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RESEARCH INTERESTS

Computational methods in fluid-structure interaction, aeroelastic control, optimization of dynamical systems, with applications to dynamics and control of flexible air vehicles and offshore horizontal-axis wind turbines.

EMPLOYMENT HISTORY

08/14 – Reader in Aeronautics – Imperial College London, Department of Aeronautics
08/12 – 07/14 Senior Lecturer in Aerostructures – Imperial College London, Department of Aeronautics
07/07 – 07/12 Lecturer in Aerostructures – Imperial College London, Department of Aeronautics
01/06 – 06/07 Research Fellow – University of Michigan, Dept. of Aerospace Engineering
07/05 – 12/05 R&D Engineer – EADS-CASA, Structural Dynamics and Aeroelasticity Department
09/01 – 02/05 Research Assistant – University of Michigan, Department of Aerospace Engineering
10/98 – 08/01 R&D Engineer – EADS-CASA, Stress Analysis Methods and Aeroelasticity Departments

ACADEMIC QUALIFICATIONS

2005 **Ph.D. in Aerospace Engineering - University of Michigan**
“Asymptotic Models of Integrally-Strained Slender Structures for High-Fidelity Nonlinear Aeroelastic Analysis.” Thesis advisor: [Prof. C.E.S. Cesnik](#); GPA: 4.0/4.0; Michigan GPA: 8.892/9 (9=A+)
1998 **Aeronautical Engineer (6-year degree) - Universidad Politécnica, Madrid**
Major: Aircraft design, Average grade: 92.2/100. Ranked #1.

AWARDS

2013 Winner, Best Supervision, Student Academic Choice Awards, Imperial College Union
2013 Finalist, Best Feedback, Student Academic Choice Awards, Imperial College Union
2011 Teaching Excellence Award, Imperial College London, Department of Aeronautics
2005 AIAA Foundation Orville and Wilbur Wright Graduate Award
2002-2004 François-Xavier Bagnoud Fellow at the University of Michigan
2001-2002 Fulbright Fellow at the University of Michigan
1998 Spanish Society of Aeronautical Engineers “Francisco Arranz” Graduation Award

RESEARCH GRANTS

2017-2020 EPSRC, Grant [EP/R007470/1](#), *Farming the Environment into the Grid: Big data in Offshore Wind* (FENGBO-WIND)
2017-2020 EC H2020-MSCA-ITN-2017, *Control of flexible structures and fluid-structure interactions*
2016-2019 Airbus Defence & Space, *Methods for aeroelastic analysis of solar-powered aircraft*

2016-2019	EPSRC ICASE Award (Airbus Group Innovations), <i>Assessment of geometrically-nonlinear effects on aircraft loads</i>
2015-2018	EPSRC, Grant EP/N006224/1 , <i>Maximizing Wind Farm Aerodynamic Resource via Advanced Modelling (MAXFARM)</i>
2014-2017	AFOSR/EOARD, Grant FA9550-14-1-0055, <i>Aeroservoelastic Optimization of Aircraft Wings with Load Alleviation Systems</i>
2013-2016	EPSRC, Grant EP/K037536/1 , <i>Vortex Induced Vibration and Structural Integrity of Deep Water Flexible Risers</i>
2013	EOARD, Window on Science, Grant 132047
2012-2016	EPSRC, Grant EP/J002070/1 , <i>Towards Biologically-Inspired Active-Compliant-Wing Micro-Air-Vehicles</i>
2012-2015	AFOSR/EOARD, Grant FA8655-12-1-2046, <i>Integrally-Actuated Membrane Wings</i>
2011-2015	EPSRC, Grant EP/I014683/1 , <i>Nonlinear Flexibility Effects on Flight Dynamics and Control of Next-Generation Aircraft</i>
2011	RAEng Distinguished Visiting Fellowship
2008-2011	EPSRC ICASE Award (QinetiQ), <i>Optimal Control Surfaces for Highly Flexible Aircraft</i>

ACADEMIC EXPERIENCE (@Imperial College)

Administration:

2014-2016	Member, College's Surveys Working Group
2012-2016	Member, Teaching Committee, Faculty of Engineering
2012-2016	Director of Undergraduate Studies, Department of Aeronautics
2010-2012	Final-year academic monitor and individual project coordinator
2009-	Member, Department Teaching Committee

Taught modules:

	Year	Hours	Class size	Academic Years
Foundation Mechanics	1	6	75	2008-2010
Manufacturing Processes	2	8	70	2007-2008
Finite Elements	3	13	85	2011-2012
Group Design Project	3	25	20	2009-2017
Computational Mechanics	4	16	50-70	2008-2017
Green Aviation Technologies	4/M.Sc.	7	100	2014-2018
Advanced Mechanics of Flight	4	13	50-60	2013-2018
Structural Dynamics	4/M.Sc.	14	85-120	2007-2018
Aeroelasticity/Aeroservoelasticity	M.Sc.	12	25-45	2007-2018

Ph.D. supervision (as main supervisor):

2016-	Alfonso del Carre	Data fusion architectures for fluid-structure interaction with large displacements
2016-	Charanya Venkatesan-Crome	Optimization and Co-Design of Aeroservoelastic Systems
2016-	Alvaro Cea	Model-order reduction methods in nonlinear aeroelasticity

2014-17	Ruben Sanchez	A Coupled Adjoint Method for Optimal Design of Fluid-Structure Interaction Problems with Large Displacements
2010-17	Alvaro Gonzalez	Aeroelasticity of deformable wing turbine aerofoils in stalled conditions (→ CENER, National Renewable Energy Centre, Spain)
2013-17	S. Maraniello	Optimal manoeuvres and co-design with very flexible wings [hdl:10044/1/49244] (→Imperial College)
2012-15	Stefano Buoso	High-fidelity modelling and feedback control of bio-inspired membrane wings [hdl:10044/1/32832] (→University of Zurich, Switzerland)
2011-15	Robert Simpson	Unsteady aerodynamics, reduced-order modelling, and predictive control in linear and nonlinear aeroelasticity with arbitrary kinematics [hdl:10044/1/33327] (→Imperial College)
2011-15	Yinan Wang	Aeroelastic modelling and control of very flexible air vehicles using a nonlinear modal formulation [hdl:10044/1/25578] (→Red Bull Formula One Racing)
2010-14	Bing Feng Ng	Model-based aeroservoelastic design and load alleviation of large wind turbines [hdl:10044/1/24788] (→ Nanyang Technological University, Singapore)
2009-14	Julian Dizy	Homogenisation of slender periodic composite structures [hdl:/10044/1/24732] (→Computational Modelling Cambridge Ltd, UK)
2009-13	Sara Arbós	Aeromechanical performance of compliant aerofoils [hdl:10044/1/28105] (→CNES, Poitiers, France)
2009-13	Henrik Hesse	Consistent aeroelastic linearization and ROM in the dynamics of manoeuvring flexible aircraft [hdl:10044/1/12258] (→ETH, Zurich)
2008-12	Robert Cook	Robust control of high-altitude long-endurance UAVs using novel lift effectors [hdl:10044/1/9998](→University of Bristol, UK)
2008-12	Joseba Murua	Flexible aircraft dynamics with a geometrically-nonlinear description of the unsteady aerodynamics [hdl:10044/1/9756] (→After graduation he joined University of Surrey, UK)

EXTERNAL SERVICE

Membership: AIAA, Spanish Society of Aeronautical Engineers (COIAE), RAeS (expired)
EPSRC Peer Review College

Associate Editor:

2016- Journal of Fluids and Structures
2016- Journal Aircraft

Grant reviewer: UK Engineering and Physical Sciences Research Council; US Army Research Office; Spanish National Evaluation and Foresight Agency; Research Council of Norway; Natural Sciences and Engineering Research Council of Canada

Committees:

2015- AIAA Structural Dynamics Technical Committee.

2011-2013 Institute of Mechanical Engineers' Aerospace Structures and Materials Technical Action Committee

2010-2012 Vice-chair in GARTEUR Flight Mechanics Action Group AG-19 "Flexible Aircraft Modelling for Flight Control System Design"

Reviewer for: Journal of Fluids and Structures; AIAA Journal; Journal of Sound and Vibration; Wind Energy; Journal of Fluid Mechanics; Structural and Multidisciplinary Optimization; Journal of Aircraft;

Journal of the American Helicopter Society; International Journal of Solids and Structures; Computers & Structures; Journal of Intelligent Material Systems and Structures; Smart Materials and Structures; Aerospace Science and Technology

CONSULTING

- 2015-2016 **Airbus Defence and Space, Farnborough, England**
Aeroelastic and stability analysis of Zephyr solar-powered aircraft prototype.
- 2014-2015 **Facebook Ltd, Menlo Park, California**
Aeroelastic and stability analysis of Aquila solar-powered aircraft prototype.
- 2005-2009 **MSC Software Corporation, Santa Ana, California**
Technical consultant (with Prof. Carlos Cesnik) in the development of composite nonlinear beam modules in MSC Nastran. Started as application of results of doctoral research.

FULL LIST OF PUBLICATIONS (citation info in [Google Scholar](#))

Book

[1] Palacios R., Cesnik C.E.S., *Flexible Aircraft Dynamics: Coupled Flight Mechanics, Aeroelasticity and Control*. Cambridge University Press, *In preparation*

Technical Journals

- [2] Broughton-Venner J., Wynn A., Palacios R., "Aeroservoelastic Optimisation of an Aerofoil with Active Compliant Flap via Re-parametrisation and Variable Selection." *AIAA Journal*, In Print
- [3] Sanchez R., Albring T., Palacios R., Gauger N.R., Economon T.D., Alonso J.J., "Coupled Adjoint-Based Sensitivities in Large-Displacement Fluid-Structure Interaction using Algorithmic Differentiation." *International Journal of Numerical Methods in Engineering*, In print [doi:10.1002/nme.5700, hdl:10044/1/51023]
- [4] Maraniello S., Palacios R., "Optimal Rolling Manoeuvres with Very Flexible Wings." *AIAA Journal*, Vol. 55, No. 9, pp. 2964-2979 [doi:10.2514/1.J055721, hdl:10044/1/47873]
- [5] Buoso S., Palacios R., "On-Demand Aerodynamics in Integrally Actuated Membranes with Feedback Control." *AIAA Journal*, Vol. 55, No. 2, pp. 377-388, Feb 2017 [doi:10.2514/1.J054888; hdl:10044/1/41932]
- [6] Ng B.F., Palacios R., Graham J.M.R., "Model-based Aeroelastic Design and Blade Load Alleviation of Offshore Wind Turbines." *International Journal of Control*, Vol. 90, No. 1, pp. 15-36, Jan 2017 [hdl:10044/1/23762; doi:10.1080/00207179.2015.1068456]
- [7] Wang Y., Wynn A., Palacios R., "A Nonlinear Modal Aeroservoelastic Analysis Framework for Flexible Aircraft." *AIAA Journal*, Vol. 54, No. 10, pp. 3075-3090, Oct 2016 [doi:10.2514/1.J054537; hdl:10044/1/32442]
- [8] Bao Y., Palacios R., Graham J.M.R., Sherwin S.J. "Generalized Thick Strip Modelling for Vortex-Induced Vibration of Long Flexible Cylinders." *Journal of Computational Physics*, Vol. 321, pp.1079-1097, 15 September 2016 [doi:10.1016/j.jcp.2016.05.062; hdl:10044/1/33432]
- [9] Maraniello S., Palacios R., "Optimal Vibration Control and Co-design of Very Flexible Actuated Structures." *Journal of Sound and Vibration*, Vol. 377, pp. 1-21, 1 September 2016 [doi:10.1016/j.jsv.2016.05.018, hdl:10044/1/32502]
- [10] Buoso S., Palacios R., "Viscoelastic Effects in the Aeromechanics of Actuated Elastomeric Membrane Wings." *Journal of Fluids and Structures*, Vol. 63, pp. 40-56, May 2016 [doi:10.1016/j.jfluidstructs.2016.01.003; hdl:10044/1/28861]

- [11] Hesse H., Palacios R., "Dynamic Load Alleviation in Wake Vortex Encounters." *Journal of Guidance, Control, and Dynamics*, Vol. 39, No. 4, pp. 801-813, April 2016 [doi:10.2514/1.G000715; hdl:10044/1/23599]
- [12] Ng B.F., New T.H., Palacios R., "Effects of Leading-Edge Tubercles on Wing Flutter Speeds." *Bioinspiration & Biomimetics*, Vol. 11, No. 3, 036003, 12 April 2016 [doi:10.1088/1748-3190/11/3/036003; hdl:10044/1/30940]
- [13] Ng B.F., Palacios R., Kerrigan E.C., Graham J.M.R., Hesse H., "Aerodynamic Load Control in HAWT with Combined Aeroelastic Tailoring and Trailing-Edge Flaps." *Wind Energy*, Vol. 19, No. 2, pp. 243-263, February 2016 [doi:10.1002/we.1830; hdl:10044/1/23403]
- [14] Buoso S., Palacios R., "Electro-aeromechanical Modelling of Actuated Membrane Wings." *Journal of Fluids and Structures*, Vol. 58, pp. 188-202, Oct 2015 [doi:10.1016/j.jfluidstructs.2015.08.010; hdl:10044/1/25858]
- [15] Wang Y., Palacios R., Wynn A. "A method for normal-mode-based model reduction in nonlinear dynamics of slender structures." *Computers & Structures*, Vol. 159, pp. 26-40, October 2015 [doi:10.1016/j.compstruc.2015.07.001; hdl:10044/1/25432]
- [16] Ng B.F., Hesse H., Palacios R., Graham J.M.R., Kerrigan E.C., "Aeroservoelastic State-Space Vortex-Lattice Modeling and Load Alleviation of Wind Turbine Blades." *Wind Energy*, Vol. 18, No. 7, pp. 1317-1331, July 2015 [doi:10.1002/we.1752]
- [17] Murua P., Martínez P., Climent H., van Zyl L., Palacios R., "T-Tail Flutter: Potential-Flow Modelling, Experimental Validation and Flight Tests." *Progress in Aerospace Sciences*, Vol. 71, pp. 54-84, November 2014 [doi:10.1016/j.paerosci.2014.07.002]
- [18] Cesnik C.E.S., Palacios R., Reichenbach E.Y., "Re-examined Structural Design Procedures for Very Flexible Aircraft." *Journal of Aircraft*, Vol. 51, No. 5, pp. 1580-1591, September-October 2014 [doi:10.2514/1.C032464]
- [19] Hesse H., Palacios R., "Reduced-Order Aeroelastic Models for Dynamics of Maneuvering Flexible Aircraft." *AIAA Journal*, Vol. 52, No. 8, pp. 1717-1732, August 2014 [doi:10.2514/1.J052684]
- [20] Hesse H., Palacios R., Murua J., "Consistent Structural Linearization in Flexible Aircraft Dynamics with Large Rigid-Body Motion." *AIAA Journal*, Vol. 52, No. 3, pp. 528-538, March 2014 [doi:10.2514/1.J052316; hdl:10044/1/11697]
- [21] Wynn A., Wang Y., Palacios R., Goulart P.J., "An Energy-Preserving Description of Nonlinear Beam Vibrations in Modal Coordinates." *Journal of Sound and Vibration*, Vol. 332, No. 21, pp. 5543-5558, 14 October 2013 [doi:10.1016/j.jsv.2013.05.021; hdl:10044/1/11126]
- [22] Simpson R.J.S., Palacios R., Murua J., "Induced Drag Calculations in the Unsteady Vortex Lattice Method." *AIAA Journal*, Vol. 61, No. 7, pp. 1775-1779, July 2013 [doi:10.2514/1.J052136; hdl:10044/1/11117]
- [23] Dizy J., Palacios R., Pinho S.T., "Homogenisation of Slender Periodic Composite Structures." *International Journal of Solids and Structures*, Vol. 50, No. 9, pp. 1473-1481, May 2013 [doi:10.1016/j.ijsolstr.2013.01.017; hdl:10044/1/13753]
- [24] Arbós-Torrent S., Ganapathisubramani B., Palacios R., "Leading- and Trailing-Edge Effects on the Aeromechanics of Membrane Aerofoils." *Journal of Fluids and Structures*, Vol. 38, pp. 107-126, April 2013 [doi:10.1016/j.jfluidstructs.2013.01.005]
- [25] Cook R., Palacios R., Goulart P.J., "Robust Gust Alleviation and Stabilization of Very Flexible Aircraft." *AIAA Journal*, Vol. 51, No. 2, pp. 330-340, February 2013 [doi:10.2514/1.J051697]
- [26] Hesse H., Palacios R., "Consistent Structural Linearisation in Flexible-Body Dynamics with Large Rigid-Body Motion." *Computers & Structures*, Vol. 110-111, pp. 1-14, Nov 2012 [doi:10.1016/j.compstruc.2012.05.011; hdl:10044/1/12924]
- [27] Murua J., Palacios R., Graham J.M.R., "Applications of the Unsteady Vortex-Lattice Method in Aircraft Aeroelasticity and Flight Dynamics." *Progress in Aerospace Sciences*, Vol. 55, pp. 46-72, November 2012 [doi:10.1016/j.paerosci.2012.06.001; hdl:10044/1/13765]
- [28] Murua J., Palacios R., Graham J.M.R., "Assessment of Wake-Tail Interference Effects on the Dynamics of Flexible Aircraft." *AIAA Journal*, Vol. 50, No. 7, pp. 1575-1585, July 2012 [doi:10.2514/1.J051543]

- [29] Palacios R., “Nonlinear Normal Modes in an Intrinsic Theory of Anisotropic Beams.” *Journal of Sound and Vibration*, Vol. 330, No. 8, pp. 1772-1792, April 2011 [[doi:10.1s016/j.jsv.2010.10.023](https://doi.org/10.1s016/j.jsv.2010.10.023); [hdl:10044/1/6336](https://hdl.handle.net/10044/1/6336)]
- [30] Palacios R., Murua J., Cook R., “Structural and Aerodynamic Models in the Nonlinear Flight Dynamics of Very Flexible Aircraft.” *AIAA Journal*, Vol. 48, No. 11, pp. 2648-2659, November 2010 [[doi:10.2514/1.J050513](https://doi.org/10.2514/1.J050513)]
- [31] Murua J., Palacios R., Peiró J., “Camber effects in the dynamic aeroelasticity of compliant airfoils.” *Journal of Fluid and Structures*, Vol. 26, No. 4, pp. 527-543, May 2010 [[doi:10.1016/j.jfluidstructs.2010.01.009](https://doi.org/10.1016/j.jfluidstructs.2010.01.009)]
- [32] Chimakurthi S.K., Tang J., Palacios R., Cesnik C.E.S., Shyy W., “Computational Aeroelasticity Framework for Analyzing Flapping Wing Micro Air Vehicles.” *AIAA Journal*, Vol. 47, No. 8, pp. 1865-1878, August 2009 [[doi:10.2514/1.38845](https://doi.org/10.2514/1.38845)]
- [33] Friedmann P.P., Glaz B., Palacios R., “A moderate deflection composite helicopter rotor blade model with an improved cross-sectional analysis.” *International Journal of Solids and Structures*, Vol. 46, No. 10, pp. 2186-2200, May 2009 [[doi:10.1016/j.ijsolstr.2008.09.017](https://doi.org/10.1016/j.ijsolstr.2008.09.017)]
- [34] Palacios R., Cesnik C.E.S., “A Geometrically-Nonlinear Theory of Active Composite Beams with Deformable Cross Sections.” *AIAA Journal*, Vol. 46, No. 2, pp. 439-450, February 2008 [[doi:10.2514/1.31620](https://doi.org/10.2514/1.31620)]
- [35] Palacios R., Cesnik C.E.S., “On The One-Dimensional Modeling of Camber Bending Deformations in Active Anisotropic Slender Structures.” *International Journal of Solids and Structures*, Vol. 45, No. 7-8, pp. 2097-2116, July 2008 [[doi:10.1016/j.ijsolstr.2007.11.011](https://doi.org/10.1016/j.ijsolstr.2007.11.011)]
- [36] Palacios R., Cesnik C.E.S., “Cross-Sectional Analysis of Non-Homogeneous Anisotropic Active Slender Structures.” *AIAA Journal*, Vol. 43, No. 12, pp. 2624-2638, December 2005 [[doi:10.2514/1.12451](https://doi.org/10.2514/1.12451)]

Book chapters

- [37] Palacios R., “Invariant Manifolds in Beam Dynamics: Free Vibrations and Nonlinear Normal Modes.” In Hodges, D. (Ed.), *Encyclopaedia of Continuum Mechanics*, Springer Verlag, Berlin, *In print*
- [38] Ng B.F., Palacios R. New T.H., “Aeroelasticity of configurations with leading-edge tubercles.” In Frank E. Fish. (Ed.), *Passive Flow Control Through Bio-Inspired Solutions: The Leading-Edge Tubercles of Humpback Whales*, Springer Verlag, Berlin (to appear)
- [39] Palacios R., Karlsson A., Winzell B., Climent H., “Assessment of Strategies for Correcting Linear Unsteady Aerodynamics Using CFD or Experimental Results.” In Haase W., Selmin V. and Winzell B. (Eds.), *Progress in Computational Fluid-Structure Interaction*, Notes on Numerical Fluid Mechanics and Multidisciplinary Design, Vol. 81, p. 209-224, Springer Verlag, Berlin, 2002

Refereed Conference Publications

- [40] Qi P., Zhao X., Wang Y., Palacios R., Wynn A., “Automatic Landing Control of a Very Flexible Flying Wing”, American Control Conference, June 27–29, 2018, Wisconsin, Milwaukee, USA
- [41] Maraniello S., Palacios R., “Towards efficient geometrically-exact aeroelastic models of wind turbine rotors: State space realisation and model reduction.” *36th ASME Wind Energy Symposium*, 8-12 January 2018, Kissimmee, Florida, USA
- [42] Qi P., Wang Y., Zhao X., Palacios R., Wynn A., “Trajectory Control of a Very Flexible Flying Wing”, *American Control Conference*, 24-25 May 2017, Seattle, Washington, USA
- [43] Palacios R., Simpson R.J.S., Maraniello S. “State-space realizations of potential-flow unsteady aerodynamics with arbitrary kinematics.” *58th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 9-13 January 2017, Grapevine, Texas, USA [[doi:10.2514/6.2017-1595](https://doi.org/10.2514/6.2017-1595)]
- [44] Sanchez R., Palacios R., Economon T.D., Alonso J.J., Albring T., Gauger N.R. “Optimal Actuation of Dielectric Membrane Wings using High-Fidelity Fluid-Structure Modelling.” *58th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 9-13 January 2017, Grapevine, Texas, USA [[doi:10.2514/6.2017-0857](https://doi.org/10.2514/6.2017-0857)]

- [45] Maraniello S., Palacios R., "Geometrically-nonlinear effects in lateral manoeuvres with coupled flight dynamics and aeroelasticity." *58th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 9-13 January 2017, Grapevine, Texas, USA [[doi:10.2514/6.2017-1352](https://doi.org/10.2514/6.2017-1352)]
- [46] Broughton-Venner J.J., Wynn A., Palacios R., "Aeroservoelastic Optimisation of an Aerofoil with Active Compliant Flap via Reparametrisation and Variable Selection" *58th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 9-13 January 2017 [[doi:10.2514/6.2017-0572](https://doi.org/10.2514/6.2017-0572)]
- [47] Ng B.F., New T.H., Palacios R., "Bio-inspired Leading-Edge Tubercles to Improve Fatigue Life in Horizontal Axis Wind Turbine Blades." *35th Wind Energy Symposium*, 9-13 January 2017, Grapevine, Texas, USA [[doi:10.2514/6.2017-1381](https://doi.org/10.2514/6.2017-1381)]
- [48] Gonzalez A., Aparicio M., Munduate X., Palacios R., Graham J.M.R. "A Computationally-Efficient Panel Code for Unsteady Airfoil Modelling Including Dynamic Stall." *35th Wind Energy Symposium*, 9-13 January 2017, Grapevine, Texas, USA [[doi:10.2514/6.2017-2000](https://doi.org/10.2514/6.2017-2000)]
- [49] Broughton-Venner J.J., Wynn A., Palacios R., "Aeroservoelastic Optimisation of an Aerofoil with Active Compliant Flap via Reparametrisation and Variable Selection" *AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference*, 13-16 June 2016, Washington, DC, USA [[hdl:10044/1/41928](https://hdl.handle.net/10044/1/41928), [doi:10.2514/6.2016-3511](https://doi.org/10.2514/6.2016-3511)]
- [50] Buoso S., and Palacios R., "High-fidelity simulation and reduced-order modelling of integrally-actuated membrane wings with feedback control." *SPIE 9799, Active and Passive Smart Structures and Integrated Systems*, 20-24 March 2016, Las Vegas, Nevada, USA [[doi:10.1117/12.2218348](https://doi.org/10.1117/12.2218348)]
- [51] Maraniello S., Simpson R.J.S., Palacios R., "Optimal Manoeuvres with Very Flexible Wings." *57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 4-8 January 2016, San Diego, California, USA [[hdl:10044/1/28847](https://hdl.handle.net/10044/1/28847); [doi:10.2514/6.2016-1223](https://doi.org/10.2514/6.2016-1223)]
- [52] Buoso S., and Palacios R., "Feedback Control of Integrally Actuated Membrane Wings: A Computational Study." *57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 4-8 January 2016, San Diego, California, USA [[hdl:10044/1/28846](https://hdl.handle.net/10044/1/28846); [doi:10.2514/6.2016-0714](https://doi.org/10.2514/6.2016-0714)]
- [53] Wang Y., Wynn A., Palacios R., "Model-Predictive Control of Flexible Aircraft using Nonlinear Reduced-Order Models." *57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 4-8 January 2016, San Diego, California, USA [[hdl:10044/1/28845](https://hdl.handle.net/10044/1/28845); [doi:10.2514/6.2016-0711](https://doi.org/10.2514/6.2016-0711)]
- [54] Sanchez R., Palacios R., Economon T.D., Kline H.L, Alonso J.J., Palacios F., "Towards a Fluid-Structure Interaction solver for Problems with Large Deformations within the Open-Source SU2 Suite." *57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 4-8 January 2016, San Diego, California, USA [[hdl:10044/1/28633](https://hdl.handle.net/10044/1/28633); [doi:10.2514/6.2016-0205](https://doi.org/10.2514/6.2016-0205)]
- [55] Tantaroudas N.D., Da Ronch A., Badcock K.J., Wang Y., Palacios R., "Model Order Reduction for Control Design of Flexible Free-Flying Aircraft." *AIAA Atmospheric Flight Mechanics Conference*, 5-9 January 2015, Kissimmee, Florida, USA [[doi:10.2514/6.2015-0240](https://doi.org/10.2514/6.2015-0240)]
- [56] Simpson R.J.S., Palacios R., "Integrated Flight Dynamics and Aeroelasticity of Flexible Aircraft with Application to Swept Flying Wings." *56th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 5-9 January 2015, Kissimmee, Florida, USA [[doi:10.2514/6.2015-0183](https://doi.org/10.2514/6.2015-0183), [hdl:10044/1/26717](https://hdl.handle.net/10044/1/26717)]
- [57] Wang Y., Wynn A., Palacios R., "Nonlinear Aeroservoelastic Analysis of Flexible Aircraft Described by Large Finite-Element Models." *56th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, 5-9 January 2015, Kissimmee, Florida, USA [[doi:10.2514/6.2015-0179](https://doi.org/10.2514/6.2015-0179), [hdl:10044/1/25432](https://hdl.handle.net/10044/1/25432)]
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