

# CURRICULUM VITAE

## Luciano Demasi

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### PROFESSIONAL PREPARATION

- **University of Washington (Seattle) and Politecnico di Torino (Italy)** **March 2004**  
Ph.D. in Aerospace Engineering
- **Politecnico di Torino (Italy)** **October 1999**  
M. S. in Aerospace Engineering

### APPOINTMENTS

- **Professor (with tenure)** **Fall 2017-Present**  
Department of Aerospace Engineering, San Diego State University
- **Visiting Professor** **June 2017-July 2017**  
Air Force Institute of Technology (AFIT), Dayton, Ohio
- **Visiting Professor** **August 2017**  
NASA Ames Research Center, Moffett Field, California
- **Associate Professor (with tenure)** **Fall 2012-Summer 2017**  
Department of Aerospace Engineering, San Diego State University

- **Professor** **Fall 2017-Present**

Computational Science Research Center, San Diego State University
- **Associate Professor** **Fall 2012-Summer 2017**

Computational Science Research Center, San Diego State University
- **Assistant Professor** **Fall 2008-Summer 2012**

Department of Aerospace Engineering, San Diego State University
- **Assistant Professor** **Fall 2008-Summer 2012**

Computational Science Research Center, San Diego State University
- **Visiting Professor** **May 2012-July 2012**

Air Force Research Lab (AFRL), Dayton, Ohio
- **Visiting Professor (Maitres the Conférences)** **May 2011-July 2011**

Université Paris Ouest, Nanterre La Défense (UFR SITEC), Paris, France
- **Visiting Professor** **July 2011-August 2011**

Air Force Institute of Technology (AFIT), Dayton, Ohio
- **Assistant Professor** **Fall 2011-Fall 2014**

Department of Mechanical and Aerospace Engineering, Politecnico di Torino (Italy)
- **Postdoctoral Research Associate** **March 2004-July 2008**

Department of Aeronautics & Astronautics, University of Washington
- **Structural Analyst** **June-October 2001**

ALENIA SPAZIO (Italian Aerospace Company), Torino, Italy
- **Research Assistant** **March-May 2001**

Department of Aeronautics and Aerospace Engineering, Politecnico di Torino, Torino, Italy

- **Research Assistant**

**October-December 1999**

Department of Aeronautics and Aerospace Engineering, Politecnico di Torino, Torino, Italy

- **Teaching Assistant**

**October 2001-February 2002**

Department of Aeronautics and Aerospace Engineering, Politecnico di Torino, Torino, Italy

## **HONORS AND AWARDS**

- **Thomson Highly Cited Researcher, section "Materials Science"**

*This Highly Cited Research resource captured the people behind the most influential publications in 21 broad subject categories in life sciences, medicine, physical sciences, engineering and social sciences based on citation metrics. Within their category, these individuals represent less than one-half of one percent of all publishing researchers—truly an extraordinary accomplishment [<http://highlycited.com>].*

- Collier Research HyperSizer/AIAA Structures **best paper award** (2013)

- Composite Structures award for the **best paper of the year** (2010)

- M.S in Aerospace Engineering with final grade of ***110/110 Magna cum Laude*** (**Award for Excellence**)

- First author, in 25 years of history of the journal, to have a **series of five papers published at once and without any required change** in the peer-reviewed journal Composite Structures. The comments that were received from the reviewers were the following:

*"A **major** and timely treatise on composite plate theories which will be widely welcomed by the composites community. An easy to understand comparison of composite plate analytical methodologies which succinctly explains the subtleties in more complex problems".*

*"An **exceptional contribution** to knowledge in laminated plate theory which deserves a wide audience.*

*The most **outstanding contribution** to composite structures this reviewer has had the pleasure of assessing for some time".*

*"May I add that I greatly enjoyed reading your papers and am sure that they will be widely appreciated. **They break new ground in being the first series of five papers since the Journal began 25 years ago.** Also although occasionally papers are accepted for publication without changes being required, this is unusual. It is very unusual for a series of two papers to be accepted in this way, which makes a series of five "**exponentially unlikely!**"*

- **Italian Habilitation (Full Professorship in Aerospace Engineering)** (Feb 2014)

- **Most Influential Faculty** (May 2012)
- **Most Influential Faculty** (May 2013)
- **Most Outstanding Aerospace Engineering Faculty** (May 2014)
- **Most Influential Faculty** (May 2015)

## LIST OF PUBLICATIONS

### Citation Indices (Google Scholar)

(Author ID: Luciano Demasi)

**Citations: 1453 (999 since 2012)**

**h-index: 19 (16 since 2012)**

**i10-index: 39 (33 since 2012)**

### Citation Indices (SCOPUS)

(Author ID: 8637399400)

**Citations: 1390**

**h-index: 18**

### Publication Statistics

**Single-author publications: 23**

**Publications with undergraduate/graduate students: 49**

**Publications with collaborators from industry: 8**

**Publications with other professors: 62**

**Publications with collaborators from the Air Force Institute of Technology (WPAFB): 2**

**Publications with collaborators from the Air Force Research Lab (WPAFB): 3**

### Journal Papers

1. **L. Demasi**, G. Monegato, R. Cavallaro “*Minimum Induced Drag Theorems for Multiwing Systems*”, **AIAA Journal**, accepted (available in the a “article in advance” section), **to appear in 2018**
2. P. Junghanns, G. Monegato, **L. Demasi** “*Properties and numerical solution of an integral equation to minimize airplane drag*”, Festschrift for the 80th Birthday of Ian Sloan (Josef Dick, Frances Y Kuo, Henryk Wozniakowski, eds.), Springer-Verlag Heidelberg-Berlin, **to appear in 2018**
3. **L. Demasi**, G. Biagini, F. Vannucci, E. Santarpia, R. Cavallaro, “*Equivalent Single Layer, Zig-Zag and Layerwise Theories for Variable Angle Tow Composite Based on the Generalized Unified Formulation*”, **Composite Structures**, Vol. 177, pp. 54-79, **2017**, DOI: 10.1016/j.compstruct.2017.06.033, **(Impact Factor = 3.874)**
4. N. Teunisse, P. Tiso, **L. Demasi**, R. Cavallaro “*Reduced Basis Methods for Structurally Nonlinear Joined Wings*”, **Aerospace Science and Technology**, Vol. 68, pp-486-495, **2017**, DOI: 10.1016/j.ast.2017.05.041, **(Impact Factor = 2.057)**

5. **L. Demasi**, G. Monegato, A. Dipace, R. Cavallaro “*Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings: Theory*”, **Journal of Optimization Theory and Applications**, Vol. 169, 1, pp-200-235, **2016**, DOI: [10.1007/s10957-015-0849-y](https://doi.org/10.1007/s10957-015-0849-y), **invited**, **(Impact Factor = 1.509)**
6. **L. Demasi**, G. Monegato, E. Rizzo, R. Cavallaro A. Dipace, “*Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings: Applications*”, **Journal of Optimization Theory and Applications**, Vol. 169, 1, pp-236-261, **2016**, DOI: [10.1007/s10957-015-0850-5](https://doi.org/10.1007/s10957-015-0850-5), **invited** **(Impact Factor = 1.509)**
7. R. Cavallaro, **L. Demasi** “*Challenges, Ideas, and Innovations of Joined-Wing Configurations: A Concept from the Past, an Opportunity for the Future*”, **Progress in Aerospace Sciences**, Vol. 87, pp. 1-93, **invited**, **2016**, DOI: [10.1016/j.paerosci.2016.07.002](https://doi.org/10.1016/j.paerosci.2016.07.002) **(Impact Factor = 4.102)**
8. **L. Demasi**, E. Santarpia, A. Dipace, R. Cavallaro, R. E. Gordnier, “*Aerodynamic and Structural Studies of a Flapping Wing in Forward Flight*”, **AIAA Journal**, Vol. 54, 9, pp-2768-81, **2016**, DOI: [10.2514/1.J054496](https://doi.org/10.2514/1.J054496), **(Impact Factor = 1.326)**
9. R. Cavallaro, R. Bombardieri, **L. Demasi**, A. Iannelli “*PrandtlPlane Joined Wing: Body Freedom Flutter, Limit Cycle Oscillation and Freeplay Studies*”, **Journal of Fluids and Structures**, Vol. 59, No. 11, pp. 57-84, **2015**, DOI: [10.1016/j.jfluidstructs.2015.08.016](https://doi.org/10.1016/j.jfluidstructs.2015.08.016), **(Impact Factor = 2.058)**
10. **L. Demasi**, Y. Ashenafi, R. Cavallaro, E. Santarpia “*Generalized Unified Formulation Shell Element for Variable-Stiffness Composite Laminates and Aeroelastic Applications*”, **Composite Structures**, Vol. 131, pp. 501-515, **2015**, DOI: [10.1016/j.compstruct.2015.05.022](https://doi.org/10.1016/j.compstruct.2015.05.022), **(Impact Factor = 3.874)**
11. R. Cavallaro, A. Iannelli, **L. Demasi**, A. M. Razón “*Phenomenology of Nonlinear Aeroelastic Responses of Highly Deformable Joined Wings*”, **Advances in Aircraft and Spacecraft Science**, Vol. 2, No. 2, pp. 125-168, **2015** **(Impact Factor = Not Available)**
12. **L. Demasi**, R. Cavallaro, F. Bertuccelli “*Post-Critical Analysis of Joined Wings: the Concept of Snap-Divergence as a Characterization of the Instability*”, **Journal of Fluids and Structures**, Vol. 54, pp. 701-718, **2015**, DOI: [10.1016/j.jfluidstructs.2015.01.009](https://doi.org/10.1016/j.jfluidstructs.2015.01.009), **(Impact Factor = 2.058)**
13. R. Cavallaro, **L. Demasi**, F. Bertuccelli, D. Benson “*Risks of Linear Design of Joined Wings: a Nonlinear Dynamic Perspective in the Presence of Follower Forces*”, **CEAS Aeronautical Journal**, Vol. 6, No. 2, pp. 161-180, **2015**, DOI [10.1007/s13272-014-0136-x](https://doi.org/10.1007/s13272-014-0136-x), **(Impact Factor = Not Available)**
14. **L. Demasi**, A. Dipace, G. Monegato, and R. Cavallaro, “*Invariant Formulation for the Minimum Induced Drag Conditions of Non-planar Wing systems*”, **AIAA Journal**, Vol. 52, No. 10, pp. 2223-2240, **2014**, DOI: [10.2514/1.J052837](https://doi.org/10.2514/1.J052837), **(Impact Factor = 1.326)**

15. R. Cavallaro, **L. Demasi**, A. Passariello “*Nonlinear Analysis of PrandtlPlane Joined Wings: Effects of Anisotropy*”, **AIAA Journal**, Vol. 52, No. 5, pp. 964-980, **2014**, DOI: [10.2514/1.J052242](https://doi.org/10.2514/1.J052242),  
**(Impact Factor = 1.326)**
16. **L. Demasi**, R. Cavallaro, and A. M. Razón, “*Post-Critical Analysis of PrandtlPlane Joined-Wing Configurations*”, **AIAA Journal**, DOI: [10.2514/1.J051700](https://doi.org/10.2514/1.J051700), Vol. 51, No. 1: pp 161-177, **2013**.  
**(Impact Factor = 1.326)**
17. E. Carrera, A. Varello, **L. Demasi**, “*A Refined Structural Model for Static Aeroelastic Response and Divergence of Metallic and Composite Wings*”, **CEAS Aeronautical Journal**, Vol. 4, No. 2, pp 175-189, **2013**. **(Impact Factor = Not Available)**
18. **L. Demasi**, “*Partially Layer Wise Advanced Zig Zag and HSDT Models Based on the Generalized Unified Formulation*”, **Engineering Structures**, Vol. 53, pp 63-91, **2013**. **(Impact Factor = 2.275)**
19. **L. Demasi**, W. Yu “*Assess the Accuracy of the Variational Asymptotic Plate and Shell Analysis Using the Generalized Unified Formulation*”, **Mechanics of Advanced Materials and Structures**, Vol. 20, No. 3, pp 227-241, **2013**. **(Impact Factor = 0.862)**
20. **L. Demasi**, A. N. Palazotto, A. Hollenbeck, R. Cavallaro “*Exploratory Structural Investigation of a Hawkmoth-Inspired MAV’s Thorax*”, **International Journal of Micro Air Vehicles**, Vol. 4, No. 4, **2012**. **(Impact Factor = 0.343)**
21. **L. Demasi**, “*Partially Zig-Zag Advanced Shear Deformation Theories Based on the Generalized Unified Formulation*”, **Composite Structures**, Vol. 94 (2), pg. 363-375, **2012**.  
**(Impact Factor = 3.874)**
22. E. Carrera, F. A. Fazzolari, and **L. Demasi**, “*Vibration Analysis of Anisotropic Simply Supported Plates by using Variable Kinematic and Rayleigh-Ritz Method*”, **Journal of Vibration and Acoustics**, Vol. 133, pp. 1-18, **2011**. **(Impact Factor = 1.430)**
23. A. Varello, E. Carrera, **L. Demasi**, “*Vortex Lattice Method Coupled with Advanced One-Dimensional Structural Models*”, **ASD Journal**, Vol. 2, pp. 53-78, **2011**.  
**(Impact Factor = Not Available)**
24. A. V. Styuart, E. Livne, **L. Demasi**, M. Mor, “*Flutter Failure Risk Assessment for Damage-Tolerant Composite Aircraft Structures*”, **AIAA Journal**, vol. 49, 655-669, **2011**, DOI: [10.2514/1.J050862](https://doi.org/10.2514/1.J050862),  
**(Impact Factor = 1.326)**
25. **L. Demasi**, “*Invariant Finite Element Model for Composite Structures: the Generalized Unified Formulation*”, **AIAA Journal**, Vol. 48, No. 8, **2010**, DOI: [10.2514/1.45416](https://doi.org/10.2514/1.45416),  
**(Impact Factor = 1.326)**
26. **L. Demasi**, “*Three-dimensional closed form solutions and  $\infty^3$  theories for orthotropic plates*”, **Mechanics of Advanced Materials and Structures**, Vol. 17, 20-39, **2010**.  
**(Impact Factor = 0.862)**

27. S. Brischetto, E. Carrera, **L. Demasi**, “Improved Bending Analysis of sandwich plates using Zig-Zag function”, **Composite structures**, Vol. 89, 408-415, **2009. (Impact Factor = 3.874)**
28. S. Brischetto, E. Carrera, **L. Demasi**, “Improved response of unsymmetrically laminated Sandwich Plates by using Zig-Zag functions”, **Journal of Sandwich Structures and Materials**, Vol. 11, 257-267, **2009 (Impact Factor = 2.852).**
29. S. Brischetto, E. Carrera, **L. Demasi**, “Free vibration of sandwich plates and shells by using Zig-Zag function”, **Shock and Vibration**, 16, 495-503, **2009. (Impact Factor = 0.880)**
30. **L. Demasi**, E. Livne, “Aeroelastic coupling of Geometrically Nonlinear Structures and Linear Unsteady Aerodynamics – Two Formulations”, **Journal of Fluids and Structures**, Vol. 25, 918-935, **2009, DOI: 10.1016/j.jfluidstructs.2009.03.001 (Impact Factor = 2.058)**
31. **L. Demasi**, E. Livne, “Dynamic Aeroelasticity of Structurally Nonlinear Configurations Using Linear Modally Reduced Aerodynamic Generalized Forces”, **AIAA Journal**, Vol. 47, No. 1, **2009, DOI: 10.2514/1.34797, (Impact Factor = 1.326)**
32. **L. Demasi**, “ $\infty^6$  mixed plate theories based on the Generalized Unified Formulation. Part I: Governing Equations”, **Composite Structures**, Vol. 87, 1-11, **2009, DOI: 10.1016/j.compstruct.2008.07.013, (Impact Factor = 3.874)**
33. **L. Demasi**, “ $\infty^6$  mixed plate theories based on the Generalized Unified Formulation. Part II: Layerwise theories”, **Composite Structures**, Vol. 87, 12-22, **2009, DOI: 10.1016/j.compstruct.2008.07.012, (Impact Factor = 3.874)**
34. **L. Demasi**, “ $\infty^6$  mixed plate theories based on the Generalized Unified Formulation. Part III: Advanced Mixed High Order Shear Deformation Theories”, **Composite Structures**, Vol. 87, 83-194, **2009, DOI: 10.1016/j.comstruct.2008.07.011, (Impact Factor = 3.874)**
35. **L. Demasi**, “ $\infty^6$  mixed plate theories based on the Generalized Unified Formulation. Part IV: Zig-Zag Theories”, **Composite Structures**, Vol. 87, 195-205, **2009, DOI: 10.1016/j.compstruct.2008.07.010, (Impact Factor = 3.874)**
36. **L. Demasi**, “ $\infty^6$  mixed plate theories based on the Generalized Unified Formulation. Par V: Results”, **Composite Structures**, Vol. 88, 1-16, **2009, DOI: 10.106/j.compstruct.2008.07.009, (Impact Factor = 3.874)**
37. **L. Demasi**, “2D, Quasi 3D and 3D Exact Solutions for Bending of Thick and Thin Sandwich Plates”, **Journal of Sandwich Structures & Materials**, Vol.10, No. 4, 271-310, **DOI: 10.1177/1099636208089311, 2008. (Impact Factor = 2.852)**
38. **L. Demasi**, “ $\infty^3$  plate theories for thick and thin plates: the generalized unified formulation”, **Composite Structures**, Vol. 84, 256-270, **2008. (Impact Factor = 3.874)**



39. **L. Demasi**, “*Three-Dimensional Closed Form Solutions and Exact Thin Plate Theories for Isotropic Plates*”, **Composite Structures**, 80, pp. 183-195, **2007**. **(Impact Factor = 3.874)**
40. **L. Demasi**, “*Investigation on the Conditions of Minimum Induced Drag of Closed Wing Systems and C-Wings*”, **Journal of Aircraft**, Vol. 44, No. 1, 81-99, **2007**, DOI: [10.2514/1.21884](https://doi.org/10.2514/1.21884), **(Impact Factor = 0.701)**
41. **L. Demasi**, “*Treatment of Stress Variables in Advanced Multilayered Plate Elements Based Upon Reissner’s Mixed Variational Theorem*”, **Computers & Structures**, 84, pp. 1215-1221, **2006**. **(Impact Factor = 2.745)**
42. **L. Demasi**, “*Quasi-3D Analysis of Free Vibration of Anisotropic Plates*”, **Composite Structures**, 74, pp. 449-457, **2006**. **(Impact Factor = 3.874)**
43. **L. Demasi**, “*Induced Drag Minimization: a Variational Approach Using the Acceleration Potential*”, **Journal of Aircraft**, Vol.43, No. 3, pp. 669-680, **2006**, DOI: [10.2514/1.15982](https://doi.org/10.2514/1.15982), **(Impact Factor = 0.701)**
44. **L. Demasi**, E. Livne, “*Structural Ritz-Based Simple-Polynomial Nonlinear Equivalent Approach – An Assessment*”, **Journal of Aircraft**, Vol. 43, No. 6, pp. 1685-1697, **2006**, DOI: [10.2514/1.17466](https://doi.org/10.2514/1.17466), **(Impact Factor = 0.701)**
45. **L. Demasi**, “*Refined Multilayered Plate Elements Based on Murakami Zig-Zag Functions*”, **Composite Structures**, 70, pp. 308-316, **2005**. **(Impact Factor = 3.874)**
46. E. Carrera, **L. Demasi**, “*Two benchmarks to assess two-dimensional theories of Sandwich Composite Plates*”, **AIAA Journal**, Vol. 41, No. 7, pp. 1356-1362, **2003**. **(Impact Factor = 1.326)**
47. E. Carrera, **L. Demasi**, M. Manganello, “*Assessment of Plate Elements on Bending and Vibrations of Composite Structures*”, **Mechanics of Composite Material and Structures**, 9:333-357, **2002**. **(Impact Factor = 0.862)**
48. E. Carrera, **L. Demasi**, “*Classical and advanced Multilayered plate element based upon PVD and RMVT. Part I: Derivation of finite element matrices*”, **International Journal for Numerical method in Engineering**, 55: 191-231, **2002**. **(Impact Factor = 2.1)**
49. E. Carrera, **L. Demasi**, “*Classical and advanced Multilayered plate element based upon PVD and RMVT. Part II: Numerical implementations*”, **International Journal for Numerical method in Engineering**, 55: 253-291, **2002**. **(Impact Factor = 2.1)**

## Books

1. E. Carrera, **L. Demasi** “*Appunti di Costruzioni Aeronautiche A*” (English translation of the title: “*Notes of Aeronautical Constructions A*”), **Levrotto & Bella**, Torino, **2002**.



## Articles in Book

1. **L. Demasi**, G. Monegato, R. Cavallaro “*Minimum Induced Drag Theorems for Nonplanar Systems and Closed Wings*”, in A. Frediani (Ed.), **Variational Analysis and Aerospace Engineering III: Mathematical Challenges for the Aerospace of the Future, Springer U.S., 2017**
2. R. Cavallaro, R. Bombardieri, S. Silvani, **L. Demasi**, G. Bernardini, “*Aeroelasticity of the PrandtlPlane: Body Freedom Flutter, Freeplay and Limit Cycle Oscillation*”, in A. Frediani (Ed.), **Variational Analysis and Aerospace Engineering III: Mathematical Challenges for the Aerospace of the Future, Springer U.S., 2017**

## Conference Papers (Peer Reviewed)

1. **L. Demasi**, G. Biagini, F. Vannucci, E. Santarpia, R. Cavallaro, “Equivalent Single Layer, Zig-Zag and Layerwise Theories for Variable Angle Tow Composite Based on the Generalized Unified Formulation” AIAA Science and Technology Forum and Exposition: 58<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2017
2. **L. Demasi**, G. Monegato, R. Cavallaro “*Minimum Induced Drag Theorems for Multi-Wing Systems*”, AIAA Science and Technology Forum and Exposition: 57<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2016.
3. R. Bombardieri, R. Cavallaro, **L. Demasi** “*A Historical Perspective on the Aeroelasticity of Box Wings and PrandtlPlane with New Findings*”, AIAA Science and Technology Forum and Exposition: 57<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2016.
4. **L. Demasi**, Y. Ashenafi, R. Cavallaro, E. Santarpia “*Generalized Unified Formulation Shell Element for Variable-Stiffness Composite Laminates and Aeroelastic Applications*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.
5. **L. Demasi**, G. Monegato, A. Dipace, R. Cavallaro “*Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings: Theory*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.
6. **L. Demasi**, G. Monegato, E. Rizzo, R. Cavallaro A. Dipace, “*Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings: Results*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.

7. N. Teunisse, P. Tiso, **L. Demasi**, R. Cavallaro “*Computational Reduced Order Methods for Structurally Nonlinear Joined Wings*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.
8. R. Cavallaro, M. Nardini, **L. Demasi** “*Amphibious PrandtlPlane: Preliminary Design Aspects Including Propellers Integration and Ground Effect*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.
9. R. Cavallaro, **L. Demasi**, R. Bombardieri, A. Iannelli “*PrandtlPlane Joined Wing: Body Freedom Flutter, Limit Cycle Oscillation and Freeplay Studies*”, AIAA Science and Technology Forum and Exposition: 56<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2015.
10. G. Phlipot, X. Q. Wang, M. Mignolet, **L. Demasi**, R. Cavallaro “*Reduced Order Modeling for the nonlinear Geometric Response of Joined Wings*”, AIAA Science and Technology Forum and Exposition: 55<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2014.
11. N. Teunisse, **L. Demasi**, P. Tiso, R. Cavallaro “*A Computational Method for Structurally Nonlinear Joined Wings Based on Modal Derivatives*”, AIAA Science and Technology Forum and Exposition: 55<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2014.
12. R. Cavallaro, A. Iannelli, **L. Demasi**, A. M. Razón “*Phenomenology of Nonlinear Aeroelastic Responses of Highly Deformable Joined-wings Configurations*”, AIAA Science and Technology Forum and Exposition: 55<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2014.
13. **L. Demasi**, A. Dipace, G. Monegato, and R. Cavallaro, “*An Invariant Formulation for the Minimum Induced Drag Conditions of Non-planar Wing systems*”, AIAA Science and Technology Forum and Exposition: 55<sup>th</sup> **AIAA/ASME/ASCE/AHS/SC Structures, Structural Dynamics, and Materials Conference**, January 2014.
14. R. Gordnier and **L. Demasi** “*Implicit LES Simulations of Flapping Wing in Forward Flight*”, presented at the **ASME 2013 Fluids Engineering Summer Conference**, Incline Village, Nevada, July 7-11, 2013.
15. R. Cavallaro, **L. Demasi**, F. Bertucelli “*Risks of Linear Design of Joined Wings: a Nonlinear Dynamic Perspective in the Presence of Follower Forces*”, 54<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Boston, Massachusetts, April 2013.
16. **L. Demasi**, R. Cavallaro, F. Bertucelli “*Post-Critical Analysis of Joined Wings: the Concept of Snap-Divergence as a Characterization of the Instability*”, 54<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Boston, Massachusetts, April 2013.

17. **L. Demasi**, R. E. Gordnier, E. Santarpia, A. Dipace “*High-fidelity Simulations of a Flexible Flapping Wing in Forward flight*”, 54<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Boston, Massachusetts, April 2013.
18. **L. Demasi**, A. N. Palazotto, A. Hollenbeck, R. Cavallaro “*Exploratory Structural Investigation of a Hawkmoth-Inspired MAV’s Thorax*”, 53<sup>rd</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, April 2012.
19. **L. Demasi**, “*Partially Layerwise Advanced Zig-Zag and HSDT Models Based on the Generalized Unified Formulation*”, 53<sup>rd</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, April 2012.
20. S. Bhasin, P. C. Chen, Z., Wang, **L. Demasi** “*Dynamic Nonlinear Aeroelastic Analysis of The Joined Wing Configuration*”, 53<sup>rd</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, April 2012.
21. R. Cavallaro, **L. Demasi**, A. Passariello “*Nonlinear Analysis of PrandtlPlane Joined Wings-Part II: Effects of Anisotropy*”, 53<sup>rd</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, April 2012.
22. **L. Demasi**, “*Partially Zig-Zag Advanced Shear Deformation Theories Based on the Generalized Unified Formulation*”, 16<sup>th</sup> **International Conference on Composite Structures (ICCS16)**, Porto, Portugal, 28-30 June 2011.
23. M. Petrolo, E. Carrera, **L. Demasi**, “*An Advanced Unified Aeroelastic Formulation Based on 1D Higher-Order Finite Elements*”, **International Forum of Aeroelasticity and Structural Dynamics**, Paris, France, 26-30 June 2011.
24. **L. Demasi**, K. Hasslinger, and D. Samardzic, “*Multi-Theory FEM Architecture for the Generation of Advanced Mixed Shear Deformation Theories Based on the Generalized Unified Formulation for Composite Structures*”, 25<sup>th</sup> **Annual Technical Conference (American Society for Composites)**, Dayton, OH, 20-22 September 2010.
25. **L. Demasi**, A. Palacios, “*A Reduced Order Nonlinear Aeroelastic Analysis of Joined Wings Based on the Proper Orthogonal Decomposition*”, 51<sup>st</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Orlando, Florida, 12-15 April 2010.
26. A. Varello, **L. Demasi**, E. Carrera, G. Giunta, “*An Improved Beam Formulation for Aeroelastic Applications*”, 51<sup>st</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Orlando, Florida, 12-15 April 2010.
27. **L. Demasi**, “*An Invariant Model for any Composite Plate Theory and FEM Applications: the Generalized Unified Formulation*”, 50<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Palm Springs, California, 4-7 May 2009.

28. **L. Demasi**, W. Yu “*Assess the Accuracy of the Variational Asymptotic Plate and Shell Analysis (VAPAS) Using the Generalized Unified Formulation (GUF)*”, 50<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Palm Springs, California, 4-7 May 2009.
29. **L. Demasi**, E. Livne “*Contributions to Joined-Wing Aeroelasticity*”, **International Forum on Aeroelasticity and Structural Dynamics**, Seattle, Washington, 21-25 June 2009.
30. **L. Demasi**, E. Livne, “*Aeroelastic Coupling of Geometrically Nonlinear Structures and Linear Unsteady Aerodynamics: Two Formulations*”, 49<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Schaumburg, Illinois, 7-10 April 2008.
31. **L. Demasi**, E. Livne, “*Dynamic Aeroelasticity of Coupling Full Order Geometrically Nonlinear Structures and Full Order Linear Unsteady Aerodynamic – The Joined Wing Case*”, 49<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Schaumburg, Illinois, 7-10 April 2008.
32. A. Styuart, **L. Demasi**, E. Livne and K. Lin, “*Probabilistic Modeling of the Aeroelastic Life Cycle for Risk Evaluation of Composite Structures*”, 49<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Schaumburg, Illinois, 7-10 April 2008
33. **L. Demasi**, E. Livne, “*Dynamic Aeroelasticity of Structurally Nonlinear Configurations Using Linear Modally Reduced Aerodynamic Generalized Forces*”, 48<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, 23-26 April 2007.
34. **L. Demasi**, E. Livne, “*The Structural Order Reduction Challenge in the Case of Geometrically Nonlinear Joined-Wing Configurations*”, 48<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Honolulu, Hawaii, 23-26 April 2007.
35. **L. Demasi**, E. Livne, “*Aeroelasticity of Structurally Nonlinear Lifting Surfaces Using Linear Modally Reduced Aerodynamic Generalized Forces*”, 47<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Newport, Rhode Island, 1-4 May 2006.
36. **L. Demasi**, E. Livne, “*Exploratory Studies of Joined Wing Aeroelasticity*”, 46<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Austin, Texas, 18-21 April 2005.
37. **L. Demasi**, E. Livne, “*Structural Ritz-Based Simple-Polynomial Nonlinear Equivalent Approach – An Assessment*”, 46<sup>th</sup> **AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference**, Austin, Texas, 18-21, April 2005.
38. **L. Demasi**, E. Livne, “*A Plate Structural Capability for the Nonlinear Aeroelastic Analysis of Joined-Wing Configurations*”, **Italian Conference AIDAA** Roma (Italy), 15-19<sup>th</sup> September 2003.

39. **L. Demasi**, “*Ala Anulare Ellittica: Distribuzione di Circolazione di Minima Resistenza Indotta*”. (English translation of the title: “*Elliptical Annular Wing: Circulation of Minimum Induced Drag*”) **Italian Conference AIDAA** Roma (Italy), 15-19<sup>th</sup> September **2003**.
40. **L. Demasi**, “*Effetto delle condizioni al contorno sulla modellizzazione di piastre multistrato*” (English translation of the title: “*Effects of the Boundary Conditions for 2D Models of Multilayered Plates*”), **Italian Conference AIDAA** Palermo (Italy), 24-28<sup>th</sup> September **2001**.
41. A. Robaldo, **L. Demasi**, E. Carrera, “*Influence of Temperature Profile on the Accuracy of Classical and Refined Multilayered Plate*”, **Italian Conference GIMC** Genova (Italy), 21-23<sup>th</sup> June **2004**.
42. E. Carrera, **L. Demasi**, “*On Two-Dimensional FEM Simulation of Layered Plates*”, **GIMC Conference**, Giulianova 24-26 June 2002 24-26 June, **2002**.
43. E. Carrera, **L. Demasi**, “*Sandwich Plate Analysis by Finite Element Method and Reissner's Mixed Theorem*”, Fifth **International Conference on Sandwich Construction** Zurich (Switzerland), 5-7<sup>th</sup> September **2000**.
44. E. Carrera, **L. Demasi**, “*An Assessment of Multilayered Finite Plate Elements in View of the  $C^0_z$  Requirements*”, **Italian Conference GIMC** 2000 Brescia (Italy), 13-15<sup>th</sup> November **2000**.
45. E. Carrera, G. Chiocchia, **L. Demasi**, A. Robaldo, “*On the developments of a Joined Wing Prandtlplane*”, Fifth **World Congress on Computational Mechanics**, Vienna July 7-12 **2002**.
46. **L. Demasi**, G. Chiocchia, E. Carrera, “*Aerodinamica dei Sistemi Portanti Chiusi: Ala Anulare Ellittica*” (English translation of the title: “*Aerodynamics of the closed Wing Systems: Elliptical Annular Wing*”), **Italian Conference AIDAA** Roma (Italy), 15-19<sup>th</sup>, Sept. **2003**.
47. G. Chiocchia, E. Carrera, **L. Demasi**, “*Studio Aerodinamico di un'Ala Anulare Ellittica*”. (English translation of the title: “*Aerodynamic Studies of an Elliptical Annular Wing*”), **Italian Conference AIDAA** Palermo (Italy), 24-28<sup>th</sup> September **2001**.

#### Other Publications (Alenia Spazio Internal Reports)

1. **L. Demasi** et alii, “*RADARSAT-2 Stress Summary Report, Issue 1, Date 25/11/2001*”. **ALENIA SPAZIO Internal report**
2. **L. Demasi** et alii, “*RADARSAT-2 Static Analysis Report, Issue 4, Date 22/11/2001*”. **ALENIA SPAZIO Internal report**

#### INVITED PRESENTATIONS

1. *Nonlinear Aeroelastic Responses of Highly Deformable Joined-Wing Configurations* (**University of California Irvine**, Irvine, CA, United States, February 17<sup>th</sup>, **2017**)



2. *Aeroelastic Responses of Joined-Wing Configurations* (**University of Liverpool**, Liverpool, United Kingdom, December, **2016**)
3. *Nonlinear Aeroelastic Responses of Highly Deformable Joined-Wing Configurations* (**International Conference on Applications in Nonlinear Dynamics**, Denver, Colorado, September 1st, **2016**)
4. *Minimum Induced Drag Theorems for Innovative Wing Systems* (**Computational Science Research Center**, SDSU, San Diego, April 29th, **2016**)
5. *Generalized Unified Formulation Shell Element for Functionally Graded Variable-Stiffness Composite Laminates and Aeroelastic Applications* (**Aerospace Flutter & Dynamics Council Spring**, ATA Offices, San Diego, November 5<sup>th</sup> and 6<sup>th</sup>, **2015**)
6. *Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings* (**Variational Analysis and Applications**, Erice, August 28-September 5, **2015**)
7. *Minimum Induced Drag Theorems for Joined Wings, Closed Systems, and Generic Biwings* (**Aerospace Flutter & Dynamics Council Spring**, NASA AMES, April, **2015**)
8. *Nonlinear Aeroelasticity, Generalized Unified Formulation for Composite Structures and Aerodynamic Models for the Preliminary Design of Wings* (**Politecnico Di Torino**, December, **2014**)
9. *Phenomenology of Nonlinear Aeroelastic Responses of Highly Deformable Joined-wing Configurations* (**Aerospace Flutter & Dynamics Council Spring**, St. Louis, 29-30 May, **2014**)
10. *An Invariant Formulation for the Minimum Induced Drag Conditions of Non-planar Wing Systems* (**Aerospace Flutter & Dynamics Council Spring**, St. Louis, 29-30 May, **2014**)
11. *A Multi-Theory and Multi-Fidelity Computational Architecture for Composite Structures: the Generalized Unified Formulation* (**University of Michigan**, 26 November, **2013**)
12. *A Multi-Theory and Multi-Fidelity Computational Architecture for Composite Structures: the Generalized Unified Formulation* (**TU Delft**, 5 February, **2014**)
13. *The Concept of Snap Divergence for Joined Wings* (**ASME 2013 Fluids Engineering Summer Conference**, Incline Village, Nevada, July 7-11, **2013**)
14. *On the Importance of Taking Into Account Structural Nonlinear Effects in the Preliminary Design of Joined Wings* (**Aerospace Flutter & Dynamics Council Spring**, Houston, Texas, 7 May, **2013**)
15. *On the Importance of Taking Into Account Structural Nonlinear Effects in the Preliminary Design of Joined Wings* (**Meeting of the AIAA Structures Technical Committee**, Boston, Massachusetts, 7 April, **2013**)
16. *Compliant Mechanism for Flapping Unmanned Aerial Systems* (**Air Force Research Lab**, WPAFB, Dayton, **2012**)

17. *Compliant Mechanism for Flapping Unmanned Aerial Systems* (**Army Research Lab**, Aberdeen Proving Ground, **2012**)
18. *Compliant Mechanism for Flapping Unmanned Aerial Systems* (**Aerospace Engineering Department**, San Diego State University , **2012**)
19. *Post Buckling Investigations and Theoretical Implications for the Design of Joined Wings* (**Aerospace Flutter & Dynamics Council**, Santa Ana, **2012**)
20. *A Multi-Theory and Multi-Fidelity Computational Architecture for Composites and Sandwich Structures: the Generalized Unified Formulation* (**Structural Engineering Department, University of California San Diego**, **2012**)
21. *A Reduced Order Nonlinear aeroelastic Analysis of Joined Wings Based on the Proper Orthogonal Decomposition* (**Université Paris Ouest, Nanterre La Défense (UFR SITEC)**, Paris, France, **2011**)
22. *A Reduced Order Nonlinear aeroelastic Analysis of Joined Wings Based on the Proper Orthogonal Decomposition* (**ATA**, San Diego, **2010**)
23. *A Reduced Order Nonlinear aeroelastic Analysis of Joined Wings Based on the Proper Orthogonal Decomposition* (**General Atomics**, San Diego, **2010**)
24. *A Reduced Order Nonlinear aeroelastic Analysis of Joined Wings Based on the Proper Orthogonal Decomposition* (**Aerospace Flutter & Dynamics Council**, San Diego, **2010**)
25. *Explore SDSU Day* (**Aerospace Engineering Department, San Diego State University**, **2010**)
26. *Dynamic Aeroelasticity of Structurally Nonlinear Airplane Configurations Using Modally Reduced Linear Aerodynamic Models* (**Risø National Laboratory for Sustainable Energy**, Technical University of Denmark – DTU, **2009**)
27. *Generalized Unified Formulation for Analysis of Composite Plates* (**Aerospace Engineering Department, San Diego State University**, **2009**)
28. *Dynamic Aeroelasticity of Structurally Nonlinear Airplane Configurations Using Modally Reduced Linear Aerodynamic Models* (**Structural Engineering Department, University of California San Diego**, **2009**)
29. *Dynamic Aeroelasticity of Structurally Nonlinear Airplane Configurations Using Modally Reduced Linear Aerodynamic Models* (**Computational Science Research Center, San Diego State University**, **2008**)
30. *Aeroelasticity of Lifting Surfaces in the Presence of Geometric Nonlinearity Using the Generalized Aerodynamic Force Matrix* (**Department of Aerospace Engineering, Politecnico di Torino**, Italy, **2006**)



## ACTIVE SCIENTIFIC COLLABORATIONS AND CONTACTS

- **German Aerospace Center (DLR), Air Transportation Systems, Integrated Aircraft Design** [*Airplane Design*]
- **Politecnico di Torino** [*Aeroelasticity and modelling of structures, aerodynamics*]
- **University of Pisa** [*Aerodynamics and Aeroelasticity*]
- **Uniroma3** [*Aeroelasticity*]
- **Delft University of Technology** [*reduced order modelling for nonlinear structures*]
- **SPAWAR** [*Flapping unmanned systems*]
- **Arizona State University** [*Joined Wings and reduced order modelling*]
- **Mississippi State University** [*Aeroelasticity*]
- **Air Force Research Lab** (WPAFB, Dayton, Ohio) [*Flapping unmanned systems*]
- **Air Force Institute of Technology** (WPAFB, Dayton, Ohio) [*Flapping unmanned systems*]
- **Computational Science Research Center at SDSU** [*Flapping unmanned systems*]
- **Universidad Carlos III de Madrid (UC3M)** [*Aerodynamics and Aeroelasticity*]
- **NASA Ames Research Center** [*Aerodynamics and Aeroelasticity*]

## TEACHING

### Academic Courses Taught

- **AE731 (Aeroelasticity, graduate level, *originally developed*)**
- **AE631 (Analysis of Elastic Plates, graduate level, *originally developed*)**
- **AE611 (Vibration of Elastic Solids, graduate level, *restructured*)**
- **AE410 (Aerospace Structural Dynamics, undergraduate level, *restructured*)**
- **AE200 (Statics, undergraduate level, *restructured*)**

### Course AE731 (Aeroelasticity, graduate level)

The objective of this class is to teach the fundamentals of aeroelasticity. The course provides the necessary background on aerospace structural dynamics and aerodynamics with particular emphasis on the fluid-structure interaction which is typical of aeroelasticity. The course introduces the computational tools for the aeroelastic analysis and design of innovative airplane configurations including Joined Wings. The students gain the theoretical background on the frequency-domain unsteady aerodynamic panel codes used by the industry (e.g., Doublet Lattice Method) and their coupling with structural commercial Finite Element Method software.

Leading commercial software such as ZAERO and NASTRAN is discussed. The theory part is complemented with practical training in using FEMAP and NASTRAN.

### **Course AE631 (*Analysis of Elastic Plates, graduate level*)**

The objective of this class is to teach the fundamentals of structural analysis of elastic plates. The course provides the necessary background on energy principles and variational methods with particular emphasis on the writing of the time-domain equations of motion for elastic multilayered laminated plates.

The course also introduces tensor analysis and equations of elasticity to provide the students with a solid theoretical background and prepare them for more advanced courses such as composite materials. The theory part is complemented with practical training in using commercial software such as FEMAP and NASTRAN.

### **Course AE611 (*Vibration of Elastic Solids, graduate level*)**

The objective of this class is to introduce the student to the analysis of vibrations of elastic solids. The material presented in this course provides the foundation for pursuing other courses such as aeroelasticity (AE731).

### **AE410 (*Aerospace Structural Dynamics, undergraduate level [4<sup>th</sup> year]*)**

The objective of this class is to introduce the student to the aerospace structural dynamics. The material presented in this course provides the foundation for pursuing other courses such as Vibration of Elastic Solids (AE611) and aeroelasticity (AE731).

### **AE200 (*Statics, undergraduate level [2<sup>nd</sup> year]*)**

This course is taken by students at the second year. They learn how to write the equilibrium equations for rigid bodies and how to solve truss and beam structures.

### **Other Educational Activities**

To increase the enrollment of new master students and to increase the visibility of my research activity, *I created a web page* [http://attila.sdsu.edu/~demasi/list\\_lectures.htm](http://attila.sdsu.edu/~demasi/list_lectures.htm) with a series of *online lectures* on the elasticity solution of plates. Free *educational software* is also available for download at the address <http://attila.sdsu.edu/~demasi/download.htm>.

This series of lectures has also been included in a searchable collection of peer reviewed and selected learning materials (MERLOT see <http://www.merlot.org/merlot/viewMaterial.htm?id=365142>).

### **Member of the College Curriculum Committee**

I am member of the College Curriculum Committee. I and the other professors of the committee perform the following duties at service of the College of Engineering:

- Evaluation if a new departmental (e.g., Mechanical Engineering) *course proposal* complies with the university rules and does not duplicate/overlap existing courses already offered (optimization of the resources).

- Addressing of educational challenges such as increasing the dimension of the *class sizes* and the consequent reduction of the quality of the student's learning.
- Improvement of the general *learning experience* of the undergraduate and graduate students at the College of Engineering.

### Teaching Awards

- **Most Influential Faculty (2012)**
- **Most Influential Faculty (2013)**
- **Most Outstanding Aerospace Engineering Faculty (2014)**
- **Most Influential Faculty (2015)**

### Research Group Students: Awards and Recognitions

Enrico Santarpia (current Ph.D. student)

- ***AIAA Reuben H. Fleet Scholarship Program***, AIAA San Diego Section, 2015, 2016, and 2017

Rauno Cavallaro (Ph.D. student, now Assistant Professor)

- ***Best literature Review award*** at UCSD Research Expo, 2012
- ***Structural Engineering Best Poster award*** at UCSD Research Expo, 2012
- ***AIAA Reuben H. Fleet Scholarship Program***, AIAA San Diego Section, 2013
- ***Inamori Fellowship – Kyocera Corporation***, SDSU, 2012-2013
- ***Collier Research Hypersizer/AIAA Structures Best Paper Award***, 2013

John Kucharski (master student)

- Working for ***Continental Data Graphics (Boeing company)***

Rachel Rybarczyk (current master student)

- ***AIAA Reuben H. Fleet Scholarship Program***, AIAA San Diego Section, 2016

Samarth Bhasin (master student)

- Working for ***Bombardier***

Kurt Hasslinger (master student)

- Working for ***General Atomics***

Luca Cigolini (visiting master student)

- Working for ***Boeing***

Alberto Varello (visiting master student)

- *Agusta westland Best Thesis Award*, 2009
- *Umberto Montalenti Award*, 2010
- *Pegasus Award*, 2009
- *Scholarship for WCCM*, 2012
- *Currently working at ROLEX SA*

Marco Petrolo (visiting master student, now Assistant Professor)

- *Vinci Grant*, 2010
- *Fulbright Grant*, 2010
- *Currently working at Politecnico di Torino (Italy)*

## SERVICE AND ADMINISTRATIVE WORK AT SAN DIEGO STATE UNIVERSITY

### Mentoring of Undergraduate Students:

Joseph Marrocco	(Computational Science Research Center)
Dejan Samardzic	(Department of Aerospace Engineering)
Samantha Stoneman	(Department of Aerospace Engineering)
Alan Márquez Razón	(Department of Aerospace Engineering)
Macarena Rey	(Department of Mechanical Engineering)
Ryan scurlock	(Department of Mechanical Engineering)

### M. S. Committees (chair):

<i>Samarth Bhasin</i>	(Department of Aerospace Engineering, <b>graduated</b> )
<i>John Kucharski</i>	(Department of Aerospace Engineering, <b>graduated</b> )
<i>Kurt Hasslinger</i>	(Department of Aerospace Engineering, <b>graduated</b> )
<i>Yonas Demissie</i>	(Department of Aerospace Engineering, <b>graduated</b> )
<i>Alexander Ortiz</i>	(Department of Aerospace Engineering, <b>graduated</b> )
<i>Rachel Rybarczyk</i>	(Department of Aerospace Engineering)

### M. S. Committees (member):

<i>Manasi Palwankar</i>	(Department of Aerospace Engineering)
<i>Amuda Varshini Kamaraj</i>	(Department of Aerospace Engineering)
<i>Rafay Navaid</i>	(Department of Aerospace Engineering)
<i>Scott A. Wong</i>	(Department of Aerospace Engineering)
<i>Joshua Rivera</i>	(Department of Aerospace Engineering)
<i>Muhammad Navaid</i>	(Department of Aerospace Engineering)
<i>Dkruu B. Patel</i>	(Department of Aerospace Engineering)
<i>Amit H. Sangani</i>	(Department of Aerospace Engineering)
<i>Vishal D. Aggarwal</i>	(Department of Aerospace Engineering)
<i>Katherine R. Wagschal</i>	(Department of Aerospace Engineering)

<i>Jeremy O. Stromsoe</i>	(Department of Aerospace Engineering)
<i>Ulas Akgun</i>	(Department of Aerospace Engineering)
<i>Dhruv Patel</i>	(Department of Aerospace Engineering)
<i>Gabriela Sans-Dougllass</i>	(Department of Aerospace Engineering)
<i>Daniel Enriquez</i>	(Department of Aerospace Engineering)
<i>Alexander Popescu</i>	(Department of Aerospace Engineering)
<i>Susan Gaylor</i>	(Department of Mathematics),
<i>Aditya A. Bothate</i>	(Department of Mechanical Engineering)
<i>Onkar Mande</i>	(Department of Mechanical Engineering)
<i>Martin Puterbaugh</i>	(Department of Mechanical Engineering)
<i>Scott J. Felter</i>	(Department of Mechanical Engineering)
<i>Ayman Battikhi</i>	(Department of Mechanical Engineering)
<i>Ryan Contois</i>	(Department of Mechanical Engineering)
<i>Toyen Ngyen</i>	(Department of Civil, Construction, and Environmental Engineering)
<i>Nathan Labadie</i>	(Department of Electrical Engineering)
<i>Elias Mireles</i>	(Department of Electrical Engineering)
<i>Joshua Patin</i>	(Department of Electrical Engineering)
<i>Mehak Garg</i>	(Department of Electrical Engineering)
<i>Anup N. Kulkarni</i>	(Department of Electrical Engineering)
<i>Anusha Kalikonda</i>	(Department of Electrical Engineering)
<i>Dave West</i>	(Department of Electrical Engineering)

PhD committees:

<i>Huy Vu</i>	(Department of Mathematics)
<i>Susan Berggren</i>	(Department of Mathematics)
Timothy Paul Johnson	(Department of Structural Engineering, Joint Doctoral Program with UCSD)

PhD committees ([chair](#)):

<i>Rauno Cavallaro</i>	(Department of Aerospace Engineering)
<i>Enrico Santarpia</i>	(Department of Aerospace Engineering)

Judge of Students' Poster Presentations

Student Research Symposium, Applied Computational Science and Engineering Student Support (ACSESS)

College of Engineering

Member of the “Curriculum committee”  
 Member of the “Joint Doctoral Program Steering Committee”  
 Secretary of the Faculty meetings  
 Member of the “Intramural Grants Committee”

Aerospace Engineering

Member of the “Faculty search committee” [current]  
 Member of the “Faculty search committee” [a professor was hired]  
 Member of the “Department chair search committee” [a chair was hired]

## SCIENTIFIC MEETINGS, EDITORIAL WORK, AND EXTERNAL COMMITTEES

### Associate Editor:

*Advances in Aircraft and Spacecraft Science*

### Conference Session Organizer:

AIAA SCITECH 2017 “*Challenges in the Design of Joined Wings and Structural Joints*” January 2017

AIAA SCITECH 2016 “*Challenges in the Design of Joined Wings*” January 2016, San Diego, California

AIAA SCITECH 2015 “*Challenges in the Design of Joined Wings*” [**two sessions on the topic**] January 5-9, 2015, in Gaylord Palms and Convention Center, Kissimmee, Florida

Session 11 on “*Beam, Plate and Shell Theories and Computational Models for Laminated Structures*” 16<sup>th</sup> International Conference on Composite Structures, University of Porto, Faculty of Engineering (FEUP), June 28-30, 2011

### Conference Session Chair:

- Session 11.2. 16<sup>th</sup> International Conference on Composite Structures, University of Porto, Faculty of Engineering (FEUP), June 28-30, 2011
- Session 46. 54<sup>th</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference, Boston, Massachusetts, 8-11 April 2013
- Session 13-2: Fluid-Structure Interaction II. ASME 2013 Fluids Engineering Summer Conference, Incline Village, Nevada, July 7-11, 2013
- Session STR-02: Beams & Plates. AIAA SCITECH 2014, National Harbor, Maryland, January 13-17, 2014
- AIAA SCITECH 2015, “Challenges in the Design of Joined Wings I and II”, 2015
- Variational Analysis and Applications, Erice, August 28-September 5, 2015
- AIAA SCITECH 2016, “Challenges in the Design of Joined Wings”, 2016
- AIAA SCITECH 2017 “*Challenges in the Design of Joined Wings and Structural Joints*” January 2017

### Organization of the Unmanned Aircraft Systems group at San Diego State University

The team is made of a total of four professors (including Luciano Demasi) with expertise in nonlinear aeroelasticity, antennas, sensors, and nonlinear dynamics. The team is the recipients of numerous NSF grants, 11 patents on sensors and an NSF Career Award (for details please see [www.UASandiego.com](http://www.UASandiego.com)).

### AIAA Structures Technical Committee

Status: member actively involved in the organization

### M.S. Committee (Other Institutions)

<u>M. S. Committee:</u> Alberto Varello	(Dept. of Aerospace Eng., Politecnico di Torino, Italy)
<u>M. S. Committee:</u> Luca Cigolini	(Dept. of Aerospace Eng., Politecnico di Torino, Italy)
<u>M. S. Committee:</u> Fiorenzo A. Fazzolari	(Dept. of Aerospace Eng., Politecnico di Torino, Italy)
<u>M. S. Committee:</u> Andrea Passariello	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Antonio Dipace	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Enrico Santarpia	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Alessandro Boccadifuoco	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Federica Bertuccelli	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Andrea Iannelli	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Massimiliano Nardini	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Rocco Bombardieri	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Pellegrino D'Addio	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Paolo Moscatelli	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Federico Vannucci	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Giacomo Biagini	(Dept. of Aerospace Eng., Università di Pisa, Italy)
<u>M. S. Committee:</u> Simone Silvani	(Dept. of Aerospace Eng., Università Roma3, Italy)
<u>M. S. Committee:</u> Ilir Deda	(Dept. of Aerospace Eng., Università Roma3, Italy)
<u>M. S. Committee:</u> Nick Teunisse	(Dept. of Mechanical Eng., TU Delft)
<u>M. S. Committee:</u> Pepijn Kessels	(Dept. of Aerospace Eng., TU Delft)
<u>M. S. Committee:</u> Govert Harlaar	(Dept. of Aerospace Eng., TU Delft)

### Referee for 33 Peer Reviewed Journals:

1. *Advances in Aircraft and Spacecraft Science*
2. *AIAA Journal*
3. *Ain Shams Engineering Journal*
4. *Applied Mathematics and Computation*
5. *Applied Mathematical Modelling*
6. *Chinese Journal of Aeronautics*
7. *Composites Part A*
8. *Composites Part B*
9. *Composite Structures*
10. *Computers Materials and Continua*
11. *Computers and Structures*
12. *Engineering Computations*
13. *Engineering Structures*
14. *European Journal of Mechanics A/Solids*
15. *Finite Element Analysis Design*
16. *International Journal of Mechanical Sciences*
17. *International Journal of Solids and Structures*
18. *Journal of Aeroelasticity and Structural Dynamics*
19. *Journal of Aerospace Engineering*
20. *Journal of Aircraft*
21. *Journal of Applied Mechanics*
22. *Journal of Composite Materials*
23. *Journal of Energy Research*



24. *Journal of Engineering Mechanics*
25. *Journal of Guidance Control and Dynamics*
26. *Journal of Intelligent Material Systems and Structures*
27. *Journal of Sound and Vibration*
28. *Journal of Zhejiang University-SCIENCE A*
29. *Mathematics and Mechanics of Solids*
30. *Meccanica*
31. *Mechanics of Advanced Materials and Structures*
32. *Thin Wall Structures*
33. *Wind Energy*

## **PROFESSIONAL ASSOCIATIONS**

American Institute of Aeronautics and Astronautics (**AIAA**): **Senior Lifetime Member**  
Association for Unmanned Vehicle Systems International (**AUVSI**): **member**