse Coding," Journal of Fluid Mechanics, Vol. 808, pp. 189-223.
- J. LaFontaine, **A. Gogulapati**, J. J. McNamara, and B. A. Miller, "Effects of Strain Hardening on Fluid-Thermal-Structural Interactions," AIAA Journal, Vol. 54, 2016, pp. 1974-1986.
- **A. Gogulapati**, P. P. Friedmann, and J. R. R. Martins, "Optimization of Flexible Flapping-Wing Kinematics in Hover," AIAA journal, Vol. 52, No. 10, 2014, pp. 2342-2354.
- R. B.R. Vandenheede, L. P. Bernal, C. L. Morrison, **A. Gogulapati**, P. P. Friedmann, C-k. Kang, and W. Shyy, "Experimental and Computational Study on Flapping Wings with Bio-Inspired Hover Kinematics," AIAA Journal, Vol. 52, No. 5, 2014, pp. 1047-1058.
- **A. Gogulapati** and P. P. Friedmann, "Approximate Aerodynamic and Aeroelastic Analysis of Flapping Wings in Forward Flight," AIAA Journal, Vol. 52, No. 1, 2014, pp. 212-218.
- **A. Gogulapati**, P. P. Friedmann, E. Kheng and W. Shyy, "Approximate Aeroelastic Modeling of Flapping Wings in Hover," AIAA Journal, Vol. 51, No. 3, 2013, pp. 567-583.
- J. J. McNamara, A. R. Crowell, P. P. Friedmann, B. Glaz, and **A. Gogulapati**, "Approximate Modeling of Unsteady Aerodynamics for Hypersonic Aeroelasticity," Journal of Aircraft, Vol. 47, No. 6, November-December 2010, pp. 1932-1945.

### Conference Proceedings

- K. Brouwer, **A. Gogulapati**, and J. J. McNamara, "Aeroelastic Loads Prediction in the Presence of Shock Impingements and Shock-Induced Separation," presented at the AIAA SciTech, Kissimmee, FL, 8-12, January 2018, AIAA Paper 2018-1448.
- K. Shaler, K. Kecskemety, **A. Gogulapati**, and J. J. McNamara, "Wind Farm Optimization Using a Free Vortex Wake Model," presented at the AIAA SciTech, Kissimmee, FL, 8-12, January 2018, AIAA Paper 2018-0752.
- **A. Gogulapati**, K. Brouwer, X. Q. Wang, R. Murthy, J. J. McNamara, and M. Mignolet, "Full and Reduced Order Aerothermoelastic Modeling of Built-Up Aerospace Panels in High-Speed Flows," presented at the AIAA SciTech, Grapevine, TX, 9-13 January 2017, AIAA Paper 2017-1080.
- K. Brouwer, **A. Gogulapati**, and J. J. McNamara, "Interplay of Surface Deformation and Shock-Induced Separation in Shock/Boundary Layer Interactions," presented at the AIAA SciTech, Grapevine, TX, 9-13 January 2017, AIAA Paper 2017-0177.
- J. LaFontaine, **A. Gogulapati**, and J. J. McNamara, "Elastic-Viscoplastic Effects on Fluid-Thermal-Structural Interactions," presented at the 15<sup>th</sup> Dynamics Specialists Conference, AIAA SciTech, San Diego, CA, 4-8 January 2016, AIAA Paper No. 2016-1092.

- K. Brouwer, **A. Gogulapati**, and J. J. McNamara, "Efficient Treatment of Structural Deformation for Aerothermoelastic Loads Prediction in High Speed Flows," presented at the 15<sup>th</sup> Dynamics Specialists Conference, AIAA SciTech, San Diego, CA, 4-8 January 2016, AIAA Paper No. 2016-1089.
- **A. Gogulapati**, R. Deshmukh, J. McNamara, V. Vyas, X.Q. Wang, M. Mignolet, T. Bebernis, S. M. Spottswood, and T. G. Eason, "Response of a Panel to Shock Impingement: Modeling and Comparison with Experiments – Part 2," presented at the 56<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Kissimmee, FL, 5-9 January 2015.
- J. LaFontaine, **A. Gogulapati**, J. J. McNamara, and B. A. Miller, "Effects of Strain Hardening on Fluid-Thermal-Structural Interactions," presented at the 56<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Kissimmee, FL, 5-9 January 2015.
- S. Nogar, A. Serrani, **A. Gogulapati**, and J. J. McNamara, "Effect of Wing Flexibility and Motor Dynamics on Split-Cycle Control of Flapping Wing Vehicles," presented at the 56<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Kissimmee, FL, 5-9 January 2015.
- R. Deshmukh, Z. Liang, **A. Gogulapati**, and J. J. McNamara, "Basis Identification for Reduced Order Modeling of Unsteady Flows Using Sparse Coding," presented at the 56<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Kissimmee, FL, 5-9 January 2015.
- **A. Gogulapati**, R. Deshmukh, A. Crowell, J. McNamara, V. Vyas, X.Q. Wang, M. Mignolet, T. Bebernis, S. M. Spottswood, and T. G. Eason, "Response of a Panel to Shock Impingement: Modeling and Comparison with Experiments," 55<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, National Harbor, MD, 13-17 January 2014.
- J. LaFontaine, **A. Gogulapati**, and J. McNamara, "Characterizing the Role of Plasticity on Structural Response in High Speed Flows," 55<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, National Harbor, MD, 13-17 January 2014.
- S. Nogar, **A. Gogulapati**, J. McNamara, and A. Serrani, "Approximate Dynamics Modeling of Flexible Flapping Wing MAVs with Application to Control," 55<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, National Harbor, MD, 13-17 January 2014.
- **A. Gogulapati**, P. P. Friedmann, and J. R. R. Martins, "Optimization of the Kinematics of a Flapping Wing MAV in Hover for Enhanced Performance," 54<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Boston, MA, 4-7 April 2013, AIAA 2013-1646.
- R. B.R. Vandenheede, L. P. Bernal, C. L. Morrison, **A. Gogulapati**, P. P. Friedmann, C-k. Kang, and W. Shyy, "Comparison of experiments on bio-inspired hover kinematics with the unsteady vortex model and CFD," 51st AIAA Aerospace Sciences Meeting Including the New Horizons Forum and Aerospace Exposition, AIAA Paper number 2013-0066, Grapevine, Texas, 7 - 10 January 2013.
- **A. Gogulapati** and P. P. Friedmann, "Approximate Aerodynamic and Aeroelastic Analysis of Flapping Wings in Hover and Forward Flight," 52<sup>nd</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA Paper number 2011-2008, Denver, Colorado, 4-7 April 2011.
- **A. Gogulapati**, P. P. Friedmann, E. Kheng, and W. Shyy, "Approximate Aeroelastic Modeling of Flapping Wings in Hover: Comparison with CFD and Experimental Data," 51<sup>st</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA Paper number 2010-2707, Orlando, Florida, 12-15 April 2010.
- **A. Gogulapati**, P. P. Friedmann, and W. Shyy, "Approximate Aeroelastic Analysis of Flapping Wings in Hover," International Forum for Aeroelasticity and Structural Dynamics, IFASD Paper Number 2009-143, Seattle, WA, June 21-25, 2009.
- J. J. McNamara, P. P. Friedmann, A. R. Crowell, and **A. Gogulapati**, "Reduced Order Modeling of Unsteady Hypersonic Aerodynamics," Proceedings of the International Forum on Aeroelasticity and Structural Dynamics, June 21–25, 2009, Seattle Washington, IFASD-2009-031.

- **A. Gogulapati**, P. P. Friedmann, and W. Shyy, “Nonlinear Aeroelastic Effects in Flapping Wing Micro Air Vehicles,” 49<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, AIAA Paper Number 2008-1817, Schaumburg, IL, 7-10 April, 2008.
- J. J. McNamara, **A. Gogulapati**, P. P. Friedmann, and N. K. Banavara, “Approximate Modeling of Unsteady Aerodynamic Loads in Hypersonic Aeroelasticity,” International Forum for Aeroelasticity and Structural Dynamics, IFASD Paper Number 2007-099, Stockholm, Sweden, June 18-20, 2007.
- **A. Gogulapati**, X. Lu, and S. Hanagud, “Equation of State from First Principles,” Presented at the International Conference on New Models and Hydrocodes for Shock Wave Processes, University of Maryland at College Park, 16-20 May, 2004.