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I. GENERAL INFORMATION

A. Education

Virginia Polytechnic Institute and State University, Engineering Science and Mechanics Blacksburg, Virginia, USA

01/99 – 02/01 Visiting Scholar, Postdoctoral Research Associate, Virginia Polytechnic Institute and State University, Virginia Tech, Engineering Science and Mechanics Department. Blacksburg, VA; Advisor: *Prof. Liviu Librescu*

Politecnico di Torino, Torino, Italy

Doctor of Philosophy in Aerospace Engineering, December 2000

09/97 – 03/01 **Ph.D.:** Politecnico di Torino, Dipartimento di Ingegneria Aeronautica and Aerospaziale. Turin, Italy

Dissertation: *Studies on Linear and Nonlinear Aeroelasticity of Lifting Surfaces Approached Via New Techniques*; Advisor: *Prof. Gianfranco Chiocchia*

Master of Science in Aeronautical Engineering, December 1996

09/94 – 12/96 **M.S.:** Aeronautical Engineering, Politecnico di Torino, Torino, Italy

Thesis: *Manufacturing of a 6 meters wing-box and theoretical/experimental analysis of structures in composite materials for solar energy electrical gliding*;
Advisor: *Prof. Giulio Romeo*

09/91 – 09/94 **Diploma-B.S.:** Aeronautical Engineering, Politecnico di Torino, Torino, Italy

B. Employment

02/09 – Present **Associate Professor**, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY, USA

10/10 – Present **CeCeT Program Manager**, Blade Testing and WT Design, Wind Research at Clarkson for the NYSERDA funded Center for the Evaluation of Clean Energy Technology

09/04 – Present **CEO**, Vento Tek Inc., Potsdam, NY

09/10 – Present **Graduate Faculty Scholar** in the College of Graduate Studies at the University of Central Florida, Orlando, FL

08/03 – 02/09 **Assistant Professor**, Department of Mechanical and Aeronautical Engineering, Clarkson University, Potsdam, NY, USA

08/01 – 08/03 **Visiting Assistant Professor**, ESM Dept, Virginia Tech, Blacksburg, Virginia, USA

02/01 – 08/01 **Postdoctoral Research Associate**, ESM Dept, Virginia Tech, Blacksburg, Virginia, USA; Postdoctoral Advisor: Liviu Librescu

01/99 – 02/01 **Visiting Scholar, Research Assistant**, ESM, Virginia Tech, Blacksburg, Virginia, USA

- 09/00 – 12/00 **Assistant Professor under contract**, Department of Aeronautical and Aerospace Engineering, Politecnico di Torino, Torino, Italy
- 09/95 – **Research Assistant/Collaborator**, Department of Aeronautical and Aerospace Engineering, Politecnico di Torino, Torino, Italy.
- 08/07 – Present **Consultant Engineer**, Morningside, New York, NY
- 09/10 – Present **Consultant Engineer**, WindART, Corpus Christi, TX
- 01/09 – 04/09 **Consultant Engineer**, California Wind Systems, Inc., California, USA
- 06/01 – **Consultant Engineer**, CSA Engineering, Inc., California, USA
- 09/96 – 09/00 **Consultant Engineer**, Archemide Advanced Composite, Torino, Italy
- 09/96 – 09/97 **Consultant Engineer**, MacNeal-Schwendler Corp. Italia, Torino, Italy
- 09/95 – 06/96 **Instructor**, Short Course for practicing automotive technicians and engineers, Electronics BEAR (Consulauto S.n.c., Torino, Italy).
- 09/86 – 09/91 **Designer**, The Associated Technical Office of Architecture and Engineering BLP, Pinerolo, Italy

C. Honors and Awards

- 2009 **Member**, Elected to the International Committee of the International Congress on Thermal Stresses (ICTS)
- 2008 **Director**, Elected to the Board of Directors of ARI Green Energy, Jacksonville, FL
- 2010 **Director**, Elected to the Board of Directors of JLM Technologies Inc, Seattle, WA
- 2007 **2007 SAE Ralph R. Teetor Educational Award**, In recognition of significant contributions to teaching, research and student development, Society of Automotive Engineering, Washington, DC
- 2005 – 2010 **Clarkson University Teaching Excellence**, Clarkson University, Potsdam, NY
- 2006 **Clarkson University Outstanding New Teacher Award**, Clarkson University, Potsdam, NY
- 2001, 2002 **Center for Excellence in Undergraduate Teaching Award**, CEUT, Virginia Tech, Blacksburg, VA
- 1997 **“Antonio Bertolotti” Award for Best M.S. in Aeronautics** at Politecnico di Torino, Italy
- 1997 – 2001 **Italian National Research Council PhD Fellowship**, CNR, Rome, Italy
- 1991 – 1996 **“Top ten-percent” Scholarship** of Politecnico di Torino, Torino, Italy
- 1990 **Rotary & Lions Clubs Award**, Ranked first for the *“Best Diploma”* at the Technical College of Pinerolo, Italy

D. Professional Experience

- 04/11 – Present **Deputy Editor-in-Chief** of the International Journal of Aeronautical and Space Sciences (IJASS)

- 01/08 – Present **Associate Editor** of the Journal of Thermal Stresses (JTS)
- 01/09 – Present **Associate Editor** of the ASCE Journal of Aerospace Engineering (JAE)
- 02/10 – Present **Associate Editor** of the International Journal of Aerospace Engineering (IJAE)
- 08/10 – Present **Associate Editor** of the SAE International Journal of Aerospace (SAE JoA)
- 02/10 – Present **International Advisory Board** of Mechanics. Proceedings of National Academy of Sciences of Armenia
- 06/07 – Present **Chair** of the UAS Applied Technical Committee, SAE International
- 08/11 – Present **Founding member** of Star Voyager organization.
- 2006, 2007 **Summer Faculty Fellow** (Summer 2006) and **Senior Summer Faculty Fellow** (Summer 2007), Office of Naval Research, Summer Faculty Research Program Fellowship, American Society for Engineering Education, ASEE, Naval Research Laboratory, Washington, DC
- 2005, 2006 **Visiting Professor**, Delft University of Technology, Aerospace Structures, Delft, The Netherlands, Periods: Dec. 2005–Jan 2006; Dec 2006–Jan 2007

II. PUBLICATIONS

h-index: > 11; No. Citations: > 300

A. Edited Books, Encyclopedias, and Journals

1. P. MARZOCCA, M.-J. PINDERA, *Professor Liviu Librescu Memorial Sessions Book of Abstracts*, ESM 2008 Mechanics Conference, Virginia Tech, Blacksburg, May 2008.
2. L. LIBRESCU, P. MARZOCCA, *Thermal Stresses'03*, Virginia Polytechnic Institute and State University, Blacksburg, VA, Vol. 1, 500 pages, 2003, ISBN 0-9721257-2-8.
3. L. LIBRESCU, P. MARZOCCA, *Thermal Stresses'03*, Virginia Polytechnic Institute and State University, Blacksburg, VA, Vol. 2, 500 pages, 2003, ISBN 0-9721257-2-8.
4. Co-Editor of the Double Special Issue of the Journal of Thermal Stresses, dedicated to the Memory of Professor Liviu Librescu, Vol. 32, No. ISS 1–2, 2009.
5. M.O.-STARZEWSKI, P. MARZOCCA, *Thermal Stresses'09*, University of Illinois at Urbana Champaign, IL, Vol. 1, 349 pages, 2009, ISBN 0-6152823-3-4.
6. M.O.-STARZEWSKI, P. MARZOCCA, *Thermal Stresses'09*, University of Illinois at Urbana Champaign, IL, Vol. 1, 296 pages, 2009, ISBN 0-6152823-3-4.
7. Encyclopedia of Thermal Stresses, Springer Publishing House, R. HETNARSKI Editor, P. MARZOCCA Sectional Editor, under contract, 2011.

B. Review Articles

1. L. LIBRESCU, P. MARZOCCA, "Advances in the Linear/Nonlinear Control of Aeroelastic Structural Systems," *Acta Mechanica*, Vol. 178, No. 3-4, 2005, pp. 147-186, Review Article.
2. Z. WANG, A. BEHAL, P. MARZOCCA, "Adaptive and Robust Aeroelastic Control of Nonlinear Lifting Surfaces with Single/Multiple Control Surfaces: A Review," *International Journal of Aeronautical and Space Sciences*, Vol. 11, No. 4, 2010, pp. 285–302.
3. P. MARZOCCA, A. FAZELZADEH, "A Review of Nonlinear Aero-Thermo-Elasticity of Functionally Graded Panels," *Journal of Thermal Stresses*, Vol.34, No. 5 & 6, 2011, pp. 536 – 568.

C. Refereed Journal Publications, Review Articles, and Special Issues

Statistics: Archival journal publication > 72 with: Graduate Students > 70; CU Graduate Students > 30; Undergraduate Students > 5; CU Faculty > 15; US Collaborators > 35; International Collaborators > 50.

(graduate/undergraduate students indicated in Italic)

1. P. MARZOCCA, L. LIBRESCU, G. CHIOCCHIA, "Aeroelastic Response of a 2-D Lifting Surfaces to Gust and Arbitrary Explosive Loading Signatures," *International Journal of Impact Engineering*, Vol. 25, No. 1, 2001, pp. 41-65.
2. P. MARZOCCA, L. LIBRESCU, G. CHIOCCHIA, "Aeroelasticity of Two-Dimensional Lifting Surfaces Via Indicial Function Approach," *The Aeronautical Journal of the Royal Aeronautical Society*, 2002, pp. 147-153.
3. Z. QIN, P. MARZOCCA, L. LIBRESCU, "Aeroelastic Instability and Response of Advanced Aircraft Wings at Subsonic Flight Speeds," *Aerospace Science and Technology*, Vol. 6, No. 3, 2002, pp. 195-208.
4. P. MARZOCCA, L. LIBRESCU, W.A. SILVA, "Aeroelastic Response and Flutter of Swept Aircraft Wings," *AIAA Journal*, Vol. 40, No. 5, 2002, pp. 801-812.
5. P. MARZOCCA, L. LIBRESCU, W.A. SILVA, "Aeroelastic Response of Nonlinear Wing Section by Functional Series Technique," *AIAA Journal*, Vol. 40, No. 5, 2002, pp. 813-824.
6. P. MARZOCCA, L. LIBRESCU, G. CHIOCCHIA, "Aeroelastic Response of a 2-D Airfoil in Compressible Flight Speed Regimes Exposed to Blast Loadings," *Aerospace Science and Technology*, Vol. 6, No. 4, 2002, pp. 259-272.
7. L. LIBRESCU, P. MARZOCCA, W.A. SILVA, "Supersonic/Hypersonic Flutter and Post-flutter of Geometrically Imperfect Circular Cylindrical Panels," *Journal of Spacecraft and Rockets*, Vol. 39, No. 5, 2002, pp.802-812.
8. P. MARZOCCA, L. LIBRESCU, W.A. SILVA, "Flutter, Post-Flutter and Control of a Supersonic 2-D Lifting Surface," *Journal of Guidance, Control, and Dynamics*, Vol. 25, No. 5, 2002, pp. 962-970.
9. L. LIBRESCU, G. CHIOCCHIA, P. MARZOCCA, "Implications of Cubic Physical / Aerodynamic Nonlinearities on the Character of the Flutter Instability Boundary," *International Journal of Nonlinear Mechanics*, Vol. 38, 2003, pp. 173-199.
10. Z. QIN, L. LIBRESCU, P. MARZOCCA, "Aeroelasticity of Composite Aerovehicle Wings in Supersonic Flows," *Journal of Spacecraft and Rockets*, Vol. 40, No. 2, 2003, pp. 162-173.
11. P. MARZOCCA, L. LIBRESCU, W.A. SILVA, "Nonlinear Open-/Closed Loop Aeroelastic Analysis of Airfoils via Volterra Series," *AIAA Journal*, Vol. 42, No. 4, 2004, pp. 673-686.
12. L. LIBRESCU, P. MARZOCCA, W.A. SILVA, "Linear/Nonlinear Supersonic Panel Flutter in a High-Temperature Field," *Journal of Aircraft*, Vol. 41, No. 1, 2004, pp. 918-924.
13. Y. YUAN, P. YU, L. LIBRESCU, P. MARZOCCA, "Aeroelasticity of Time-Delayed Feedback Control of Two-Dimensional Supersonic Lifting Surfaces," *Journal of Guidance, Control, and Dynamics*, Vol. 27, No. 5, 2004, pp. 795-803.
14. P. MARZOCCA, L. LIBRESCU, W.A. SILVA, "Time-Delay Effects on Linear/Nonlinear Feedback Control of Simple Aeroelastic Systems," *Journal of Guidance, Control, and Dynamics*, Vol.28, No.1, 2005, pp. 53-62.

15. L. LIBRESCU, P. MARZOCCA, W.A. SILVA, "Aeroelasticity of 2-D lifting surfaces with time-delayed feedback control," *Journal of Fluids and Structures*, Vol. 20, No. 2, 2005, pp. 197-215.
16. A.J. MICHALEK, P. MARZOCCA, J. MOOSBRUGGER, D. HASANYAN, "Effects of an In-Plane Axisymmetric Magnetic Field on the Vibration of a Thin Conductive Spinning Disk," *Journal of Applied Physics*, Vol. 97, 10R509, 2005, pp. 1-3.
17. L. LIBRESCU, S. NA, P. MARZOCCA, C. CHUNG, M.K. KWAK, "Active aeroelastic Control of 2-D Wing-Flap Systems Operating in an Incompressible Flowfield and Impacted by a Blast Pulse," *Journal of Sound and Vibration*, Vol. 283, 2005, pp. 685-706.
18. P. MARZOCCA, L. LIBRESCU, D.H. KIM, I. LEE, S. SCHOBBER "Generalized Transonic Unsteady Aerodynamics via Computational-Fluid-Dynamics Indicial Approach," *AIAA Journal*, Vol. 43, No. 4, 2005, pp.915-921.
19. D.-H. KIM, I. LEE, P. MARZOCCA, L. LIBRESCU, S. SCHOBBER "Nonlinear Aeroelastic Analysis of an Airfoil Using CFD-Based Indicial Approach," *Journal of Aircraft*, Vol. 42, No.5, 2005, pp. 1340-1344.
20. S. NA, L. LIBRESCU, M.-H. KIM, I.-J. JEONG, P. MARZOCCA, "Aeroelastic Response of Flapped Wing Systems Using Robust Estimation Control Methodology," *Journal of Guidance, Control, and Dynamics*, Vol. 29, No. 1, 2006, pp. 199-201.
21. A. BEHAL, P. MARZOCCA, V.M. RAO, A. GNANN, "Nonlinear Adaptive Control of an Aeroelastic 2-D Lifting Surface," *Journal of Guidance, Control, and Dynamics*, Vol. 29, No. 2, 2006, pp. 382-390.
22. S. NA, L. LIBRESCU, M.-H. KIM, I.-J. JEONG, P. MARZOCCA, "Robust Aeroelastic Control of Flapped Wing Systems Using a Sliding Mode Observer," *Aerospace Science and Technology*, Vol. 10, No. 3, 2006, pp. 120–126.
23. A. BEHAL, V.M. RAO, P. MARZOCCA, M. KAMALUDEEN "Adaptive Control for a Nonlinear Wing Section with Multiple Flaps," *Journal of Guidance, Control, and Dynamics*, Vol. 29, No. 3, 2006, pp. 744-748.
24. V.M. RAO, A. BEHAL, P. MARZOCCA, C. RUBILLO, "Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap," *Aerospace Science and Technology*, Vol. 10, No. 4, 2006, pp. 309-315.
25. O. SERESTA, M.M. ABDALLA, S.B. MULANIZ, P. MARZOCCA, "Stacking Sequence Design of Flat Composite Panel for Flutter and Thermal Buckling," *AIAA Journal*, Vol. 44, No. 11, 2006, pp. 2726-2735.
26. C. RUBILLO, P. MARZOCCA, E. BOLLT, "Active Aeroelastic Control of Lifting Surfaces via Jet Reaction Limiter Control," *International Journal of Bifurcation and Chaos*, Vol. 16, No. 9, 2006, 2559–2574.
27. M. BELUBEKYAN, K. GHAZARYAN, P. MARZOCCA, C. CORMIER, "Localized Bending Waves in a Rib-Reinforced Elastic Orthotropic Plate," *ASME Journal of Applied Mechanics*, Vol. 74, No. 1, 2007, pp. 169-171.
28. S.S. NA, L. LIBRESCU, P. MARZOCCA, G.C. YOON, C. RUBILLO, K. BONG, Robust aeroelastic control of two-dimensional supersonic flapped wing systems, *Acta Mechanica*, Vol. 192, No. 1-4, 2007, pp. 37-47.
29. L.K. ABBAS, Q. CHEN, K. O'DONNELL, D. VALENTINE, P. MARZOCCA, Numerical studies of a non-linear aeroelastic system with plunging and pitching freeplays in supersonic/hypersonic regimes, *Aerospace Science and Technology*, Vol. 11, No. 5, 2007, pp. 405-418.

30. P. YU, Z. CHEN, Z., L. LIBRESCU, P. MARZOCCA, "Implications of time-delayed feedback control on limit cycle oscillation of a two-dimensional supersonic lifting surface," *Journal of Sound and Vibration*, Vol. 304, No. 3-5, 2007, pp. 974-986
31. P. MARZOCCA, L. LIBRESCU, D.-H. KIM, I. LEE, S. SCHOBBER, "Development of an Indicial Function Approach for the Two-Dimensional Incompressible/Compressible Aerodynamic Load Modeling," *Journal of Aerospace Engineering, Part G, Proceedings of the Institution of Mechanical Engineers*, Vol. 221, No. 3, 2007, pp. 453-463.
32. I. TUZCU, P. MARZOCCA, E. CESTINO, G. ROMEO, G. FRULLA, "Stability and Control of a High-Altitude, Long-Endurance UAV" *Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 3, 2007, pp. 713-721.
33. K.K. REDDY, J. CHEN, A. BEHAL, P. MARZOCCA, "Multi-Input/Multi-Output Adaptive Output Feedback Control Design for Aeroelastic Vibration Suppression," *Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 4, 2007, pp. 1040-1048.
34. M. HE, P. MARZOCCA, S. DHANIYALA, "A New High Performance Battery-Operated Electrometer," *Review of Scientific Instruments*, Vol. 78, October 2007, pp. 105103-1-5.
35. M. BELUBEKYAN, K. GHAZARYAN, P. MARZOCCA, C. CORMIER, "Localized Magnetoelastic Bending Vibration of an Electroconductive Elastic Plate," *ASME Journal of Applied Mechanics*, Vol. 74, No. 6, 2007, pp. 1071-1077.
36. L.K. ABBAS, Q. CHEN, P. MARZOCCA, A. MILANESE, "Non-linear Aeroelastic Investigations of Store(s)-Induced Limit Cycle Oscillations," *Proceedings of the Institution of Mechanical Engineers, Part G, Journal of Aerospace Engineering*, Vol. 222, No. 1, 2008, pp. 63-80.
37. J.M. NICHOLS, P. MARZOCCA, A. MILANESE, "On the Use of the Auto-Bispectral Density for Detecting Quadratic Nonlinearity in Structural Systems," *Journal of Sound and Vibration*, Vol. 312, No. 4-5, 2008, pp. 726-735.
38. L.K. ABBAS, Q. CHEN, P. MARZOCCA, Z. GÜRDAL, M. ABDALLA, "Active Aerothermoelastic Control of Hypersonic Double-Wedge Lifting Surface," *Chinese Journal of Aeronautics*, Vol. 21, No. 1, 2008, pp. 8-18.
39. K. LI, D. AIDUN, P. MARZOCCA, "Modeling of the mixed weld zone of dissimilar metals joint by functionally graded materials," *STEEL GRIPS Journal of Steel and Related Materials*, Vol. 6, No. 1, 2008, pp 58-68.
40. L.K. ABBAS, Q. CHEN, P. MARZOCCA, K. O'DONNELL, D. VALENTINE, "Aeroelastic Behavior of the Lifting Surfaces with Free-Play and Aerodynamic Stiffness and Damping Nonlinearities," *International Journal of Bifurcation and Chaos*, Vol. 18, No. 4, 2008, pp. 1101-1126.
41. P. MARZOCCA, J.M. NICHOLS, M. SEAVER, S. TRICKEY, A. MILANESE, "Second Order Spectra for Quadratic Non-linear Systems by Volterra Functional Series: Analytical Description and Numerical Simulation," *Mechanical Systems and Signal Processing*, Vol. 22, 2008, pp. 1882-1895.
42. G. COPPOTELLI, P. MARZOCCA, F.D. ULKER, J. CAMPBELL, F. NITZSCHE, "Experimental Investigation on Modal Signature of Smart Spring/Helicopter Blade System," *Journal of Aircraft*, Vol. 45, No. 4, 2008, pp. 1373-1380.
43. A. MILANESE, P. MARZOCCA, J.M. NICHOLS, M. SEAVER, S.T. TRICKEY, "Modeling and Detection of Joint Loosening Using Output Only Broad-Band Vibration Data," *Structural Health Monitoring, an International Journal*, Vol. 7, No. 4, 2008, pp. 309-328.

44. A. MILANESE, P. MARZOCCA, M. BELUBEKYAN, K. GHAZARYAN, "Effect of the stiffness and inertia of a rib reinforcement on the localized bending waves in semi-infinite plates," *International Journal of Solids and Structures*, *Special Volume* dedicated to Professor Liviu Librescu, Edited by Professor Stelios Kyriakides, Vol. 46, No. 10, 2009, pp. 2126-2135.
45. S. NA, I.-J. JEONG, G.-C. YOON, P. MARZOCCA, "Robust Aeroelastic Control of Lifting Surfaces with Uncertainty via Multi-Objective Synthesis," *Journal of Guidance, Control, and Dynamics*, Vol. 32 No.1, 2009, pp. 337-343.
46. S. NA, G.-C. YOON, B.-H. LEE, P. MARZOCCA, "Dynamic Response Control of Rotating Composite Booms Under Solar Radiation," *Journal of Thermal Stresses*, *Special Issue* dedicated to the memory of Professor Liviu Librescu, Vol. 32, No. ISS 1-2, 2009, pp. 1-20.
47. A. MILANESE, P. MARZOCCA, M. BELUBEKYAN, K. GHAZARYAN, H.P MKRTCHYAN, "On the Magnetic Field Effect in Electroconductive Plates Under Non-Conservative Loading," *ASME Journal of Applied Mechanics*, Vol 76, No. 1, 2009, pp. 1-9.
48. K.-W. KIM, B.-H. LEE, S. NA, P. MARZOCCA, "Dynamic Response Analysis of Rotating Functionally Graded Thin-Walled Blades Exposed to Steady Temperature and External Excitation," *Journal of Thermal Stresses*, Vol. 32, No. 3, 2009 , pp. 209 – 225.
49. J.M. NICHOLS, P. MARZOCCA, A. MILANESE, "The Trispectrum for Gaussian Driven, Multiple Degree-of-Freedom, Non-linear Structures," *International Journal of Non-Linear Mechanics*, Vol. 44, No. 4, 2009, pp. 404-416.
50. S. FINLEY, C SIDWELL, K. WILLMERT, P. MARZOCCA, "Application of Variance Based Sensitivity Analysis to Blade Outer Air Seals," *Advanced Modeling and Optimization International Journal*, Vol. 11, No. 1, 2009.
51. O.M. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, H. LEE, "Integrated Approach for Life Prediction of Thermo-Fluidic Systems," *Advanced Modeling and Optimization International Journal*, Vol. 11, No. 4, 2009.
52. S.A. FAZELZADEH, P. MARZOCCA, A. MAZIDI, A.R. RAHMATI, "The effect of multiple stores arrangement on flutter speed of a shear deformable wing subjected to pull-up angular velocity," *The Aeronautical Journal of the Royal Aeronautical Society*, Vol. 113, No. 1148, 2009, pp. 661-668.
53. P. MARZOCCA, J.M. NICHOLS, A. MILANESE, "An analytical formulation of bispectral densities for multiple degree-of-freedom systems," *Journal of Engineering Mathematics*, Vol. 67, No. 4, pp. 351-367, 2010.
54. G. FRULLA, E. CESTINO, P. MARZOCCA, "Critical Behavior of Slender Wing Configurations," *Journal of Aerospace Engineering, Part G, Proceedings of the Institution of Mechanical Engineers*, Vol. 224, No. 5, 2010, pp. 587-600.
55. S.A. FAZELZADEH, P. MARZOCCA, A. MAZIDI, E. RASHIDI, "Divergence and flutter of shear deformable aircraft swept wings subjected to roll angular velocity," *Acta Mechanica*, Vol. 212, No. 1-2, 2010, pp. 151-165.
56. B.-H. LEE, J.-H. CHOO, S. NA, P. MARZOCCA, L. LIBRESCU (In Memory), "Sliding Mode Robust Control of Supersonic Three Degrees-of-Freedom Airfoils," *International Journal of Control, Automation, and Systems*, Vol. 8, No. 2, pp. 279-288. 2010.
57. S.A. FAZELZADEH, P. MARZOCCA, A. RASHIDI, A. MAZIDI, "Effects of Rolling Maneuver on Divergence and Flutter of Aircraft Wings Carrying an External Store," *Journal of Aircraft*, Vol. 47, No. 1, 2010, pp. 64-70.

58. O.M. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, H. LEE, "Integrated Physics-Based Approach for the Reliability Prediction of Thermal Systems," *International Journal of Reliability and Safety*, Vol. 5, No. 2, 2011, pp. 110-139.
59. M. HOSSEINI, S.A. FAZELZADEH, P. MARZOCCA, "Chaotic and Bifurcation Dynamic Behavior of Functionally Graded Curved Panels Under Aero-Thermal Loads," *International Journal of Bifurcation and Chaos*, Vol.21, No. 3, 2011, pp. 931-954.
60. S.S. NA, B. LEE, J. CHOO, P. MARZOCCA "Robust Dynamic Sliding Mode Control of a Rotating Thin-Walled Composite Blade," *ASCE Journal of Aerospace Engineering*, Vol. 24, No. 3, 2011, pp. 298-308.
61. A. MAZIDI, S.A. FAZELZADEH, P. MARZOCCA, "Flutter of Aircraft Wings Carrying a Powered Engine under Roll Maneuver," *Journal of Aircraft*, Vol. 48, No. 3, 2011, pp. 874-883.
62. K. GHAZARYAN, R. GHAZARYAN, O.HACHKEVYCH, P. MARZOCCA, "Gap surface waves in a system of a two elastic superconducting semi-spaces separated by a narrow gap," *Journal of Applied Mechanics*, Vol. 78, No. 6, 2011, DOI: 10.1115/1.4004427.
63. Z. WANG, A. BEHAL, P. MARZOCCA, "Model-Free Control Design for MIMO Aeroelastic System Subject to External Disturbance," *Journal of Guidance, Control, and Dynamics*, Vol.34, No.2, 2011, pp. 446-458.
64. D. CÁRDENAS, A. ARELLANO, H. ELIZALDE, J.AGUIRRE, H. AHUETT, P. MARZOCCA, O. PROBST, "Numerical Validation of a Finite Element Thin-Walled Beam Model of a Composite Wind Turbine Blade," *Wind Energy*, 18 MAR 2011, DOI: 10.1002/we.462..
65. M. IZADI, D.K. AIDUN, P. MARZOCCA, H. LEE, "Integrated Experimental Investigation of Seawater Composite Fouling Effect on the 90/10 Cu/Ni Tube Applied Thermal Engineering," *Applied Thermal Engineering*, Vol. 31, No. 14-15, 2011, pp. 2464-2473.
66. L.K. ABBAS, X. RUI; P. MARZOCCA, M. ABDALLA, R. DE BREUKER, "A parametric study on supersonic/hypersonic flutter behavior of aero-thermo-elastic geometrically imperfect curved skin panel," *Acta Mechanica*, Vol. 222, No. 1-2, pp. 2011, 41-57.
67. M. IZADI, D.K. AIDUN, P. MARZOCCA, H. LEE "Experimental Investigation of Fouling Behavior of 90/10 Cu/Ni Tube by Heat Transfer Resistance Monitoring (HTRM) Method," *Journal of Heat Transfer*, Vol. 133, No. 10, 2011, DOI: 10.1115/1.4004165.
68. Z. WANG, A. BEHAL, P. MARZOCCA, "Robust Adaptive Output Feedback Control Design for a MIMO Aeroelastic System," *International Journal of Aeronautical and Space Sciences*, Vol. 12, No. 2, 2011, pp. 157–167. (DOI: 10.5139/IJASS.2011.12.2.157).
69. L.K. ABBAS, X. RUI, P. MARZOCCA, "Panel flutter analysis of plate element based on the absolute nodal coordinate formulation," *Multibody System Dynamics*, Vol., No., 2011, pp. 1-18, DOI 10.1007/s11044-011-9268-5, In press.
70. Z. WANG, A. BEHAL, P. MARZOCCA, "Continuous Robust Control for Plunging-Pitching Aeroelastic System with Leading- and Trailing-Edge Flaps," *AIAA Journal of Guidance, Control and Dynamics*, DOI: 10.2514/1.54347, In press.
71. L.K. ABBAS, X. RUI; P. MARZOCCA, M. ABDALLA, R. DE BREUKER, "Static/Dynamic Edge Movability Effect on Non-linear Aerothermoelastic Behavior of Geometrically Imperfect Curved Skin Panel: Flutter and Post-Flutter Analysis," *Journal of Applied Mechanics*, Accepted, In Press.
72. P. COFFIN, G. AHMADI, R. JHA, P. MARZOCCA, "Experimental In-Flight Rolling MAV Wing Deployment and Aerodynamic Characterization" *SAE International Journal of Aerospace*, Nov. 2011, In press.

73. E. CESTINO, G. FRULLA, E. PEROTTO, P. MARZOCCA, "Theoretical and Experimental Flutter Predictions in High Aspect Ratio Composite Wings" *SAE International Journal of Aerospace*, Nov. 2011, In press.
74. E. CESTINO, G. FRULLA, E. PEROTTO, P. MARZOCCA, "Experimental Slender Wing Model Design By The Application Of Aeroelastic Scaling Laws," *ASCE Journal of Aerospace Engineering*, in press.
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D. Conferences Proceedings

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108. K. LI, D. AIDUN, P. MARZOCCA, "Numerical Investigation of the Heat Flow in Friction Stir Welding Process," TS2009, 1-4 June 2009, Urbana-Champaign, IL.
109. G.Y. BAGHDASARYAN, M.A. MIKILYAN, P. MARZOCCA, "Thermo-Elastic Stability Of Superconductive Shell in s Homogeneous Magnetic Field," TS2009, 1-4 June 2009, Urbana-Champaign, IL.
110. O.M. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, H. LEE, "Integrated Physics-Based Approach for the Reliability Prediction of Thermal Systems," IMECE2009-13342, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
111. O.M. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, H. LEE, "Integrated Approach for Life Prediction of Complex Thermal Systems," IMECE2009-13343, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
112. M.P. LACOURSIERE, D.K. AIDUN, P. MARZOCCA, "An Experimental Study Investigating the Corrosion Behavior of Cu-Ni Alloys in Waters Treated and Untreated with Anti-Corrosives," IMECE2009-13341, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
113. P. SHUKLA, M. IZADI, P. MARZOCCA, D.K. AIDUN, "Increasing the Efficiency of a Combined Cycle Power Plant by Modifying the Intercooled Gas Turbine," IMECE2009-13347, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
114. M. IZADI, D.K. AIDUN, P. MARZOCCA, H. LEE, "The Experimental Investigation of Fouling Phenomenon In Heat Exchangers by Heat Transfer Resistance Monitoring (HTRM) Method," IMECE2009-12524, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
115. M. IZADI, D.K. AIDUN, P. MARZOCCA, H. LEE, "The effect of geometrical features on air-side heat transfer, friction characteristics, and optimization of a large-size plain fin-and-tube heat exchanger by 3-D numerical simulation," IMECE2009-12523, Proceedings of ASME International Mechanical Engineering Congress and Exposition, Florida, Nov. 2009.
116. D. VALYOU, S. DHANIYALA, P. MARZOCCA, P. COFFIN, "Structural and Manufacturing Considerations for a Research Unmanned Aerial Vehicle," 09ATC-0134, SAE Aerotech 2009, November 8-12, 2009, Seattle, WA.

117. D. VALYOU, S. DHANIYALA, P. MARZOCCA, P. HOPKE, P.D. NALLATHAMBY, S.C. PRYOR "UAV Operation, Crash Analysis, and Measurement of Particle Concentrations above a Forest and Surrounding Farmland," 09ATC-0069, SAE Aerotech 2009, November 8-12, 2009, Seattle, WA.
118. P. COFFIN, G. AHMADI, R. JHA, P. MARZOCCA, W.-J. SU, W. TOLEDO, L. MANOLE, "Design and Experimental Investigation of a Small UAV," 09ATC-0322, SAE Aerotech 2009, November 8-12, 2009, Seattle, WA.
119. B. LEE, J.-H. CHOO, S.S. NA, P. MARZOCCA, "Robust Control of Rotating Composite Thin-Walled Beam," AIAA 2010-2625, Proceedings of the 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, 12 - 15 April 2010, Orlando, Florida
120. M. IZADI, D. AIDUN, P. MARZOCCA, "The experimental investigation of corrosion fouling in tubular heat exchangers by heat transfer resistance monitoring (HTRM) method," 18th Annual International Conference on Mechanical Engineering- ISME2010, 11 – 13 May, 2010, Sharif University of Technology, Tehran, Iran.
121. M. IZADI, D. AIDUN, P. MARZOCCA, H. LEE, "The Experimental Investigation of Seawater Fouling Effect on the 90/10 Cu/Ni Tube," POWER2010- 27155, Proceedings of POWER2010, ASME 2010 Power Conference, July 13 - 15, 2010, Chicago, IL, USA.
122. R. ALSTROM, P. MARZOCCA, E. BOLLT, G. AHMADI, "Controlling Chaotic Motions of a Nonlinear Aeroelastic System Using Adaptive Control Augmented with Time Delay," - 2010-8146, Proceeding of the AIAA Guidance, Navigation and Control Conference 2-5 August 2010, Toronto, Canada.
123. A. MAZIDI, S.A. FAZELZADEH, P. MARZOCCA, "Effects of Rolling Angular Velocity on The Flutter of Wing-Store Under Follower Force," FEDSM-ICNMM2010-30378, Proceedings of the 3th Joint US-European Fluids Engineering Summer Meeting FEDSM2010, August 1-5, 2010, Montreal, Canada.
124. M. IZADI, D. AIDUN, P. MARZOCCA, H. LEE, "Effect of Surface Roughness on Calcium Carbonate Fouling: An Experimental Investigation," IMECE2010- 40623, Proceedings of IMECE2010, 2010 ASME International Mechanical Engineering Congress and Exposition, November 12 -18, 2010, Vancouver, British Columbia, Canada.
125. P. SHUKLA, M. IZADI, P. MARZOCCA, D. AIDUN, "The Application of Intercooler as a Feed-Water Heater of the Heat Recovery Steam Generator," ASME-POWER 2010-27177, Chicago (2010).
126. P. SHUKLA, M. IZADI, P. MARZOCCA, D. AIDUN, "Thermodynamic Evaluation of an Intercooled Gas Turbine in the Combined Cycle Power Application," ASME-POWER 2010-27176, Chicago (2010).
127. P. SHUKLA, M. IZADI, P. MARZOCCA, D. AIDUN, "A Heat Recovery Study: The Application of Intercooler as a Feed-Water Heater of the Heat Recovery Steam Generator," IMECE2010-38917, of IMECE2010, 2010 ASME International Mechanical Engineering Congress and Exposition, November 12 -18, 2010, Vancouver, British Columbia, Canada.
128. M. IZADI, D. AIDUN, P. MARZOCCA, L. TIAN, "Numerical Simulation Of Deposition of Calcium Carbonate Particles Suspended in the Turbulent Cooling Water Flow," IMECE2010-38864, Proceedings of IMECE2010, 2010 ASME International Mechanical Engineering Congress and Exposition, November 12 -18, 2010, Vancouver, British Columbia, Canada.
129. M. PASQUALI, W. LACARBONARA, P. MARZOCCA, "Nonlinear System Identification of Composite Plates with Higher-Order Spectra: Numerical Analyses and Experimental Tests," AIAA-2011-2068, Apr. 4-7, 2011, Denver, CO.

130. A. ARENA, W. LACARBONARA, P. MARZOCCA, "Nonlinear Aeroelastic Formulation for Flexible High-Aspect Ratio Wings via Geometrically Exact Approach," AIAA-2011-1916, Apr. 4-7, 2011, Denver, CO.
131. F. ABDI, G. ABUMERI, J. PAQUETTE, G. CRANS, L. MINNETYAN, P. MARZOCCA "Durability of Tapered Composite Laminates under Static and Fatigue Loading," AIAA-2011-1757, 4-7, 2011, Denver, CO.
132. B. ALSTROM, P. MARZOCCA, E. BOLLT, G. AHMADI, "The Effect of Rate Limited Actuator Dynamics on the Adaptive Control of a Nonlinear Aeroservoelastic (ASE) System," AIAA-2011-1769, 4-7, 2011, Denver, CO.
133. M. PASQUALI, W. LACARBONARA, P. MARZOCCA, "Advanced System Identification of Plates Using a Higher-Order-Spectral Approach: Theory and Experiment," ASME 2011 IDETC/CIE, Washington, DC, August 29-31, 2011.
134. A. BAHRAMI, D.K. AIDUN, P. MARZOCCA, D.T. VALENTINE, "Wall Material Effect on Total Conduction Heat Gain of Office Buildings in Hot and Dry Climate," IMECE2011-64355, Proceedings of IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11 - 17, 2011, Denver, Colorado, USA.
135. Z. IVERSON, A. ACHUTHAN, P. MARZOCCA, D. AIDUN, K. CAIRD, "Performance and Reliability Analysis of an Off-Grid Hybrid Power System," IMECE2011-64197, Proceedings of IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11 - 17, 2011, Denver, Colorado, USA.
136. M. IZADI, A. BAHRAMI, D.K. AIDUN, P. MARZOCCA, B. GHEBERSELASSIE, M. WILLIAMS, "Studying the Effect of Number of Blades on the Aerodynamic Performance of a Venturi Effect Wind Turbine (VEFT) By Numerical Simulation," IMECE2011- 64565, Proceedings of IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11 - 17, 2011, Denver, Colorado, USA.
137. P. COFFIN, P. MARZOCCA, R. JHA, G. AHMADI, "Deployment Dynamics of a Small Carbon Fiber Tape-spring UAV Wing," IMECE2011-65669, Proceedings of IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11 - 17, 2011, Denver, Colorado, USA.
138. O.M. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, "Stochastic Simulation of a Power Generation Air Joint," 2011 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies, 6-8 December 2011.
139. J. JANAS, D. VALYOU, M. ABELL, P. MARZOCCA, "Design, Manufacturing, and Testing of a Research Unmanned Aerial Vehicle," 2011-01-2721, SAE Aerotech 2011, Toulouse, France, October 18-21, 2011.
140. E. CESTINO, G. FRULLA, E. PEROTTO, P. MARZOCCA, "Theoretical and Experimental Flutter Predictions in High Aspect Ratio Composite Wings," 2011-01-2722, SAE Aerotech 2011, Toulouse, France, October 18-21, 2011.
141. P. COFFIN, G. AHMADI, R. JHA, P. MARZOCCA, "Experimental In-Flight Rolling MAV Wing Deployment and Aerodynamic Characterization," 2011-01-2648, SAE Aerotech 2011, Toulouse, France, October 18-21, 2011.
142. D. VALYOU, P. MARZOCCA "Experimental Methods for the Characterization of the Static and Dynamic Stability of a Spinning Body," 2011-01-2735, SAE Aerotech 2011, Toulouse, France, October 18-21, 2011.

E. Keynotes, and National and International Invited Seminars at Other Institutions

1. L. LIBRESCU, P. MARZOCCA, W.A. SILVA, "Nonlinear Aeroelasticity of Air Vehicle Structural Systems In Pre- And Post- Flutter Flight Conditions," AFOSR/AFRL Workshop on Nonlinear Aspects of Aeroelasticity and Related Structural Dynamics, Shalimar, FL, 6-7 March 2003.
2. L. LIBRESCU, P. MARZOCCA: "Advances in the Linear/Nonlinear Control of Aeroelastic Structural Systems," Keynote Lecture at the Third European Conference on Structural Control (3ECSC), Vienna University of Technology, Vienna, Austria, July 12-15, 2004.
3. P. MARZOCCA, "Linear and Nonlinear Indicial Methods for 2-D Lifting Surfaces Aeroelasticity" Invited Lecture at the 16th Canadian Symposium on Fluid Dynamics, Dalhousie University in Halifax; CAIMS/CMS 2004: 25th Annual Meeting of the Canadian Applied and Industrial Mathematics Society; June 13–15, 2004.
4. P. MARZOCCA, "Volterra Functional Series Applied to Aerospace," Polytechnic of Turin, Department of Aeronautical and Aerospace Engineering, Turin, Italy, March 3, 2001.
5. P. MARZOCCA, "Linear/Nonlinear Aeroelasticity and Control of Aerospace Systems in Various Flight Speed Regimes," Xi'an Jiaotong University, Aerospace Department, Xi'an, China, 1 June 2005.
6. P. MARZOCCA, "Aeroservoelasticity for Advanced Aeronautical Systems," Northwestern Polytechnical University, School of Aeronautics and Aerospace, Xi'an, China, 2 June 2005.
7. P. MARZOCCA, "Stability and Bifurcations of Aerospace Systems," Xi'an Jiaotong University, Department of Mathematics, Xi'an, China, 3 June 2005.
8. P. MARZOCCA, "Potentials of Functional Series for Health Monitoring of Structural Systems," Naval Research Laboratory, Washington, DC, 24-25 April 2006.
9. P. MARZOCCA, "Linear and Non Linear Aeroelasticity: An Overview," Korea University, South Korea, 28 May 2006.
10. P. MARZOCCA, "Aeroelasticity of Flexible Systems," Korea University, GyeongSang National University (GSNU), South Korea, May 29 2006.
11. P. MARZOCCA, "Stability, Bifurcations and Active Aeroelastic Control of Aeroelastic Systems," KAIST, South Korea, 30 May 2006.
12. D. AIDUN, P. MARZOCCA, "Investigation of Water Quality Requirements for Heat Exchangers," CAMP Technical Meeting, May 2008, Canandaigua, NY.
13. P. MARZOCCA, D. AIDUN, "REAL: Reliability Evaluation and Assessment Laboratory Research Activities," General Electric, Global Research Center, June 11, 2008, Albany, NY.
14. P. MARZOCCA, K. VISSER, "Wind Energy in the North Country: Clarkson University Wind Energy Research Development and Technology Transfer," CNY Sustainable Speaker Series, Oct 23, 2008, Syracuse, NY.
15. J.M. NICHOLS, A. MILANESE, P. MARZOCCA, "High-Order Spectral Analysis to Investigate Non-linear M-DOF Structural Systems," The ESM 2008 100 Anniversary Mechanics Conference, Professor Liviu Librescu Memorial Sessions, Virginia Tech, Blacksburg, VA, May 29-30, 2008.
16. P. MARZOCCA, "Aeroelasticity and Control of Lifting Surfaces: Liviu Librescu Tribute," The ESM 2008 100 Anniversary Mechanics Conference, Professor Liviu Librescu Memorial Sessions, Virginia Tech, Blacksburg, VA, May 29-30, 2008.

17. P. MARZOCCA, “Volterra Functional Series with Applications in Non-Linear Structural Dynamics and Aeroelasticity,” University of Rome La Sapienza, Rome, Italy, 7 July 2009.
18. G. AHMADI, P. MARZOCCA, R. JHA, B. ALSTORM, S. OBIED. P. KABIR AND A. SHAHRABI, “Active Flow Control of Lifting Surface with Flap – Current Activities and Future Directions,” MINNOWBROOK VI, AFOSR/AFRL Workshop, Flow Physics and Control For Internal And External Aerodynamics, 23-26 AUGUST 2009.
19. P. MARZOCCA, “Aeroservoelastic modeling and computations of lifting surfaces with application to fixed and rotating blades,” Keynote lecture at the 23^o International Congress of Mechanical Engineering, IMPULSO XXIII, 4-6 November 2010, ITESM Campus Monterrey, Monterrey, Mexico.
20. P. MARZOCCA, “A Review of Nonlinear Aero-Thermo-Elasticity of Functionally Graded Panels” Keynote lecture at the 9th International Congress on Thermal Stresses 2011, Budapest University of Technology and Economics and Hungarian Academy of Sciences, June 6-9, 2011, Budapest, Hungary.

F. Provisional and Patents

1. Jet Reaction Torquer / Morphing Control: Application to Highly Flexible UAV Wings, Wind turbine concepts, Small Inflatable Unmanned-Air-Vehicle, (provisional patent: 60/556,529). Co-applicant: E. Bollt.
2. Energy Harvesting Device from Accelerated Air Flow near Bridges and other Civil Structures. Co-applicant: C. Cetinkaya.
3. In-place-Deployable Wind Barrier for a Group of Light Frame Buildings, Co-applicants: E.F. Thacher, J.S. Schrader.
4. Turbine Blade System, Co-applicants: ARI Renewable Energy Company, R. Taylor.
5. Smart Wind Turbine System, Co-applicants: ARI Green Technology.
6. Offshore Wind Turbine System Design, Co-applicants: ARI Green Technology.
7. In-line method and apparatus for monitoring and preventing fouling by application of a side-stream fouling monitoring device which controls the motion of moving vanes located in the tube sheets of the working tubular heat exchanger, Co-applicants: M. Izadi, D.K. Aidun.
8. In-line method and apparatus for monitoring fouling and visual inspection of its effects on the inside surface of the tube by application of a re-assembled tube, Co-applicants: M. Izadi, D.K. Aidun.
9. A Self-Healing Fin for Tube-Fin Bonding Retention in Heat Exchangers, Co-applicants: O.M. Al-Habahbeh, D.K. Aidun.
10. Application of Shape Memory Alloys (SMA) for the tube-fin bonding in heat exchangers, Co-applicants: O.M. Al-Habahbeh, D.K. Aidun.
11. Installing springs assemblies to maintain contact between tube and fin in heat exchangers, Co-applicants: O.M. Al-Habahbeh, D.K. Aidun.

G. Undergraduate and Graduate Research Papers, Posters, and Presentations

1. A. ROMAN (McNair Student), “i-UAV Project: structural characterization” Mentor: P. Marzocca, B. Helenbrook, E. Bollt, K. Visser, SURE Conference 2004, Clarkson University, July 2004.

2. Q. SODJI (McNair Student), "i-UAV Project: CFD modeling" Mentor: P. Marzocca, B. Helenbrook, E. Bollt, K. Visser, SURE Conference 2004, Clarkson University, July 2004.
3. A. GNANN (MAE Und. Student), "Adaptive Control Based Structural Health Monitoring Technique," Mentors: P. Marzocca, A. Behal, SURE Conference 2004, Clarkson University, July 2004.
4. C. RUBILLO (MS Student) "Active Aeroelastic Limiter Control of a Nonlinear Wings," SIAM Conference on Applications of Dynamical Systems, Snowbird Ski and Summer Resort, Snowbird, Utah, May 22-26, 2005.
5. C. MCBEE (Summer Research Student), C. LIBORDI (Summer Research Student), V.M. RAO (MS Student ECE), "Damage Detection Based on Structural Dynamic Characteristics," Mentors: P. Marzocca, A. Behal, SURE Conference 2005, Clarkson University, July 2005.
6. M.K. KAMALUDEEN (McNair Student), V.M. RAO, (MS Student ECE) "Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap," Mentors: P. Marzocca, A. Behal, SURE Conference 2005, Clarkson University, July 2005.
7. C. MCBEE, C. LIBORDI (Faculty Advisors: P. Marzocca, A. Behal) "Health Monitoring of Structural Components," 14th Annual Teaching Effectiveness Conference Undergraduate Research: Models, Funding and Pedagogy Saturday, October 29, 2005 Bertrand Snell Hall, Clarkson University.
8. M.K. KAMALUDEEN (McNair Student), V.M. RAO, (MS Student ECE) (Faculty Mentors: P. Marzocca, A. Behal) "Adaptive Control of a Supersonic Wing," 14th Annual Journey Beyond Excellence CSTEP State Wide Student Conference, 21-23 April, 2006, Lake George, Sagamore, NY. **Best Poster Award: 3rd place.**
9. D.M. ENO, P. MARZOCCA, D. LEONARD, R. PARTCH, "Studies on Filler Addition to SOMOS 11120 Watershed Stereolithography Resin," CAMP Meeting, May 2006, Canandaigua.
10. C.W. MCNALL (REU-NSF/MAE UG Student), K. O'DONNELL (MAE UG/G Student), "Development of an Experimental Two Degree of Freedom Aeroelastic Test Apparatus," Mentor: P. Marzocca, SURE Conference 2006, Clarkson University, July 2006.
11. M. HE, (Advisors: S. DHANIYALA, P. MARZOCCA) "Urban Airshed Monitoring: New Tools for Aerosol Characterization at Meso-Scale Spatial Resolution" Clarkson CEE Meeting, Spring 2007.
12. O. AL-HABAHBEH, R. CROCKER, A. EKBOTE, P. MARZOCCA, D. AIDUN, "Use of Reliability and Life Assessment Techniques to Analyze Corrosion & Fatigue," CAMP Technical Meeting, May 2007, Canandaigua, NY.
13. A. MILANESE, P. MARZOCCA, J. M. NICHOLS, "Modeling of Randomly Excited Nonlinear Structures for the Benchmark of SHM Techniques," 6th International Workshop on Structural Health Monitoring, IWSHM 2007, Stanford, CA, September 11-13, 2007.
14. M. HE, P. MARZOCCA, S. DHANIYALA, "Urban Airshed Monitoring: UAV-based system for aerosol measurements," AAAR 26th Annual Conference, September 24-28, 2007, Reno, NV.
15. D. VALYOU, Z. GIBBONS, "Flight control, Data Acquisition, and Payload Integration for an Aerosol Sampling Unmanned Aerial Vehicle," Mentors: P. Marzocca, S. Dhaniyala, "SURE Conference 2006, Clarkson University, July 2007.
16. M. HE, P. MARZOCCA, S. DHANIYALA, "Urban Air Pollution Modeling," Clarkson CEE Meeting, Spring 2008.

17. O. AL-HABAHBEH, P. MARZOCCA, D. AIDUN, "Reliability Assessment Model for a Gas Turbine Circuit Using CFD and FEM," CAMP Technical Meeting, May 2008, Canandaigua, NY.
18. M. IZADI, P. MARZOCCA, D. AIDUN, "Monitoring and Investigation of Fouling Phenomenon in Tubular Heat Exchangers by Heat Transfer Resistance (HTR) Technique," CAMP Technical Meeting, May 2008, Canandaigua, NY. **Best Poster Award: 3rd place.**
19. M.K. KAMALUDEEN (McNair Student), V.M. RAO, (MS Student ECE) (Faculty Mentors: P. Marzocca, A. Behal) "Adaptive Control of a Supersonic Wing," C-STEP Conference 2006, April 21-23, 2006, Syracuse University, 14th Annual Journeys Beyond Excellence Conference at the Sagamore Resort on Lake George. Student Poster Presentation Competition. **Best Poster Award: 3rd place.**
20. J. THOMSON (Honor Student), "Assessment of Visual Stabilization for Controlling Unmanned Aerial Vehicles," AIAA Region I-NE Student Conference, Princeton University, NJ, April 22-23, 2005. **Best paper Award: 3rd place.**
21. T. RENDALL, C. CHANG, (Visiting Scholar Students) "Aerodynamic and Aeroelastic Characterization of a Non-Rigidizable Inflatable UAV," AIAA Region I-NE Student Conference, Princeton University, April 22-23, 2005.
22. C.P. CORMIER (Honor Student), "Buckling Characterization of an Inflatable, Non-Rigidizable Wing," AIAA Region I-NE Student Conference, Princeton University, April 22-23, 2005.
23. S.J. SCHOBBER (MS Student), "Multiple Synthetic Jet-Airfoil Synthesis: Potential for Aerodynamic Improvement and Aeroelastic LCO Control," AIAA Region I-NE Student Conference, Princeton University, April 22-23, 2005.
24. R. HOVER (UG Student), J. THOMSON (Honor Student), "Feasibility Analysis of a Jet-Rocket Launch System" AIAA Region I-NE Student Conference, Princeton University, April 22-23, 2005.
25. J. DEARBORN (McNair Student), "Inflatable-Winged Unmanned Aerial Vehicle," SURE Conference 2005, Clarkson University, July 2005.
26. A. BINGHAM, M. FARRELL, W. OWENS, K. WICKSWAT, C. ZUPP, (Advisors: P. Marzocca, H. Shen) "Development of a Sustainable Development of a Sustainable Lunar Base," AIAA Region I-NE Student Conference, Syracuse University, March 30 - April 1, 2006.
27. A. BINGHAM, M. FARRELL, W. OWENS, K. WICKSWAT, C. ZUPP, (Advisors: P. Marzocca, H. Shen) "Development of a Sustainable Development of a Sustainable Lunar Base," Revolutionary Aerospace Systems Concepts Academic Linkage (RASC-AL), RASC-AL 2006 forum, Cape Canaveral, Florida, May 21-25, 2006. Competition limited to 20 US University Teams. **Awarded \$5,000 from Universities Space Research Association (USRA).**
28. J. DEARBORN (McNair Student), "Inflatable UAV Project," University at Buffalo's 12th Annual Ronald E. McNair Research Conference McNair Conference 2006, July 15th Niagara Falls, NY.
29. L.M. MYERS, J.M. HOLLA (Advisors: P. Marzocca, D. Valentine), "Design of Acoustical and Flow Visualization Experiments with a Remote Controlled Helicopter," AIAA Region I-NE Student Conference, MIT, Boston, MA, April 27 - April 29, 2007.

30. J.M. HOLLA (Advisors: P. Marzocca), "Project SANDFLY: Design of High speed VTOL Demonstrator Aircraft," AIAA Region I-NE Student Conference, MIT, Boston, MA, April 27 - April 28, 2007.
31. T.F. PERLEY, K.M. ZEZNICK (Advisors: P. Marzocca, S. Dhaniyala), "Unmanned Aircraft Systems Operation in Civil Airspace for University Research: the Rules of the Game," AIAA Region I-NE Student Conference, MIT, Boston, MA, April 27 - April 28, 2007.
32. W.E. BARTLETT, A.T. BINGHAM, S.D. CARON, M.M. FARRELL, S.D. MOORE, E.C. WESTON, K.M. WICKSWAT, R.A. ZILNICKI (Advisors: P. Marzocca, D. Valentine) "Manned Missions to Near Earth Objects Using Exploration Systems Architecture Study Hardware," Revolutionary Aerospace Systems Concepts Academic Linkage (RASC-AL), RASC-AL 2007 forum, Houston, Texas, May 20–24, 2007. Competition limited to 15 US University Teams. **Awarded \$5,000 from Universities Space Research Association (USRA).**
33. L.M. MYERS, J.M. HOLLA, (Advisors: P. Marzocca, D. Valentine) "Design of Acoustical and Flow Visualization Experiments with a Remote Controlled Helicopter," NASA Aeronautics Competition: 2006-2007 Academic Year, University Division, Categories for entry: Small Team. **Awarded \$500 from NASA LaRC. Honorable mention award.**
34. J. HOLLA (C-STEP Student), (Advisors: P. Marzocca, A. Milanese) "Acoustic Analysis of Blade Modifications on a Scale Model Helicopter," University at Buffalo's 13th Annual Ronald E. McNair Research Conference McNair Conference 2007, July 25th Niagara Falls, NY.
35. J. HOLLA, (Advisors: P. Marzocca, D. Valentine) "Acoustic Analysis of Blade Modifications on a Scale Model Helicopter," AIAA Region I-NE Student Conference, Clarkson University, Potsdam, NY, April 5 - 7, 2008.
36. P.B. COFFIN, C.L. SINGER, A. COLLETTI, J. LAZAR, "Overview of Inflatable UAV Research at Clarkson University," AIAA Region I-NE Student Conference, Clarkson University, Potsdam, NY, April 5 - 7, 2008; **Best Team paper Award: 3rd place. Awarded \$250 from AIAA.**
37. J. HOLLA, "The Design of a High Speed Multipurpose ESTOL/VTOL Aircraft," AIAA Region I-NE Student Conference, Clarkson University, Potsdam, NY, April 5 - 7, 2008. **Best paper Award: 3rd place.**
38. J. HOLLA, (Advisors: P. Marzocca, D. Valentine) "Acoustic Analysis of Blade Modifications on a Scale Model Helicopter," Poster Presentation, SURE Spring Symposium, April 11, 2008.
39. J. HOLLA, "The Design of a High Speed Multipurpose ESTOL/VTOL Aircraft," Poster Presentation, SURE Spring Symposium, April 11, 2008.
40. D. VALYOU (Honor Student), A. FRIEBEL, M. JOSLIN (C-STEP Student), "Advanced Active Flow Control Using Pulsating Air Jets for Adaptive Smart Wind Turbine Blade" Poster Presentation, SURE Conference 2008, Clarkson University, July 2008.
41. D. BARBECHO (McNair Student), "Molecular Tagging Velocimetry (MTV) Experiment To Evaluate Synthetic Jet Actuator (SJA) Performance" Poster Presentation, SURE Conference 2008, Clarkson University, July 2008.
42. F. HEMSING (Honor Student), "Modeling and Experimentation of a Flutter Like Aeroelastic Power Source (FLAPS)," Poster Presentation, SURE Conference 2008, Clarkson University, July 2008.
43. A. MILANESE, R. DE BREUKER, P. MARZOCCA, M. ABDALLA, Distributed Synthetic Jet Actuators for the Control of Nonlinear Aeroelastic Systems, ICAST 2008, 19th International

Conference on Adaptive Structures and Technologies, October 6–9, 2008, Ascona, Switzerland.

44. D.K. AIDUN, P. MARZOCCA, M. LACOURSIERE, “An Experimental Study to Investigate Corrosion behavior of 90/10 Cu/Ni Alloy Used In The Intercooler System,” IMECE2008-68374, 2008 ASME International Mechanical Engineering Congress & Exposition, Oct 31-Nov 6, 2008, Boston, MA.
45. J. HOLLA, (Advisors: P. Marzocca) “The Design of a High Speed Multipurpose ESTOL/VTOL Aircraft,” AIAA Region I-NE Student Conference, WPI, Worcester, MA, March 27 - 28, 2009; **Best Award: 3rd place. Awarded \$250 from AIAA.**
46. M. IZADI, P. MARZOCCA, D. AIDUN, “The Experimental Investigation of Fouling Phenomenon in Heat Exchangers,” CAMP Technical Meeting, May 2009, Canandaigua, NY.
47. P. SHUKLA, P. MARZOCCA, D. AIDUN, “Waste Heat Recovery in Combined Cycle Power Plants,” CAMP Technical Meeting, May 2009, Canandaigua, NY.
48. M. LACOURSIERE, D.K. AIDUN, P. MARZOCCA, “An Experimental Study to Investigate Corrosion Behavior of 90/10 Cu/Ni Alloy Used in a Heat Exchanger,” CAMP Technical Meeting, May 2009, Canandaigua, NY.
49. O. AL-HABAHBEH, P. MARZOCCA, D. AIDUN, “Reliability Assessment Model for a Gas Turbine Circuit Using CFD and FEM,” CAMP Technical Meeting, May 2009, Canandaigua, NY.
50. O. AL-HABAHBEH, D.K. AIDUN, P. MARZOCCA, “Reliability Assessment Model for a Gas Turbine Circuit Using CFD and FEM,” The 8th Annual Symposium on Environmental & Energy Systems, Syracuse, New York, Sep 2008.
51. P. NALLATHAMBY, D. VALYOU, P. MARZOCCA, A. ROSSNER, S. DHANIYALA, P. HOPKE, S. PRYOR “Particle Nucleation above Forest and Surrounding Farmland,” AAAR 28th Annual Conference, October 26-30, 2009, Minneapolis, MI.
52. M. MOORE, P. MARZOCCA, G. AHMADI, R. JHA, E. BOLLT, “Adaptive Smart Wind Turbine Blades,” 1000 Islands Energy Research Forum 2009, 23-25 October 2009, Alexandria Bay, NY.
53. M. MOORE, P. MARZOCCA, “ARI Green Energy Wind Turbine Blade Tip Design, Prototyping, and Testing,” 1000 Islands Energy Research Forum 2009, 23-25 October 2009, Alexandria Bay, NY. (Oral Presentation and Poster).
54. M. MOORE, P. MARZOCCA, “Advanced Active Flow Control for Adaptive Smart Wind Turbine Blades,” 9th International Conference & Exhibition, HEALTHY BUILDINGS 2009, September 13-17, 2009, Syracuse, NY.
55. P. COFFIN, (Advisors G. AHMADI, R. JHA, P. MARZOCCA), “DATCOM Small UAV Design Considerations and Wind Tunnel Experimental Verification,” AIAA Young Professional's Conference, November 6, 2009, Baltimore, MD.
56. A. FARAHANI, P. MARZOCCA, G. AHMADI, “Closed Loop Control of Naca-0015 Airfoil using Synthetic Jets,” FEDSM-ICNMM2010-30597, 3th Joint US-European Fluids Engineering Summer Meeting FEDSM2010, August 1-5, 2010, Montreal, Canada.
57. B. ALSTROM, P. KABIRI, P. MARZOCCA, D. BOHL, G. AHMADI, Synthetic Jet Actuator Design and Characterization – A Combined Experimental and Computation Study, FEDSM-ICNMM2010-30822, 3th Joint US-European Fluids Engineering Summer Meeting FEDSM2010, August 1-5, 2010, Montreal, Canada.

58. T. ARSENAULT, A. ACHUTHAN, P. MARZOCCA, Integrated FBG Sensor System for Structural Health and Load Monitoring of Wind Turbine Blades, IMECE2011-64553, Proceedings of IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11 - 17, 2011, Denver, Colorado, USA.

III. GRANTS

- ❑ Efficient Reduced Order Modeling Tools for Super Long-Span Bridges Aeroelastic Predictions, NSF, 2011-2014, \$300,072, D. Valentine (CO-PI), P. Marzocca (PI, 50%)
- ❑ Smart Rotor Blades for Next Generation Wind Turbines, NYSERDA, 2011-2013, \$250,000, A. Achuthan (PI), P. Marzocca (CO-PI, 50%)
- ❑ Center for the Evaluation of Clean Energy Technology (Wind and PV), NYSERDA, 2011-2016, \$4,400,000, Intertek, P. Marzocca (PI at Clarkson, Program Manager, 20% Clarkson Share).
- ❑ Feasibility Study of Morphing Device, ARMY, ARDEC, 2008-Open, \$130,000, G. Ahmadi (PI), R. Jha, P. Marzocca (Co-PI, 33%)
- ❑ Advancement of Intelligent Aerospace Systems (AIAS) for U.S. Air Force, AFOSR, 2008-2010, \$1,741,506, G. Ahmadi (PI), R. Jha, E. Bollt, D. Bohl, B. Helenbrook, K. Visser, J. McLaughlin, P. Marzocca (Co-PI, 12%)
- ❑ Analytical Service for ARI Renewable Energy Company, 2008-open, \$50,000, P. Marzocca (PI, 100%)
- ❑ Reliability Study of a Grid-Tie Wind-Solar-Battery Hybrid Power Generation - Storage System, GE, 2010-2012, \$90,000, A. Achuthan, D. Aidun, P. Marzocca (PI, 34%)
- ❑ Optiwind Wind Turbine Project, Optiwind Inc., 2008-2011, \$334,754, D. Valentine (PI), Ken Visser, B. Helenbrook, D. Bohl, P. Marzocca (Co-PI, 20%)
- ❑ Optiwind Wind Turbine Project, Optiwind Inc., 2008-2011, \$35,000, D. Valentine (PI), Ken Visser, B. Helenbrook, D. Bohl, P. Marzocca (Co-PI, 20%)
- ❑ RASC-AL and NASA Student Competitions, ESMD and NASA Space Grant, University Space Research Association, 2006-Open, \$5,800/year, P. Marzocca (PI, 100%)
- ❑ Bridging the gap between Industry and Academia Thermal Stresses Community, NSF, 2009, \$15,000, P. Marzocca (PI, 100%)
- ❑ International Congress on Thermal Stresses, AFOSR, 2009, \$15,000, P. Marzocca (PI, 100%)
- ❑ Smart Responsive Nanocomposites for Soldier Protection, 2009-2010, \$261,735, C. Cetinkaya (PI), G. Ahmadi, D. Aidun, M.-C. Cheng, W. Ding, R. Jha, J. Moosbrugger, P. Marzocca (Co-PI, 12%)
- ❑ Investigations of Thin Elastic Structures under Electromagnetic and Aerodynamic Loading Conditions, NSF, 2005-2008, \$20,000, P. Marzocca (PI, 100%)
- ❑ Acquisition of a Scanning Laser Vibrometer for Smart-Structures Research, NSF, 2005-2006, \$199,000, R. Jha (PI), G. Ahmadi, J. Kim, E. Sazonov, P. Marzocca (Co-PI, 15%).
- ❑ Design and Reliability of Gas Turbine Heat Exchanger, General Electric, 2006-2011, \$913,526, D. Aidun (PI), P. Marzocca (Co-PI, 50%)
- ❑ Fabrication and Marketing of Smart Wind Turbine Blade, MDA-NY – Vento Tek Inc., 2006-2009, \$50,000, G. Ahmadi, E. Bollt, P. Marzocca (PI, 50%)

- ❑ Fluid-Structure Interaction of Flexible Suspended Bridges Exposed to Severe Environmental Conditions, NSF, 2006-2008, \$19,250, D. Valentine (PI), P. Marzocca (Co-PI, 50%)
- ❑ Urban Airshed Monitoring: New Tools for Aerosol Characterization at Meso-Scale Spatial Resolution, CARTI-SU – EPA, 2006-2008, \$100,000, S. Dhaniyala (PI), P. Marzocca (Co-PI, 50%)
- ❑ Parametric Design and Modeling for Turbine Blade Configurations, Pratt & Whitney, 2006-2008, \$120,000, K. Willmert (PI), B. Helenbrook, R. Jha, K. Visser, J. Moosbrugger, P. Marzocca (Co-PI, 16%)
- ❑ Parametric Design and Modeling for Turbine Blade Configurations, Extension, Pratt & Whitney, 2008-2009, \$11,985, K. Willmert (PI), P. Marzocca (Co-PI, 50%)
- ❑ Advanced Wind Turbine Concept, SOE – Clarkson University, 2006-2007, \$7,000, R. Jha (50%), P. Marzocca (PI, 50%)
- ❑ Acquisition of a Stereoscopic Molecular Tagging Velocimetry (sMTV)/ Molecular Tagging Thermometry (MTT) System, NSF, 2007-2010, \$276,518, D. Bohl (PI), H. Shen, S.P. Lin, K. Issen, P. Marzocca (Co-PI, 22%)
- ❑ Commercialization of Smart Wind Turbine Blade, CAP IV Syracuse COE, Vento Tek Inc, 2008-2009, \$50,000. G. Ahmadi, R. Jha, E. Bollt, P. Marzocca (PI, 40%)
- ❑ Particle Nucleation Events in the Ohio River Valley - Supplement for the Morgan State Park Campaign, NSF/Indiana University, 2008-2009, \$95,000, P. Hopke (PI), S. Dhaniyala, A. Rossner, P. Marzocca (Co-PI, 25%)
- ❑ NYS Office of Science, Technology & Academic Research, 2008-2009, \$10,000, R. Jha, P. Marzocca (PI, 50%)
- ❑ Analytical Service for CSA Engineering Inc., CSA Engineering Inc., \$3,000+, 2005-Open. P. Marzocca (PI, 100%)
- ❑ Analytical Service for Delft University of Technology, \$10,000, 2007-Open, P. Marzocca (PI, 100%)

IV. TEACHING

A1. Undergraduate and Graduate Classes at Clarkson University

<u>Semester</u>	<u>Course</u>	<u>Title</u>	<u>Q19 &Q20</u>	<u>Univ. Mean</u>
Fall 2003	AE430	Stability and control of aerospace vehicles	4.4/3.9	4.1/3.8
Spring 2004	AE429	Performance and flight mechanics	4.7/4.3	4.2/3.9
Fall 2004	AE430	Stability and control of aerospace vehicles	4.5/3.9	4.1/3.9
Spring 2005	AE429	Performance and flight mechanics	4.8/4.5	4.2/3.9
Spring 2005	ME628	Models/Analysis of Nonlinear Mech. Phenom.*		
Fall 2005	AE430	Stability and control of aerospace vehicles	4.6/4.2	4.2/3.9
Spring 2006	AE429	Performance and flight mechanics	4.7/4.6	4.2/3.9
Fall 2006	AE430	Stability and control of aerospace vehicles	4.6/4.0	4.2/3.9
Fall 2006	ME 555	Advanced Mechanical Vibrations**		
Spring 2007	AE429	Performance and flight mechanics	5.0/4.5	4.0/3.9
Fall 2007	AE430	Stability and control of aerospace vehicles	4.5/3.8	4.2/3.9
Spring 2008	AE429	Performance and flight mechanics	4.8/4.3	4.2/3.9

Fall 2008	AE430	Stability and control of aerospace vehicles	4.2/4.0	4.2/3.9
Spring 2009	AE429	Performance and flight mechanics	tba	tba
Fall 2009	AE430	Stability and control of aerospace vehicles	tba	tba
Fall 2009	HP200	Honors Course on Problem Solving.	tba	tba
Spring 2010	AE429	Performance and flight mechanics	tba	tba
Fall 2010	AE430	Stability and control of aerospace vehicles	tba	tba
2003-2008	AE200	Aeronautical Engineering Seminar***		

* Co-Coordinator together with Profs. Valentine and Helenbrook

**Support to Instructor: Cetin Cetinkaya. Participation to a series of weekly seminars

*** Taught 1 seminar in 2003 and 3-4 in 2004-2009. No credit. Several aero-related seminars are presented to AE sophomore students. Material for the seminars has been developed and is distributed to students.

Several Independent Projects, and Selected Topics Studies have been developed. UG students interested in learning more about Unmanned Aerial Systems and getting exposed to research in this field can enroll in AE365, AE366, and AE465. Graduate students interested in nonlinear phenomenon in fluid, solid, or material engineering can enroll in ME628, ME657, or ME591, respectively. Course materials have been developed and textbooks have been selected to assist the student independent study. Student and faculty meet on a weekly base and reports are due on a bi-weekly schedule.

A2. Independent Projects, and Selected Topics Study

<u>Semester</u>	<u>Course</u>	<u>Title</u>	<u>Level</u>	<u>Students</u>	<u>Credits</u>
Spring 2004	ME657	ST: Advanced vibration analysis	Grad	2	3
Spring 2004	AE365	IS: Fundamentals of aeroelasticity	Senior	1	3
Fall 2004	AE365	IS: Fundamentals of aeroelasticity	Senior	5	3
Spring 2005	AE365	IS: UAV Autonomous Visual Control	Senior	3	3
Fall 2005	AE365	IS: Fundamentals of aeroelasticity	Senior	1	3
Spring 2006	AE365	IS: Fundamentals of aeroelasticity II	Senior	3	3
Fall 2006	AE365	IS: UAV design	Senior	1	3
Spring 2007	AE365	IS: UAV technologies	Senior	3	3
Spring 2007	ME628	ST: Special topics in Solid Mechanics	Grad	3	3
2007, 2008	HP180, HP280	Honor Independent Study	Und.	1	3
Spring 2008	ME657	ST: Special topics in Solid Mechanics	Grad	2	3
Spring 2008	ME365	IS: Fundamentals of Computational Analysis	Senior	1	3
Fall 2008	AE465	IS: Fundamentals in Active Flow Controls	Senior	1	3
Fall 2008	ME591	ST: Special topics in Materials Engineering	Grad	1	3
Spring 2009	ME657	ST: Special topics in Solid Mechanics	Grad	1	3
Fall 2009	ME591	ST: Special topics in Materials Engineering	Grad	1	3
Fall 2009	ES447	IS: Fundamentals in Active Flow Control	Senior	2	3
Spring 2010	ME591	ST: Special topics in Materials Engineering	Grad	1	3

ST: Selected Topics: Graduate independent study under supervision

IS: Independent Study: Undergraduate independent study under supervision

B1. Innovation in Courses and Classroom

- **AE429 Performance and Flight Mechanics, Spring 2004/2005.** This is an analysis intensive required AE course oriented toward the enhancement of the students' written, oral, and graphical communication skills. Completely reworking lecture notes and reviewing several textbooks. This course requires the development of computer bases tools (Matlab or equivalent) by the students to solve aircraft performance and flight mechanics problems. Students are encouraged to use software such as AAA, Javafoil, Xfoil, etc.
- **AE430 Stability and Control of Aerospace Vehicles, Fall 2003/2004.** This is an analysis intensive required AE course oriented toward the enhancement of the students' written, oral, and graphical communication skills. The AE430 syllabus has been modified to be compatible and complementary to ME324 Dynamics of Mechanical Systems. Completely reworking lecture notes and reviewing several textbooks. This course requires the development of computer bases tools (Matlab or equivalent) by the students to solve aircraft stability and controls problems. Students are encouraged to use software such as X-Plane, Simulink, control subroutines, etc.
- Discussion of topics included and not included in the textbook and recent developments in research related to class material. Assign readings material and references, ask students to read different books and journal articles.
- Make student comfortable to ask questions. Encourage class discussion and respond to student questions. Give a brief early assignment before test and a review session.
- Use overhead, blackboard, Powerpoint, multimedia, etc.
- Class divided into smaller groups for final project and final presentation inviting students to share their knowledge and experiences.
- Use feedback via mid-term evaluation and hand out short questionnaires to get feedback
- Arrive at class 10 minutes early to talk with students, keep some time free after class to talk with students, keep your office door open as much as you can.
- Develop positive relationships with students, independent study and research.

C. Undergraduate and Graduate Classes at Other Institutions

BEAR Company, Consulauto S.n.c., Torino, Italy

<u>Semester</u>	<u>Course</u>	<u>Title</u>	<u>Level</u>	<u>Students</u>
Fall 1995	CEE	Introduction to Automotive Electronics	All	15

Politecnico di Torino, Department of Aeronautical and Aerospace Engineering

<u>Semester</u>	<u>Course</u>	<u>Title</u>	<u>Level</u>	<u>Students</u>	<u>Credits</u>
Fall 1998	AEB4190	Aerospace structures: FEM Patran/Nastran	Grad	75	3
Fall 1997	AEB4190	Aerospace structures: FEM Patran/Nastran	Grad	75	3
Fall 2000	AEB1420	Aerospace technical design	Junior	100	3

Virginia Tech, Department of Engineering Science and Mechanics

<u>Semester</u>	<u>Course</u>	<u>Title</u>	<u>Level</u>	<u>Students</u>	<u>Credits</u>
Fall 2001	ESM2104	Statics	Sophomore	50	3
Spring 2002	ESM2104	Statics	Sophomore	50	3
Fall 2002	ESM2104	Statics	Sophomore	75	3
Spring 2003	ESM2104	Statics, session # 1 and 2	Sophomore	100	3

D. Graduate Students Supervised

<u>Student Graduated</u>			
<u>Year</u>	<u>Student Name</u>	<u>Program</u>	<u>Project [present work]</u>
2003-2004	Arthur Michalek	MS	<i>Thesis: Effects of an In-Plane Axisymmetric Electromagnetic Field on the Vibration of a Thin Spinning Disk</i> [currently PhD Student @ UVM, VT]
2003-2004	Kiran Cheguri	ME	Aeroelasticity report – no thesis - [work in NJ]
2004-2006	Chrissy Rubillo	MS	<i>Thesis: Non-Linear Aeroelasticity and Control of 2-D Lifting Surfaces</i> [GE, NY]
2004-2006	Steve Schober	MS	<i>Thesis: Modeling and Computation of Synthetic Jet Actuators for Flow and Aeroelastic Control</i> [Lockheed Martin, NY]
2004	Venkatesh Venkataramanujam	ME	Active control report – no thesis - [currently PhD Student @ FIT, FL]
2006-2007	Keegan O'Donnell	MS	<i>Thesis: Lifting Surfaces Aeroelastic Experimental Investigations and Implementation of Active Flow Control Using Synthetic Jet Actuators</i> [GE, NY]
2006-2008	Mitchell Stolk	MS	<i>Thesis: Modeling and Computation of Lifting Surfaces Hosting Flow Control Actuators</i>
2007-2008	Abhishek Ekbote	MS	<i>Thesis: An Experimental Study to Investigate Corrosion Behavior in Heat Exchangers</i> (Co-Advisor: D. Aidun)
2007-2008	Ryan Crocker	MS	<i>Thesis: Analysis of the Fin to Tube Bond Degradation Due to Thermal Fatigue in a Plate-Fin Heat Exchangers</i> (Co-Advisor: D. Aidun)
2006-2008	Carl Hoover	MS	<i>Thesis: Design and Experimentation of a Flutter-Like Aeroelastic Power Source – FLAPS</i>
2006-2008	Lucas Craig	MS	<i>Thesis: Investigation of Fluid Flow and Particle Dispersion within a shock wave of an Explosion</i> (Co-Advisor: G. Ahmadi, S. Dhaniyala, D. Partch)
2007-2008	Steve Finley	MS	<i>Thesis: Integration of Commercial Computer Aided Engineering Software To Perform Multidisciplinary Optimization</i> (Co-Advisor: K. Willmert) [P&W, CT]
2007-2008	Qaid Foulks	ME	Modeling of an hyper-actuated morphing wing (Primary Advisor: K. Fite)
2004-2008	Miguel A Pereira	ME	Aerothermoelasticity of lifting surfaces [USA, TX]
2006-2009	Attilio Milanese	PhD	<i>Thesis: Volterra series revisited, with applications in nonlinear structural dynamics and aeroelasticity</i> [currently Senior Fellowship @ CERN, Genève, Switzerland]
2006-2009	Kejing Li	PhD	<i>Thesis: Numerical Modeling of Friction Stir Welding of Dissimilar Metals Using Functionally Graded Material Concept and Its Experimental Verification</i> (Co-Advisor: D. Aidun), [currently at Goodyear Corp]

2007-2009	Snehal Sewant	ME	Structural Health Monitoring of Composite Structures – no thesis - [US corporation in India] Thesis: Integrated Approach for Physics-Based Reliability Assessment of Engineering Systems (Co-Advisor: D. Aidun), [currently Professor, University of Jordan].
2007-2009	Osama Al-Hababbeh	PhD	Thesis: Effect of pH, Temperature and Flow Rate on Corrosion of Copper-Nickel (Co-Advisor: D. Aidun) [currently at Clarkson, PhD student].
2008-2009	Marissa LaCoursiere	MS	Thesis: An Experimental and Computational Investigation of a Tube Launched Micro Air Vehicle (Co-Advisor: G. Ahmadi, R. Jha) [currently at University of Colorado Boulder, PhD student]
2009-2010	Peter Coffin	MS	Thesis: Experimental and Numerical Investigation of Fouling in Heat Exchangers (Co-Advisor: D. Aidun), [currently at Bechtel Corp]
2007-2010	Mahmood Izadi	PhD	Thesis: Increasing the Efficiency of Intercooled Gas Turbine by Waste Heat Recovery (Co-Advisor: D. Aidun) [US corporation in India]
2008-2010	Pravin Shukla	MS	

Current Students

<u>Year</u>	<u>Student Name</u>	<u>Program</u>	<u>Project [present work]</u>
2008-	Bruce Alstrom	PhD	AFOSR Project on Flow Control (Co-Advisor: G. Ahmadi, E. Bollt)
2008-	Steve Finley	PhD	Variance Based Design (Co-Advisor: K. Willmert) [P&W]
2010-	Tyler Arsenault	MS	Horizontal Axis Wind Turbine
2010-	Rani Almuti	ME	Autopilot Systems for UAV operations
2009-	Zack Iverson	MS	Smart Grid
2010-	Bereket Ghebreselassie	MS	Vertical Axis Wind Turbine
2011-	Othman Aitmaatallah	PhD	Green Data Center
2011-	Xxxxxxx Yyyyyyyy	PhD	Green Data Center
2010-	Casey M Stockbridge	MS	Green Air Transportation System
2010-	Dan Valyou	PhD	Reduced Order Modeling Long Span Bridges
2010-	Latif Ebrahimnejad	PhD	Reduced Order Modeling Long Span Bridges
2010-	Hooman Farsani	MS	Reduced Order Modeling Long Span Bridges
2010-	Michael J. Keil	MS	Underwater Power Harvesting Technologies
2010-	Glenn Crans	MS	Durability of Tapered Composite Laminates under Static and Fatigue Loading

E. Graduate Defenses Committees

Member of 12 PhD Defense Committees (10 at Clarkson University, 1 at Andhra University (India), 1 at VPI&SU, USA, 1 at UCF) and 10 MS Defense Committees (8 at Clarkson University (MAE and ECE), 2 in Italy, 1 in The Netherlands) , updated to Fall 2008.

F. Undergraduate Research Project Advisor (REU)

<u>Year</u>	<u>Student Name</u>	<u>Project Title</u>
2004	D. J Streibich	Unmanned Aerial Vehicles: Design and Prototyping
2004	A. Gnann	Health Monitoring of Aircraft Wing via Adaptive Control
2005	A. Campbell, G. Sanders	Evaluation of Output Only Codes for SHMT
Summer 05	C. Libordi, C. McBee	Structural Health Monitoring
2007	J. Holla	Project Sandfly: High speed VTOL Demonstrator Aircraft
2007	L. Myers	Design of Acoustical and Flow Visualization Experiments with a Remote Controlled Helicopter
2007	T.F. Perley, K.M. Zeznick	Unmanned Aircraft Systems Research
2008	S. Kennedy	CFD modeling using Fluent (co-advisor: E. Thacher)
Summer 08	A. Friebe	Active Flow Control for Wind Turbine Technologies

G. McNair and C-STEP Students Supervised

<u>Year</u>	<u>Student Name</u>	<u>Project Title</u>
Summer 04	A. Roman	I-UAV stiffness characterization
Summer 04	Q. Sodji	I-UAV CFD modeling
Summer 05	A. Howard	Dynamic Characterization of Cellular Material
Summer 05	J. Dearborn	Inflatable structures
Summer 05	M.K. Kamaludeen	Adaptive Aeroelastic Vibration Suppression of a Supersonic Airfoil with Flap
Summer 06	C. McNall	Aeroelastic Experimental Apparatus Design
Summer 07	D. Gonyer	Experimental investigation into the implementation of Smart Wind Turbine Blades
Summer 07	J. Holla	Acoustic Analysis of Blade Modifications on a Scale Model Helicopter
Summer 08	D. Barbecho	Molecular Tagging Velocimetry Experiment to Evaluate Synthetic Jet Actuator Performance
Summer/Fall 08	M. Joslin	Hardware in the Loop and Control Modeling for Wind Turbines Technologies
Summer 09	M. Moore	Wind Turbine Active Flow Control
Summer 10	M. Abell	Wind Turbine Active Flow Control
Summer 10	M. Moore	Wind Turbine Active Flow Control
Summer 11	J. Gonzalez	UAV Research
Summer 11	H. Razak	Vertical Axis Wind Turbine

H. Honors Students Supervised

<u>Year</u>	<u>Student Name</u>	<u>Project Title</u>
2004-2005	C. Cornier	Finite Element Modeling and Characterization of an inflatable unmanned aerial vehicle
2005-2006	C. Mundy	Flow and Aeroelastic Control via Synthetic Jets
2006-2007	A. Bingham	Stability and Control of a MARS Re-Entry System

2007-2011	D. Valyou	Micro-Aerial Vehicle Design and Wind Tunnel Testing
2007-2008	Z. Gibbons	Flight control, Data Acquisition, and Payload Integration for an Aerosol Sampling Unmanned Aerial Vehicle
2008-2009	L. Bear	Synthetic Jet Actuator Experimental Investigation

I. Student Teams Supervised

i-UAV Team - Co-Coordinator: Erik Bollt (MCS) web page <http://www.clarkson.edu/~pmarzocc/i-uav/i-uav-web.html>. Other Faculty involved: Ken Visser, Brian Helenbrook

Team members: C. McNall, T. Swain, D. Streibich, C. Zupp, D. McCarney, R. Hover, M. Brown, A. Gnann, C. Staniunas, T.J. Pond, G. McCain, J. Rohr, J. Butler, S. Schober, C. Cornier, N. Foti, M.J Brewer, C. Bastien, M. Feldman, J. Leahy, D. Beckmann, J. Ngambo, A. Roman, Q. Sodji, ...

TurboJet Team - Co-coordinator: Valerio Viti (University of Kentucky).

Team members: C. Zupp, C. Agwu, C. Stout, C. McBee, A. Collins, L. Roberts, G. Scialdone; M. Brewer; B. Bohan; J. Butler; J. Edlinger; R. Hover,

Web page <http://www.clarkson.edu/~pmarzocc/> ... under construction

J. Visiting Professors

<u>Year</u>	<u>Name</u>	<u>Title (University)</u>	<u>Present Position</u>
Spring 05	V. Viti	Visiting Professor, Kentucky University	Fluent, Inc.

K. Visiting Scholars¹

<u>Year</u>	<u>Student Name</u>	<u>Degree, University</u>	<u>Project Title</u>
Spring 05	C. Chang	MS Student, Imperial College, UK	MS Thesis: <i>Conceptual Design and Realization of an Inflatable Uninhabited Aerial Vehicle</i>
Spring 05	T. Rendall	MS Student, Imperial College, UK	MS Thesis: <i>Static, Dynamic and Aeroelastic Behavior of Inflatable UAV Wing</i>
Summer 05	E. Cestino	Ph.D Student, Politecnico di Torino, Italy	PhD Thesis: <i>High Altitude Long Endurance UAV Nonlinear Aeroelasticity</i>
Fall 05	F. Testa	MS Student, Universita' di Catania, Italy	MS Thesis: <i>Gust Response of HALE wings</i>
Spring 06	T. Calder	MS Student, Imperial College, UK	MS Thesis: <i>Design of a Morphing Inflatable Wing</i>
Spring 06	E. Crosbie	MS Student, Imperial College, UK	MS Thesis: <i>Aeroelastic and Aerodynamic Control of a Morphing Inflatable UAV Wing</i>
Summer 06	F. Borello	Ph.D Student, Politecnico di Torino, Italy	Probabilistic Design in Advanced Composite Materials
Spring 07	E. Levis	MS Student, Imperial	MS Thesis: <i>Aeroelasticity of</i>

¹ Serving as External Supervisor and Member of the Committee for the Degree Awarded.

		College, UK	<i>Morphing Inflatable Wing</i>
Spring 07	D. Patel	MS Student, Imperial College, UK	MS Thesis: <i>Active Flow Control via SJAs: modeling, design and experiments</i>
Summer 07	E. Nicolini	MS Student, Delft University of Technology, The Netherlands	MS Thesis: <i>SJA Design and Testing</i>
Summer 07	F. Testa	Visiting student, University of Catania, Italy	<i>Gust Response of HALE wings</i>
Summer 08	S. Verlinsky	Visiting Professor, State Engineering University of Armenia Armenia	Multi-physics research
Summer 08	K. Ghazaryan	Visiting Professor, Armenia Academy of Sciences, Armenia	Multi-physics research
Summer/Fall 08	S. Obeid	PhD Student, Université de Paul Sabatier, Toulouse, France.	Wind Turbine Research
Fall 09-10	A. Arena	PhD Student, University of Rome "La Sapienza"	FSI – ROMS research
Fall 09/Spring 10	M. Pasquali	MS Student, University of Rome "La Sapienza"	MS Thesis: <i>Geometrically exact models of thin plates towards nonlinear dynamic system identification via higher-order spectral approach</i>
Spring-Fall 2010	D. Cardenas	PhD Student, Tecnológico de Monterrey-Campus Monterrey	Wind Turbine TWB Composite Modeling and Fatigue Analysis
Summer 2010	D. Uziel	PhD Student, Tecnológico de Monterrey-Campus Monterrey	Structural Health Monitoring of Wind Turbines

V. NATIONAL SERVICE

A. Professional Societies

American Helicopter Society (AHS International), Member (2000-Present); American Institute of Aeronautics and Astronautics (AIAA), Senior Member, (2000-Present); American Society of Mechanical Engineers (ASME), Associate Member, (2000-Present); American Society for Engineering Education (ASEE), Member, (2003-Present); Society of Automotive Engineers (SAE International), Member, (2003-Present); Institute of Electrical and Electronics Engineers, IEEE Member (2007-Present); Sigma Gamma Tau Honor Society for Aerospace Engineering, Member (2004-Present); AIAA Student Chapter, 2006, co-advisor; Design Build and Fly, 2007, co-advisor;

B. Book's, Journal's, Conference's, Proposal Reviewer

Books: Cambridge University Press, Wiley, Springer, Elsevier, Butterworth-Heinemann, Newnes, Academic Press, **Journals:** Journal of Aircraft; AIAA Journal; Journal of Guidance, Dynamics and Control; Journal of Spacecraft and Rockets; Aerospace Sciences and Technology; Nonlinear Dynamics; Journal of Vibrations and Control; Journal of Thermal Stresses; Smart Materials and Structures; IEE Proceedings Control Theory & Applications; International Journal of Systems Science; AMM Applied Mathematical Modeling; Shock and Vibration; Journal of Applied Mechanics; Journal of Offshore Mechanics and Arctic Engineering; International Journal of Robust and Nonlinear Control; ASME Journal of Vibration and Acoustics; Canadian Aeronautics and Space Journal; Dynamics of Continuous, Discrete and Impulsive Systems; Journal of Fluids and Structures; Composites Part B: Engineering; Mathematical and Computer Modeling; Mechanics Research Communications; Journal of Sound and Vibration; Computers and Structures, Progress in Photovoltaics: Research and Applications; Energies, Applied Energy; Journal of Wind Engineering and Industrial Aerodynamics; **Conferences:** AIAA Guidance, Navigation, and Control Conference; Thermal Stresses Congresses; AIAA SDM Conferences; ASME Turbo Expos: Power for Land, Sea and Air; ASME GT Conferences, CDC - IEEE Control Systems Society Conference; IEEE International Conference on Robotics and Automation; SAE Aerotech Congresses; SAE WATC Conferences; **Proposals:** U.S. Civilian Research and Development Foundation CRDF; NSF CMMI, NSF CREST; ASEE NRL Fellowships; ASEE Department of Defense SMART Fellowship, NASA Postdoctoral Program Review, DOE, EPSRC Engineering and Physical Sciences Research Council, UK.

C. Conference Organizer

- June, 2003 **Secretary**, *5th International Congress of Thermal Stresses and Related Topics, TS2003*, Organized and hosted by Virginia Polytechnic Institute and State University, Blacksburg, Virginia, June 8-11, 2003.
- May, 2005 **Member of the International Organizing Committee** of the *6th International Congress of Thermal Stresses and Related Topics, TS2005*, Organized and hosted by Vienna University of Technology, Vienna, Austria, May 26-29, 2005.
- Oct., 2005 **Member of the Scientific Program Committee** of the *5th International Conference "The Problems of Dynamics of Interaction of Deformable Media"* Organized by the Institute of Mechanics NAS of Armenia, Institute of Mechanics of Moscow State University, Institute of Mechanical Problems of RAS and Goris Branch of SEUA, Goris, Armenia, October 1-7, 2005.
- May, 2007 **Member of the International Organizing Committee** of the *7th International Congress of Thermal Stresses and Related Topics, TS2007*, Organized and hosted by National Taiwan University of Science and Technology, National Taiwan University, Taipei, Taiwan, June 4-7, 2007.
- May, 2008 **Organizer and Chair**, Professor Liviu Librescu Memorial Sessions, Organized with Professor M. Pindera of UVA. Held during the ESM2008 Mechanics Conference celebrating 100 years of the ESM Department at Virginia Tech; 40 contributions from 15 Countries for this special symposium.
- Aug, 2008 **Organizer and Chair**, three sessions at the WATC 2008 Wichita Aviation Technology Congress & Exhibition, August 19-21, 2008, Wichita, KS, – WATC-25: Unmanned Aerial Vehicles I, II, and III.
- June, 2009 **Congress Co-Chair**, **8th International Congress on Thermal Stresses**, TS2009, June 1-4, 2009, University of Illinois at Urbana-Champaign, IL.
- June, 2009 **Organizer**, Professor Liviu Librescu Memorial Symposium, Organized with Professor M. Pindera of UVA. Held during the TS2009 International Congress

- on Thermal Stresses, University of Illinois at Urbana Champaign, IL, June 1-4, 2009; 50 contributions from 15 Countries for this special symposium.
- June, 2009 **Program Advisory Committee Member**, UAV'09, the 2nd International Symposium on Unmanned Aerial Vehicles, June 8-10, Reno, NV.
- Nov, 2009 **Program Organizer**, UAS Technical Sessions at the SAE 2009 AeroTech Congress and Exhibition, Nov 10-12, 2009, Seattle, WA.
- Nov, 2011 **Program Organizer**, UAS Technical Sessions at the SAE 2011 AeroTech Congress and Exhibition, October 18-21, 2011 Toulouse, France.

D. Conference Chair Activities

- June, 2003 **Session Chair**, *Aerothermoelasticity*, at *5th International Congress of Thermal Stresses and Related Topics, TS2003*, Organized and hosted by Virginia Polytechnic Institute and State University, Blacksburg, Virginia, June 8-11, 2003.
- July, 2004 **Session Chair**, *Different Structures I: Aerospace, Off- Shore, Ship*, at *3rd European Congress on Structural Control*, Organized and hosted by Vienna University of Technology, Vienna, July 12-15, 2004.
- May, 2005 **Session Chair**, *Waves II and Dynamic Problem II*, at *6th International Congress of Thermal Stresses and Related Topics, TS2005*, Organized and hosted by Vienna University of Technology, Vienna, Austria, May 26-29, 2005.
- May, 2006 **Session Chair**, Engine and Jet Design, 2nd AIAA Multidisciplinary Design Optimization Specialist Conference, Newport, Rhode Island, 1 - 4 May 2006.
- June, 2007 **Session Chair**, *Functionally Graded Materials I and Thermoplasticity and Viscoplasticity I*, at *7th International Congress of Thermal Stresses and Related Topics, TS2007*, Organized and hosted by National Taiwan University of Science and Technology, National Taiwan University, Taipei, Taiwan, June 4-7, 2007.
- April, 2004 Judge at AIAA Region I-MA Student Conference, Virginia Tech, April 16-18, 2004; AIAA Region I-NE Student Conference, Boston University, April 2-3, 2004.
- 2003 – Chair/co-Chair to several of the events listed in the Conference Organizer section

VI. CLARKSON UNIVERSITY SERVICE

A. Departmental Service

- ❑ Aeronautical Engineering Committee
- ❑ Recruitment & Teaching Committee
- ❑ Graduate Committee
- ❑ McNair, C-Step and Honor Student Mentor
- ❑ Undergraduate student recruitments efforts – Meetings with parents of prospective students student, tours, etc.
- ❑ Open House Activities since Fall 2003 (four times per year)
- ❑ MAE Senior and Junior students activities
- ❑ Qualifying exam
- ❑ Speaker and Invite speaker to Seminar Series
- ❑ Chair of the Graduate Student Seminar Series, Spring 2006.
- ❑ Serve in Ph.D. committees
- ❑ Support Faculty Recruiting Committee in establishing contact with potential candidates.
- ❑ Web pages:
 - ❑ AE-430, Stability and control of aerospace vehicles,
<http://www.clarkson.edu/~pmarzocc/AE430/AE430index.htm>

- AE-429, Performance and flight mechanics, <http://www.clarkson.edu/~pmarzocc/AE429/AE429index.html>
- i-UAV: <http://www.clarkson.edu/~pmarzocc/i-uav/i-uav-web.html>
- Mentor: Undergraduate Research Project, Summer 2004-2010
- Mentor inflatable Unmanned Aerial Vehicle Team, i-UAV team
- Mentor: Wright Brother Glider Club
- Mentor: Turbojet Propulsion Group (with Prof. V. Viti)
- Mentor: SPEED RASC-AL Team 2006 (with Prof. H. Shen), 2007 and 2008 (with Prof. D. Valentine), 2009 and 2010 (with Prof. Visser)
- Sigma Gamma Tau Aerospace Honor Society (co-advisor with R. Jha)

B. University Service

- University Senate, 2010 – Present
- Research Space Policy Committee, 2011 – Present
- University Award Committee
- Academic Integrity Committee
- Mentor 8 McNair Scholars, Summer 2004, 2005, 2006, 2007, 2009, 2010
- Mentor 1 REU Scholar, Summer 2006
- Mentor 4 CSTEP Scholar, Summer 2007, 2008, 2009, 2010
- Mentor 5 Honor Students, Summer 2007, 2008, 2010

VII. REFERENCES

Available Upon Request

For more information, see <http://www.clarkson.edu/~pmarzocc>.