



Professor Chiara Bisagni

Buckling of axially compressed composite cylindrical Shell (from Composites Part B: Engineering, Vol. 31, No. 8, 2000)

See:

<http://www.aero.polimi.it/bisagni/web/index.php>

<http://www.journalogy.net/Author/12968783/chiara-bisagni>

Chair, Aerospace Structures and Computational Mechanics
Technical University of Delft, The Netherlands

Main research topics:

1. Experimental and numerical studies of buckling and post-buckling phenomena of composite structures.
2. Behavior of metallic and composite structures under dynamic loading.
3. Development of analytical formulations and methods for the structural optimization of composite components.
4. Crashworthiness modeling and testing of aircraft and car structures.
5. Study of the damage propagation in composite structures through experimental tests and finite element analyses.

Teaching subjects:

Non Linear Analysis of Aerospace Structures for graduate students of Aeronautical Engineering at the Technical University of Delft, The Netherlands

Academic appointments:

2015 – present: Professor and Chair of the Aerospace Engineering Department, TU Delft, The Netherlands

2012 – 2015: Professor, Department of Aero and Astro, University of California in San Diego

2006 - 2012: Associate Professor in Aerospace Structures at the Department of Aerospace Engineering of Politecnico di Milano, Italy

September - November 2010: Visiting Professor at the School of Aerospace Engineering and Applied Mechanics, Tongji University, Shanghai, China

October 2006 - March 2007: Visiting Associate Professor at the Department of Mechanical Engineering of the Massachusetts Institute of Technology (MIT), USA

May 1999 - April 2006: Assistant Professor in Aerospace Structures at the Department of Aerospace Engineering of Politecnico di Milano, Italy.

Research areas:

Buckling and post-buckling, crash worthiness, fatigue, damage propagation, optimization of aerospace composite structures using nonlinear analysis and structural testing.

Professor Chiara Bisagni conducts research in the area of aerospace composite structures. She and her team develop testing equipment and methodologies, as well as numerical tools to analyze buckling and post-buckling of unstiffened and stiffened composite structures. Their goal is to allow composite structures to work safely in the post-buckling range. They also have developed analytical tools that can design and optimize composite structures such as aircraft panels. Bisagni also investigates the dynamic response of aerospace components to short-duration loads, such as dynamic buckling, as well as fatigue and damage propagation. She conducts finite element analyses and experimental crash tests on aircraft, helicopter and automobile structures. Some of her research is developed for Formula 1 racing cars, where the cockpit is equipped with survival cells made of composite materials.

Capsule Bio written in 2012:

Chiara Bisagni received her Ph.D. and master's degree in aerospace engineering at Politecnico di Milano, Italy, where she then became associate professor in aerospace structures in the Department of Aerospace Engineering. She was a Visiting Associate Professor in the Department of Mechanical Engineering at the Massachusetts Institute of Technology from October 2006 to March 2007. Bisagni has received many international recognitions and fellowships, including a Fulbright Grant in 2006-07, a Young Researcher Fellowship in 2001 from the Massachusetts Institute of Technology, a Marie Curie Research Training Grant from the Training and Mobility of Researchers Program in the EU in 1998, and an Amelia Earhart Fellowship in 1996-97. She has been also member of the American Institute of Aeronautics and Astronautics Structures Technical Committee since 2009, and has been an AIAA Associate Fellow since 2012.

Education:

Politecnico di Milano, Ph.D. in Aerospace Engineering: July 1997

Politecnico di Milano, Laurea cum laude in Aeronautical Engineering: July 1993.

Post-doc research period at international institutions:

June - December 1998: EU Research Assistant at DLR (German Aerospace Center) in Braunschweig, Germany, through a TMR Marie Curie Research Training Grant given by the program Training and Mobility of Researchers of the European Union.

November 1997: Research activity at the Institute for Lightweight Structures and Ropeways of ETH in Zurich, Switzerland.

March - June 1997: Visiting Engineer at the Impact and Crashworthiness Laboratory of the Massachusetts Institute of Technology, Cambridge (USA).

Honors and awards:

1. American Institute of Aeronautics and Astronautics (AIAA) Associate Fellow, 2012.
2. Fellowship of the Erasmus Mundus TANDEM funded by the European Commission inside the ERASMUS MUNDUS 2009-2013, Top Academic Network for Developing Exchange and Mobility, Lot 14 - CHINA, 2010.
3. Fulbright Grant in the category Research Scholar, academic year 2006/07.
4. Occasional Lecturer Program Award 2006-2007 given by the Council for International Exchange of Scholars (CIES) related to the United States Department of State, Bureau of Educational and Cultural Affairs.
5. Group Study Exchange to Melbourne given by Rotary International, 2003.
6. Prize Arnaldo Rancati 2001 given by the Istituto Lombardo Accademia di Scienza e Lettere.
7. Young Researcher Fellowship given by the Massachusetts Institute of Technology, Cambridge (USA), 2001.
8. TMR Marie Curie Research Training Grant given by the programme Training and Mobility of Researchers of the European Union, 1998.
9. Amelia Earhart Fellowship 1996/97 given by Zonta International Foundation.
10. Scholarship from DAAD (Deutscher Akademischer Austauschdienst) 1996.
11. Prize "Gianfranco Rotondi 1993" given by the Department of Aerospace Engineering, Politecnico di Milano.

Invited lectures:

Shanghai Jiao Tong University, School of Aeronautics & Astronautics, Shanghai, P. R. China, October 26, 2010.

Beihang University (Beijing University of Aeronautics and Astronautics), School of Astronautics, Beijing, P. R. China, October 20, 2010.

Tongji University, School of Aerospace Engineering and Applied Mechanics, Shanghai, P. R. China, September 9, 2010.

Massachusetts Institute of Technology, Department of Aeronautics and Astronautics, Cambridge (MA), USA, February 11, 2009.

Delft University of Technology, Faculty of Aerospace Engineering, Delft, The Netherlands, October 29, 2008.

Imperial College of London, Department of Aeronautics, London, UK, October 13, 2008.

Stanford University, Department of Aeronautics & Astronautics, Structures and Composites Labs, Palo Alto (CA), USA, February 26, 2007.

University of Southern California (USC), Los Angeles (CA), USA, February 23, 2007.

University of California Los Angeles (UCLA), Los Angeles (CA), USA, February 22, 2007.

NASA Langley, Hampton (VA), USA, January 23, 2007.

Wichita State University and National Institute for Aviation Research (NIAR), Wichita (KS), USA, December 11, 2006.

General Electric Global Research, Niskayuna (NY), USA, November 13, 2006.

Lufthansa Technical Training at the ILA Berlin Air Show, Berlin, Germany, May 16, 2006.

NASA Langley, Hampton (VA), USA, July 20, 2004.

Airbus France, Toulouse, France, October 29, 2003.

Melbourne Chapter of the Australian Composite Structures Society, Melbourne, Australia, February 17, 2003.

Massachusetts Institute of Technology (MIT), Department of Aeronautics and Astronautics, Technology Laboratory for Advanced Composites, Cambridge (MA), USA, June 10, 1997.

Technical committees and professional services:

Member of the Editorial Board of International Journal of Crashworthiness since 2005.

Member of the Working Group for European Space Agency (ESA) ECSS-E-30-24 Buckling Handbook from 2005 to 2009.

Member of the Composite Materials Handbook CMH-17 (formerly MIL-HDBK-17) since 2006.

Collaborator for CDIO (Conceive - Design - Implement - Operate) Initiative, an innovative educational framework for producing the next generation of engineers, since 2007.

International Member of the American Institute of Aeronautics and Astronautics (AIAA) Structures Technical Committee since 2009.

Technical and scientific committees of international conferences:

Third International Conference on Buckling and Postbuckling behavior of Composite Laminated Shell Structures with DESICOS Workshop, 25-27 March, 2015

Composites 2011, 3rd ECCOMAS Thematic Conference on the Mechanical Response of Composites, Hannover, Germany, September 21-23, 2011.

2010 RAeS Structures & Materials Conference, 2nd Aircraft Structural Design Conference, London, UK, October 26-28, 2010.

International Crashworthiness Conference, Washington, USA, September 22-24, 2010.

2010 CDIO Conference, Montreal, Canada, June 15-17, 2010.

2009 CDIO Conference, Singapore Polytechnic, June 8-11, 2009.

2nd ECCOMAS Thematic Conference on the Mechanical Response of Composites - Composites2009, Imperial College London, UK, April 1-3, 2009.

RAeS/CEAS Aircraft Structural Design Conference Challenges for the Next Generation - Concept to Disposal, The Foresight Centre, University of Liverpool, UK, October 14-16, 2008.

2nd International Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures with COCOMAT Workshop, Braunschweig, Germany, September 3-5, 2008.

International Conference on Buckling and Postbuckling Behaviour of Composite Laminated Shell Structures, Eilat, Israel, March 1-2, 2004.

Professional Society membership:

American Institute of Aeronautics and Astronautics (AIAA).

Associazione Italiana di Aeronautica e Astronautica (AIDAA).

Most recent publications (2012 - 2015):

Reliability assessment of buckling response of an axially compressed sandwich composite shell with and without cut-outs

M. Alfano and C. Bisagni, Third International Conference on Buckling and Postbuckling behavior of

Composite Laminated Shell Structures with DESICOS Workshop, 25-27 March, 2015

5Experimental investigation of the postbuckling response and collapse of a single-stringer specimen

C Bisagni, CG Dávila - Composite Structures, 2014 - Elsevier

Abstract The postbuckling response and the collapse of composite specimens with a co-cured hat stringer are investigated experimentally. The specimens are designed to evaluate the postbuckling response and the effect of an embedded defect on the collapse load and ...

Influence of impacts on static and low-cycle fatigue characteristics of composite specimens

C Bisagni, C Walters - International Journal of Crashworthiness, 2013 - Taylor & Francis

This paper describes the effect of impacts on the possible reduction of the structural characteristics and damage growth of graphite-epoxy specimens. The considered specimens are undamaged specimens and specimens impacted with two different energy ...

Perturbation-based imperfection analysis for composite cylindrical shells buckling in compression

AC Orifici, C Bisagni - Composite Structures, 2013 - Elsevier

Abstract A numerical investigation was conducted into a perturbation-based analysis approach for assessing the imperfection sensitivity of composite cylindrical shells buckling under compression loading. The Single Perturbation Load Analysis (SPLA) approach was ...

Two-step procedure for fast post-buckling analysis of composite stiffened panels

R Vescovini, C Bisagni - Computers & Structures, 2013 - Elsevier

Abstract The paper presents an analytical formulation for the post-buckling analysis of composite aeronautical panels with omega stiffeners loaded in compression and shear. The formulation relies on an energy principle and the method of Ritz. In the first step, the panel ...

Modeling Delamination in Postbuckled Composite Structures Under Static and Fatigue Loads

C Bisagni, P Brambilla, CG Dávila - 2013 - ntrs.nasa.gov

Abstract: The ability of the Abaqus progressive Virtual Crack Closure Technique (VCCT) to model delamination in composite structures was investigated for static, postbuckling, and fatigue loads. Preliminary evaluations were performed using simple Double Cantilever ...

Strain Energy Method to Model Composite Structures Damping

C Bisagni, E Catapano - 2013 - arc.aiaa.org

Characterizing the damping properties of composite structures is of growing interest due to the intensive current use of laminated composite materials in aerospace components. But, although damping is of prime importance in noise and vibration control, in fatigue analysis ...

An Investigation into the Postbuckling Response of a Single Blade-Stiffened Composite Panel

AD Spediacci - 2014 - gradworks.umi.com

... operating in the postbuckling range and allow for thinner, lighter structures, which can increase the overall efficiency of aircraft. Adviser, Chiara Bisagni. Student Thesis

Single-mode solution for post-buckling analysis of composite panels with elastic restraints loaded in compression

R Vescovini, C Bisagni - Composites Part B: Engineering, 2012 - Elsevier

A closed-form solution is obtained to determine the buckling and post-buckling behavior of elastically restrained composite panels under compressive loading. The approach allows to study the response of stiffened panels undergoing local buckling modes, taking into ...

Buckling analysis and optimization of stiffened composite flat and curved panels

R Vescovini, C Bisagni - AIAA journal, 2012 - arc.aiaa.org

THE design of structurally efficient composite stiffened panels requires the choice of a large number of design variables, such as the stacking sequences of the skin and the stiffeners as well as their geometry and shape. In most of the cases, the laminates make use of just four ...

Simplified Models for the Study of Postbuckled Hat-Stiffened Composite Panels

R Vescovini, CG Davila, C Bisagni - 2012 - ntrs.nasa.gov

Abstract The postbuckling response and failure of multistringers stiffened panels is analyzed using models with three levels of approximation. The first model uses a relatively coarse mesh to capture the global postbuckling response of a five-stringer panel. The second ...

Dynamic analysis of composite stiffened panels subjected to compressive load

R Vescovini, C Bisagni - 53rd AIAA/ASME/ASCE/AHS/ASC Structures, ..., 2012 - arc.aiaa.org

The study of the dynamic response of composite stiffened panels is of primary interest for the aeronautical structures design. Indeed, dynamic loadings may be caused by manoeuvres, gusts and ground impacts, and can lead the structure to buckling. The typical sizing ...

Publications in Refereed Journals up to 2011:

Bisagni Chiara, Vescovini Riccardo and Dávila Carlos G.(9) "Development of a single-stringer compression specimen for the assessment of damage tolerance of postbuckled structures", *Journal of Aircraft*, Vol. 48, No. 2, pp. 495-502, 2011.

Cordisco Potito and Bisagni Chiara, "Cyclic buckling tests under combined loading on pre-damaged composite stiffened boxes", *AIAA Journal*, Vol. 49, No. 8, pp. 1795-1807, 2011.

Patel Shuvendu Narayan, Bisagni Chiara and Datta Prosum Kumar(16), "Dynamic buckling analysis of a composite stiffened cylindrical shells", *Structural Engineering Mechanics*, Vol. 37, No. 5, pp. 509-527, 2011.

Greve Lars(15), Bisagni Chiara and Walters Carey(8), "Biaxial experimental determination of in-plane matrix fracture envelope of unidirectional composite", *Composites Part A*, Vol. 41, No. 6, pp. 750-758, 2010.

Cordisco Potito and Bisagni Chiara, "Design, test and validation of a composite box under combined loading up to collapse", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4, pp. 853-869, 2010.

Kalnins Kaspars(11), Rikards Rolands(11), Auzins Janis(11), Bisagni Chiara, Abramovich Haim(13), Degenhardt Richard(6), "Metamodeling methodology for postbuckling simulation of damaged composite stiffened structures with physical validation", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4, pp. 705-716, 2010.

Orifici Adrian C.(4-12), Thomson Rodney S.(4), Degenhardt Richard(6), Bisagni Chiara, Bayandor Javid(12), "An analysis tool for design and certification of postbuckling composite aerospace structures", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4, pp. 669-681, 2010.

Karachalios E.(7), Vrettos C.(7), Marioli-Riga Z.(7), Bisagni C., Cordisco P., Ortiz De Zarate I.(1), Caruso A.(2), "Numerical simulation and testing of a composite stiffened structure under combined buckling loads", *International Journal of Structural Stability and Dynamics*, Vol. 10, No. 4, pp. 871-884, 2010.

Bisagni Chiara and Vescovini Riccardo, "Fast tool for buckling analysis and optimization of stiffened panels", *Journal of Aircraft*, Vol. 46, No. 6, pp. 2041-2053, 2009.

Cordisco Potito and Bisagni Chiara, "Cyclic buckling tests under combined compression and shear on composite stiffened panels", *AIAA Journal*, Vol. 47, No. 12, pp. 2879-2893, 2009.

Orifici Adrian C.(4-12), Thomson Rodney S.(4), Degenhardt Richard(6), Bisagni Chiara and Bayandor Javid(12), "A finite element methodology for analysing degradation and collapse in postbuckling composite aerospace structures", *Journal of Composite Materials*, Vol. 43, No. 26, pp. 3239-3263, 2009.

Bisagni Chiara, "Experimental investigation of the collapse modes and energy absorption characteristics of composite tubes", *International Journal of Crashworthiness*, Vol. 14, No. 4, pp. 365-378, 2009.

Bisagni Chiara and Giavotto Vittorio, "Experiments and analyses on post-buckling behavior of stringer-stiffened laminated composite helicopter tailplane", *Journal of the American Helicopter Society*, Vol. 54, No. 2, 022003, length: 12 pages, 2009.

Bisagni Chiara and Vescovini Riccardo, "Analytical formulation for local buckling and post-buckling analysis of stiffened laminated panels", *Thin-Walled Structures*, Vol. 47, pp. 318-334, 2009.

Bisagni Chiara and Terletti Davide(5), "Structural optimization of composite elements of a Formula One racing car", *International Journal of Vehicle Design*, Vol. 48, Nos. 1/2, pp. 149-170, 2008.

Bisagni Chiara and Walters Carey(8), "Experimental investigation of the damage propagation in composite specimens under biaxial loading", *Composite Structures*, Vol. 85, pp. 293-310, 2008.

Abramovich Haim(13), Weller Tanchum(13) and Bisagni Chiara, "Buckling behavior of composite laminated stiffened panels under combined shear and axial compression", *Journal of Aircraft*, Vol. 45, No. 2, pp. 402-413, 2008.

Orifici Adrian C.(4-12), Thomson Rodney S.(4), Degenhardt Richard(6), Bisagni Chiara and Bayandor Javid(12) "Development of a finite element analysis methodology for the propagation of delaminations in composite structures", *Mechanics of Composite Materials*, Vol. 43, 2007, pp. 9-28.

Bisagni Chiara and Cordisco Potito, "Post-buckling and collapse experiments of stiffened composite cylindrical shells subjected to axial loading and torque", *Composite Structures*, Vol. 73, No. 2, 2006, pp. 138-149.

Bisagni Chiara and Mirandola Cecilia, "Experimental and numerical investigation of crash behavior of composite helicopter cruciform elements", *Journal of the American Helicopter Society*, Vol. 50, No. 1, 2005, pp. 107-116.

Bisagni Chiara, Di Pietro Giuseppe, Frascini Lara(5) and Terletti Davide(5), "Progressive crushing of fiber-reinforced composite structural components of a Formula One racing car", *Composite Structures*, Vol. 68, No. 4, 2005, pp. 491-503.

Bisagni Chiara, "Dynamic buckling of fiber composite shells under impulsive axial compression", *Thin-Walled Structures*, Vol. 43, No. 3, 2005, pp. 499-514.

Bisagni Chiara and Cordisco Potito, "Testing of stiffened composite cylindrical shells in the postbuckling range until failure", *AIAA Journal*, Vol. 42, No. 9, 2004, pp. 1806-1817.

Lanzi Luca, Bisagni Chiara and Ricci Sergio, "Crashworthiness optimization of helicopter subfloor based on decomposition and global approximation", *Structural and Multidisciplinary Optimization*, Vol. 27, No. 5, 2004, pp. 401-410.

Lanzi Luca, Bisagni Chiara and Ricci Sergio, "Neural network systems to reproduce crash behavior of structural components", *Computers & Structures*, Vol. 82, pp. 93-108, 2004.

Bisagni Chiara and Cordisco Potito, "An experimental investigation into the buckling and post-buckling of CFRP shells under combined axial and torsion loading", *Composite Structures*, Vol. 60, No. 4, 2003, pp. 391-402.

Bisagni Chiara, "Crashworthiness of helicopter subfloor structures", *International Journal of Impact Engineering*, Vol. 27, No. 10, 2002, pp. 1067-1082.

Bisagni Chiara, Lanzi Luca and Ricci Sergio, "Optimization of helicopter subfloor components under crashworthiness requirements using neural networks", *Journal of Aircraft*, Vol. 39, No. 2, 2002, pp. 296-304.

Bisagni Chiara and Lanzi Luca, "Post-buckling optimisation of composite stiffened panels using neural networks", *Composite Structures*, Vol. 58, No.2, 2002, pp. 237-247.

Bisagni Chiara, "Numerical analysis and experimental correlation of composite shell buckling and post-buckling", *Composites Part B: Engineering*, Vol. 31, No. 8, 2000, pp. 655-667.

Bisagni Chiara, "Energy absorption of riveted structures", *International Journal of Crashworthiness*, Vol. 4, No. 2, 1999, pp. 199-212.

Bisagni Chiara, "Experimental buckling of thin composite cylinders in compression", *AIAA Journal*, Vol. 37, No. 2, 1999, pp. 276-278.

Bisagni Chiara, "Crashworthiness of helicopter subfloor structural components", *Aircraft Engineering and Aerospace Technology*, Vol. 71, No. 1, 1999, pp. 6-11.

Book Chapters:

Bisagni Chiara, "Buckling and postbuckling tests on stiffened composite panels and shells", in *Buckling and Postbuckling Structures: Experimental, Analytical and Numerical Studies*, Editors: Falzon Brian G. and Aliabadi M. H., World Scientific (ISBN 978-1-86094-794-0), pp.39-64, 2008.

Abramovich Haim(13), Weller Tanchum(13) and Bisagni Chiara, "Buckling behavior of composite laminated stiffened panels under combined shear and axial compression", in *NASA/TM-2006-214276, Collected Papers in Structural Mechanics Honoring Dr. James H. Starnes Jr.*, compiled by: Norman F. Knight, Jr. (General Dynamics - Advanced Information Systems, Chantilly, Virginia), Michael P. Nemeth (Langley Research Center, Hampton, Virginia) and John B. Malone (Langley Research Center, Hampton, Virginia), February 2006.

Contribute in Singer J., Arbocz J. and Weller T., *Buckling Experiments – Experimental Methods in Buckling of Thin-Walled Structures*, Vol. 2, John Wiley & Sons Inc., ISBN 0471974501, New York, USA, 2002, pp.1203-1209.

Publications in International Conference Proceedings (up to 2011):

Bisagni Chiara and Vescovini Riccardo, "Buckling Optimization of Stiffened Composite Flat and Curved Panels", 52nd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, Denver, Colorado, USA, 4-7 April 2011, AIAA 2011-2124.

Eglitis Edgars(11), Kalnins Kaspars(11) and Bisagni Chiara, "Study on buckling behaviour of laminated shells under pulse loading", ICAS 2010 - 27th Congress of International Council of the Aeronautical Sciences, Nice, France, 19-24 September 2010.

Castelli Alessio(17), Marinoni Clementina(17), Bisagni Chiara, Brodeur Doris(8), Crawley Edward(8), Causi Alfred(18), Fortin Clément(19), Malmqvist Johan(20), Maury Claude(21), "An integrated CDIO-EQF engineering Framework for Europe", 6th International CDIO Conference 2010, École Polytechnique de Montréal, Québec, Canada, June 15-18, 2010.

Bisagni Chiara, Ghiringhelli Gian Luca and Ricci Sergio, "Survey for program evaluation of Aerospace Engineering at Politecnico di Milano", 6th International CDIO Conference 2010, École Polytechnique de Montréal, Québec, Canada, June 15-18, 2010.

Bisagni Chiara, Vescovini Riccardo and Dávila Carlos G.(9), "Assessment of the damage tolerance of postbuckled hat-stiffened panels using single stringer specimens", 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Orlando, Florida, USA, 12 - 15 April 2010.

Abramovich Haim(13), Bisagni Chiara and Cordisco Potito, "Cyclic buckling under combined loads of composite panels", ICCM-17, 17th International Conference on Composite Materials, Edinburgh, UK, 27-31 July 2009.

Vescovini Riccardo and Bisagni Chiara, "Analytical approach for the buckling of composite panels with different stringer shapes", XX AIDAA Congress (Associazione Italiana di Aeronautica e Astronautica), Milano, Italy, June 29-July 3, 2009.

Zou Duo and Bisagni Chiara, "Buckling and postbuckling tests and analysis of composite stiffened components", XX AIDAA Congress (Associazione Italiana di Aeronautica e Astronautica), Milano, Italy, June 29-July 3, 2009.

Cordisco Potito and Bisagni Chiara, "Effect of cyclic buckling under combined loading on pre-damaged composite stiffened box", 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Palm Springs, California, USA, 4 - 7 May 2009, AIAA 2009-2498.

Bisagni Chiara, Giavotto Vittorio, Romeo Giulio(10), Frulla Giacomo(10), Fanteria Daniele(14) and Lanciotti Agostino(14), "Research activities on buckling of composite structures in Italy", 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Palm Springs, California, USA, 4 - 7 May 2009, AIAA 2009-2349.

Bisagni Chiara and Walters Carey(8), "Low-cycle fatigue tests under biaxial loading on impacted composite specimens", Composites2009 - 2nd ECCOMAS Thematic Conference on the Mechanical Response of Composites, Imperial College London, UK, 1-3 April 2009.

Bisagni Chiara and Vescovini Riccardo, "A fast tool for analysis and optimization of isotropic and composite stiffened panels", 12th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference, Victoria, British Columbia, Canada, September 10 - 12, 2008, AIAA-2008-5978.

Kalnins Kaspars(11), Bisagni Chiara, Rikards Rolands(11), Eglitis Edgars(11), Cordisco Potito and Chate Andris(11), "Metamodels for the optimization of damage-tolerant composite structures", ICAS 2008 - 26th Congress of International Council of the Aeronautical Sciences, Anchorage, Alaska, USA, September 14-19, 2008, ICAS 2008-7.3.3.

Basso Nadia, Chishti Maajid(12), Bayandor Javid(12), Thomson Rodney(4), Bisagni Chiara, "Investigation of adhesively bonded composite structure joints", ICAS 2008 - 26th Congress of International Council of the Aeronautical Sciences, Anchorage, Alaska, USA, September 14-19, 2008, ICAS 2008-7.2.3.

Bisagni Chiara, "Optimization of an helicopter subfloor under crash conditions", Proceedings of the International Crashworthiness Conference - ICRASH 2008, Kyoto, Japan, July 22-25, 2008, 2008-016, pp. 1-16.

Bisagni Chiara, Ghiringhelli Gian Luca, Guardone Alberto and Ricci Sergio, "Multidisciplinary design labs: experiences at DIA-PoliMI", Proceedings of the 4th International CDIO Conference, University College Ghent, Belgium, June 16-19, 2008.

Bisagni Chiara and Cordisco Potito, "Cyclic buckling tests of stiffened composite curved panels under compression and shear", accepted for 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Schaumburg, Illinois, USA, 7 - 10 April 2008.

Cordisco Potito and Bisagni Chiara, "Cyclic buckling tests of CFRP boxes under compression and torsion", Proceeding of the International Conference on Experimental Mechanics, Experimental Analysis of Nano and Engineering Materials and Structures - ICEM 13, Alexandroupolis, Greece, July 1-6, 2007.

Abramovich Haim(13), Bisagni Chiara and Cordisco Potito, "Post-buckling test simulation of a stiffened composite panel", Proceedings of the 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Waikiki, Hawaii, USA, April 23-26, 2007, AIAA 2007-2126.

Bisagni Chiara, “Numerical analysis of composite panels in the post-buckling field taking into account progressive failure”, Proceeding of the International Conference on Computational & Experimental Engineering and Sciences - ICCES'07, Miami, USA, January 3-8, 2007, ICCES, vol.1, no.3, pp.93-98, 2007.

Bisagni Chiara, Cordisco Potito, Abramovich Haim(13) and Weller Tanchum(13), “Cyclic buckling tests of CFRP curved panels”, Proceedings of the 25th International Congress of the Aeronautical Sciences - ICAS 2006, Hamburg, Germany, September 3-8, 2006, pp. 1-8.

Bisagni Chiara and Linde Peter(3), “Numerical simulation of the structural behaviour of orthotropically stiffened aircraft panels under short time duration loading”, Proceedings of the 25th International Congress of the Aeronautical Sciences - ICAS 2006, Hamburg, Germany, September 3-8, 2006, pp. 1-7.

Bisagni Chiara and Mantovani Manuel, “Crash simulation of a commuter aircraft subfloor: original configuration compared to a composite one”, Proceedings of the International Crashworthiness Conference - ICRASH 2006, Athens, Greece, July 4-7, 2006, 2006-94, pp. 1-11.

Bisagni Chiara, “Progressive delamination analysis of stiffened composite panels in post-buckling”, Proceedings of the 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Material Conference, Newport, Rhode Island, USA, May 1-4, 2006, AIAA 2006-2178, pp. 1-12.

Bisagni Chiara and Cordisco Potito, “Post-buckling behaviour of stiffened composite cylinders: experimental and numerical results”, Proceedings of the International Conference on Computational and Experimental Engineering and Sciences – ICCES 2005, Indian Institute of Technology Madras, Chennai, India, December 1-6, 2005, pp. 1-6.

Giavotto Vittorio and Bisagni Chiara, “Numerical - experimental investigation of an helicopter tailplane in composite materials: from buckling to collapse”, Proceedings of the XVIII Congresso Nazionale AIDAA, Volterra, Italy, September 19-22, 2005, pp. 1-12.

Giuseppe Sala, M. Vergani and Chiara Bisagni, “Valutazione dell'invasività di microattuatori in NiTiNOL entro laminati in composito”, Proceedings of the XVIII Congresso Nazionale AIDAA, Volterra, Italy, September 19-22, 2005, pp. 1-12.

Bisagni Chiara, “An analytical formulation for the prediction of buckling and post-buckling of composite panels and shells”, Proceedings of the Third MIT Conference on Computational Fluid and Solid Mechanics, Cambridge, USA, June 14-17, 2005, pp. 83-87.

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