Gaetano Giunta

Curriculum Vitae, May 13, 2015

Personal Data

Date of birth	06/02/79
Gender	male
Place of birth	Leonforte (EN), Italy
Citizenship	Italian
Marital status	single
Private address	14, rue J. P. Michels, L-4243, Esch-sur-Alzette, G. D. of Luxembourg
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Current employment	R&D Engineer, Materials Research and Technology Department, Luxembourg Institute of Science and Technology (LIST), Luxembourg
Work address	5, avenue des Hauts-Fourneaux L-4362 Esch-sur-Alzette, G. D. of Luxembourg
Work email	gaetano.giunta@list.lu
Work telephone	+352 275 888 1

Work Experience

June 2015–present: **R&D Engineer**, LIST, Bio-based and Functional Composites group, Luxembourg.

Project H2020-MSCA-ITN-2014 642121 FULLCOMP on "Fully Integrated Analysis, Design, Manufacturing and Health-Monitoring of Composite Structures". FULLCOMP aims at the creation of a multidisciplinary, intersectorial and international research training network. The full spectrum of the design of composite structures are dealt with - manufacturing, health-monitoring, failure, modelling, multi-scale approaches, testing, prognosis and prognostic - to develop integrated analysis tools to improve the design and production of composites.

January 2015– present: **R&D Engineer**, LIST, Bio-based and Functional Composites group, Luxembourg.
Project ESA GSTP AO 1-5720/08/NL/CB COSSMAS on "Composite Space Structures Modelling and Analysis Software". The project consists in the implementation of higher-order composite shell finite element models within the commercial software packages LMS Samtech Samcef and Open-Engineering OOFELIE::Multiphysics.

July 2014– December 2014: **R&D Engineer**, CRP Henri Tudor, Modelling and Simulation unit, Luxembourg.
Project ESA GSTP AO 1-5720/08/NL/CB COSSMAS on "Composite Space Structures Modelling and Analysis Software". The project consists in the implementation of higher-order composite shell finite element models within the commercial software packages LMS Samtech Samcef and Open-Engineering OOFELIE::Multiphysics.

January 2013–July 2014: **R&D Engineer**, CRP Henri Tudor, Modelling and Simulation unit, Luxembourg.
Project FNR / 784 868 WRINKLE on "Multi-Scale Modelling and Simulation of Wrinkling Phenomena in Nanomaterial and Composites Structures". The project consists in the modelling of global and local instabilities, such as wrinkles, in composite beam and plate structures.

February 2010– January 2013: **R&D Engineer**, CRP Henri Tudor, Modelling and Simulation unit, Luxembourg.
Principal investigator of project FNR CORE C09/MS/05 FUNCTIONALLY on "Functionally Graded Materials Multi-Scale Modelling, Design and Optimisation". The project consists in the development of advanced and accurate micro- and macro-scale modelling for simulation, design and optimisation of Functionally Graded Materials and lightweight structural components with high thermo-mechanical capabilities.

February 2009– January 2010: **Post-Doc position**, CRP Henri Tudor, Modelling and Simulation unit, Luxembourg.
Research topics:
1. Development of higher-order hierarchical beam models for composite and functionally graded materials via analytical and finite element solutions.
2. Analysis of composite doubly curved shells under localised loadings via refined analytical solutions.
3. Analysis of composite doubly curved shells under localised loadings via refined analytical solutions.
4. Application of Arlequin method for coupling different finite element beam models.

Developed models have been validated towards FE solutions developed via Patran/Nastran or ANSYS.

January 2008– January 2009: **Post-Doc position**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Research topics:
1. Failure analysis of composite plates via hierarchical analytical models.
2. Analysis of composite cylindrical shells under localised loadings.

April–June 2008: **R&D project**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Design verification via Patran and Nastran of a planetary gear set.

March 2007–March 2008: **R&D project**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Design of an acoustic barrier structure made of composite materials via Patran and Nastran.

March–October 2004: **Trainee**, European Space Agency, ESTEC, Structures and Thermal Division, The Netherlands.
Application of Higher Order Derivatives to Structural Probabilistic Analysis Static, free vibration and buckling analyses of space structures (Corot cover lid and Artemis Antenna Reflector) have been carried out in a stochastic framework via Patran/Nastran and ANSYS (stochastic and DX-VT modules).

Research Interests

Hierarchical models for the linear static and large deformations, free vibration, buckling, post-buckling, thermo-mechanical and failure analysis of beam, plate, and shells structures made of laminated, piezo-electric and functionally graded materials. Analytical, finite element and meshless methods.

Education

2007 **Ph.D. in Aerospace Engineering**, *Polytechnic University of Turin*, Italy.

2004 **Graduation in Aerospace Engineering**, *Polytechnic University of Turin*, Italy, summa cum laude.

1997 **Baccalaureate**, *Liceo classico (humanities) "N. Vaccalluzzo", Leonforte*, Italy, 60/60.

Ph.D. Thesis

Title *Deterministic and Stochastic Hierarchical Analysis of Failure and Vibration of Composites Plates and Shells*

Supervisors Prof. E. Carrera (Politecnico di Torino)

Masters Thesis

Title *Application of the higher-order derivative method to probabilistic structural analyses*

Supervisors Prof. E. Carrera (Politecnico di Torino) and Dr. Adriano Calvi (European Space Agency)

Teaching Activity

February–May 2008: **Structures of Space Vehicles**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Lectures on Patran and Nastran at the course for first year master students.

September–December 2006: **Basics of Structural Engineering**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Course for second year bachelor students.

September–December 2005: **Basics of Structural Engineering**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.
Course for second year bachelor students.

Mentoring Activity

November 2007– December 2008: **Master of System Engineering in Aeronautics for the International Community (MOSAIC)**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.

March 2006: **Space Exploration end Development Systems (SEEDS)**, Polytechnic University of Turin, Aeronautic and Space Engineering Department, Italy.

Students Supervision

Ph.D. Students

2010–2013: **Ms. D. Crisafulli**, *"Multi-scale Modelling, Design and Sensitivity Analysis of Functionally Graded Materials and Structures"*, AFR grant: PHD-MARP-03.

2010–2013: **Ms. A. Catapano**, *"Optimization of composite light structures with respect to stiffness, strength and damage: a new global approach for modern applications"*, AFR grant: PHD-09-184.

Master Students

2015: **Ms. M. Costanzo**, *"Material and structural modelling of sandwich panels"*, Politecnico di Torino, Italy.
Stage in collaboration with Euro-Composites, Luxembourg.

2015: **Mr. N. M. Addante**, *"Modelling and Simulation of Advanced Composites for Aerospace Applications"*, Politecnico di Torino, Italy.
Stage in collaboration with Euro-Composites, Luxembourg.

2010: **Ms. M. Maiarù**, *"One-dimensional multi-scale models for the analysis of composite structures"*, Politecnico di Torino, Italy.

2008: **Mr. B. Bianco Chinto**, *"Analysis and comparison of composite laminates failure criteria"*, Politecnico di Torino, Italy.

Bachelor Students

2008: **Ms. M. R. Velardo**, *"Structural and aerodynamics analysis of the wing of an innovative composite made ultra-light airplane: Part 1, static analysis"*, Politecnico di Torino, Italy.

2008: **Ms. E. Velutini**, *"Structural and aerodynamics analysis of the wing of an innovative composite made ultra-light airplane: Part 2, dynamic analysis"*, Politecnico di Torino, Italy.

2008: **Mr. M. Marinaccio**, *"An analysis of composite shells by means of hierarchical models"*, Politecnico di Torino, Italy.

2007: **Mr. F. Fazzolari**, *"Stochastic analysis of plates made of composite materials"*, Politecnico di Torino, Italy.

Engineering Software Knowledge

FEM: Nastran, Patran, ANSYS, Abaqus.

CAD: Catia V5.

Mathematics: Matlab, Mathematica.

General Computer Skills

OS	Linux, Unix, Windows, Mac Os.
Programming	C++, Fortran, Awk, Python, Html.
Office software	LaTeX, MS Office, OpenOffice.

Languages

Italian	**Native speaker**	
English	**Advanced**	*Fluent written and spoken*
French	**Intermediate**	*Conversationally fluent*
German	**Basic**	*Basic words and phrases only*

Peer Reviewer Activity

Journals

∘ Composite structures, ∘ Composites Part B, ∘ Journal of Sound and Vibration, ∘ Zeitschrift für Angewandte Mathematik und Mechanik, ∘ International Journal of Applied Mechanics, ∘ International Journal of Mechanical Sciences, ∘ Archives of Mechanics, ∘ Acta Mechanica, ∘ Advances in Aircraft and Spacecraft Science, ∘ Journal of Intelligent Material Systems and Structures, ∘ Mechanics of Advanced Materials and Structures, ∘ Science and Engineering of Composite Materials, ∘ Applied Mathematical Modelling, ∘ Scientific World Journal, ∘ Steel and Composite Structures - an International Journal, ∘ Actuators, ∘ Advances in Acoustics and Vibration, ∘ Chaos, Solitons and Fractals.

Funding Agencies

2013 **Italian Ministry of Instruction, University and Research (MIUR)**, Research Projects of National Interest(PRIN 2012).

2012 **Italian Ministry of Instruction, University and Research (MIUR)**, eValuation of Quality of Research (VQR 2004-2010).

2011 **Swiss National Science Foundation (SNSF)**, Ph.D. thesis applications.

Invited Scientist

May, 15-June, 15 2013 Laboratoire Energétique Mécanique Electromagnétisme, Université Paris Ouest Nanterre La Défense, France.

Scientific Events

Conferences Organisation

2011 **IV International Symposium on Design, Modelling and Experiments of Advanced Structures and Systems (DeMEASS IV)**, 27-30 March 2011, Urspelt, Ardennes Region, Grand Duchy of Luxembourg.

2006 **I International Symposium on Design, Modelling and Experiments on Adaptive Structures and and Smart Systems (DeMEASS I)**, 10-12 July 2006, Bardonecchia, Italy.

Conference Sessions Organisation

2013 **Modeling and Simulation of Piezoelectric Advanced Structures**, VI ECCOMAS Thematic Conference on Smart Structures and Materials (SMART2013), 24-26 June 2013, Turin, Italy.

2012 **Thermo-Mechanical Analysis of Composite and Advanced Structures**, Mechanics of Nano, Micro and Macro Composite Structures, 18-20 June 2012, Turin, Italy.

2011 **Functionally graded structures**, VI International Conference on Composite Structures, 28-30 June 2011, Porto, Portugal.

Scientific Committee Membership

2015 **International Conference on Shells, Plates and Beams (SPB2015)**, 16-18 September, Bologna, Italy.

II International Conference on Numerical and Symbolic Computation - Developments and Applications (SYMCOMP2015 - ECCOMAS Thematic Conference), 26-27 March, Faro, Algarve, Portugal.

VII International Symposium on Design Modeling and Experiments on Adaptive Structures and Smart Systems (DeMEASS VII), 4-7 October, Radebeul, Dresden, Germany.

2014 **I International Conference on Mechanics of Composites (MECHCOMP2014)**, 8-12 June, Long Island, NY State, USA.

2013 **V International Conference on Algebraic and Symbolic Computation (SYMCOMP 2013)**, 9-10 September, Lisbon, Portugal.

2012 **V International Symposium on Design Modeling and Experiments on Adaptive Structures and Smart Systems (DeMEASS V)**, 28-31 October, Ulrichsberg, Austria.

Ph.D. Thesis Defence Committee Membership

17/12/2012 **Ana Neves**, *"Analysis of laminated and functionally graded plates and shells by a unified formulation and collocation with radial basis functions"*, Faculdade de Engenharia, Universidade do Porto, Portugal.

Books

2011 **Carrera E., Giunta G., Petrolo M.**, *Beam Structures: Classical and Advanced Theories*, J. Wiley & Sons, 978-0-470-97200-7.

Chapters in a Book

2013 **Giunta G., Koutsawa Y. and Belouettar S.**, *Analysis of Three-Dimensional Piezo-Electric Beams via a Unified Formulation*, Smart Structures and Materials Thematic Conference, Scientific.Net Materials Science and Engineering.

2010 **Carrera E., Giunta G., Petrolo M.**, *A Modern and Compact Way to Formulate Classical and Advanced Beam*, Saxe-Coburg Publications, 10.4203/csets.25.4.

Articles on International Peer Reviewed Journals

Submitted **Polit, O., Gallimard, L., Vidal, P., D'Ottavio, M., Giunta, G., Belouettar, S.**, Hierarchical beam finite elements based upon a variables separation method, *International Journal for Numerical Methods in Engineering*.

Polit, O., Gallimard, L., Vidal, P., D'Ottavio, M., Giunta, G., Belouettar, S., An analysis of composite beams by means of hierarchical finite elements and a variables separation method, *Computers and Structures*.

Nasser, H., Koutsawa, Y., Giunta, G., Belouettar, S., Optimal design of multi-layered piezoelectric transducer based homogenization method, *Composites Part B: Engineering*.

Giunta, G., Biscani, F., Belouettar, S., Ferreira, A. J. M., Static response of functionally graded beams via a multiquadric radial basis functions meshless method, *Composites Part B: Engineering*.

Giunta, G. Crisafulli, D., Carrera, E., Belouettar, S., Free Vibration Analysis of Thin-Walled Beams using Higher-order Models, *Meccanica*.

Accepted **Biscani, F., Giunta, G., Belouettar, S., Carrera, E.**, Mixed-dimensional modelling by means of solid and higher-order multi-layered plate finite elements, *Mechanics of Advanced Materials and Structures*.

2015 **Koutsawa, Y., Giunta, G., Nasser, H., Belouettar, S.**, Static analysis of shear actuated piezo-electric beams via hierarchical FEM theories, *Mechanics of Advanced Materials and Structures*, 22(1-2), pp 3–18.

Yang, J., Huang, Q., Hu, H., Giunta, G., Belouettar, S., Potier-Ferry, M., A new family of finite elements for wrinkling analysis of thin films on compliant substrates, *Composite Structures*, 119, pp 568–577.

Yu, K., Hu, H., Tang, H., Giunta, G., Potier-Ferry, M., Belouettar, S., A novel two-dimensional finite element to study the instability phenomena of sandwich plates, *Computer Methods in Applied Mechanics and Engineering*, 283, pp 1117–1137.

2014 **Giunta, G., Koutsawa, Y., Belouettar, S., Hu, H.**, Analysis of nano-plates by atomistic-refined models accounting for surface free energy effect, *Acta Mechanica*, 225(1), pp 31–51.

Koutsawa, Y., Giunta, G., Belouettar, S., A free vibration analysis of piezoelectric beams via hierarchical FEM theories, *Journal of Intelligent Material Systems and Structures*, 25(8), pp 1009–1023.

Giunta, G., Koutsawa, Y., Belouettar, S., Calvi, A., A dynamic analysis of three-dimensional functionally graded beams by hierarchical models, *Smart Structures and Systems*, 13(4), pp 637–657.

Koutsawa, Y., Giunta, G., Tiem, S., Belouettar, S., Effective electromechanical coupling coefficient of adaptive structures with integrated multifunctional piezoelectric structural fiber composites, *Smart Structures and Systems*, 13(4), pp 501–515.

Giunta, G., Belouettar, S., Biscani, F., Carrera, E., Hierarchical theories for a linearised stability analysis of thin-walled beams with open and closed cross-section, *Advances in Aircraft and Spacecraft Science*, 1(3), pp 253-271.

2013 **Giunta, G., Metla, N., Belouettar, S., Ferreira, A. J. M., Carrera, E.**, A thermo-mechanical analysis of isotropic and composite beams via collocation with radial basis functions, *Journal of Thermal Stresses*, 36(11), pp 1169–1199.

Giunta, G., Koutsawa, Y., Belouettar, S., Hu, H., Static, free vibration and stability analysis of three-dimensional nano-beams by atomistic refined models accounting for surface free energy effect, *International Journal of Solids and Structures*, 50(9), pp 1460–1472.

Giunta, G., Biscani, F., Belouettar, S., Ferreira, A. J. M., Carrera, E., Free vibration analysis of composite beams via refined theories *Composites Part B: Engineering*, 44(1), pp. 540–552.

Giunta, G., Metla, N., Koutsawa, Y., Belouettar, S., Free vibration and stability analysis of three-dimensional sandwich beams via hierarchical models, *Composites Part B: Engineering*, 47, pp. 326–338.

Giunta, G., Crisafulli, D., Belouettar, S., Carrera, E., A thermo-mechanical analysis of functionally graded beams via hierarchical modelling, *Composite Structures*, 95, pp. 676–690.

Giunta, G., Catapano, A., Belouettar, S., Failure indentation analysis of composite sandwich plates via hierarchical models, *Journal of Sandwich Structures and Materials*, 15(1), pp. 45–70.

Carrera, E., Maiarú, M., Petrolo, M., Giunta, G., A refined 1D element for the structural analysis of single and multiple fiber/matrix cells, *Composite Structures*, 96, pp. 455–468.

Koutsawa, Y., Giunta, G., Belouettar, S., Hierarchical FEM modelling of piezo-electric beam structures, *Composite Structures*, 95, pp. 705–718.

2012 **Giunta, G., Catapano, A., Belouettar, S., Vannucci, P., Carrera, E.**, Failure analysis of composite plates subjected to localized loadings via a unified formulation, *Journal of Engineering Mechanics*, 138(5), pp. 458–467.

Biscani, F., Giunta, G., Belouettar, S., Carrera, E., Hu, H., Variable kinematic plate elements coupled via Arlequin method, *International Journal for Numerical Methods in Engineering*, 91(12), pp. 1264–1290.

2011 **Giunta, G., Crisafulli, D., Belouettar, S., Carrera, E.**, Hierarchical theories for the free vibration analysis of functionally graded beams, *Composite Structures*, 94(1), pp. 68–74.

Giunta, G., Biscani, F., Belouettar, S., Carrera, E., Analysis of thin-walled beams via a one-dimensional unified formulation through a Navier-type solution, *International Journal of Applied Mechanics*, 3(3), pp. 407–434.

Giunta, G., Biscani, F., Belouettar, S., Carrera, E., Hierarchical modelling of doubly curved laminated composite shells under distributed and localised loadings, *Composites Part B: Engineering*, 42(4), pp. 682–691.

Giunta, G., Carrera, E., Belouettar, S., Free vibration analysis of composite plates via refined theories accounting for uncertainties, *Shock and Vibration*, 18(4), pp. 537–554.

Catapano, A., Giunta, G., Belouettar, S., Carrera, E., Static analysis of laminated beams via a unified formulation, *Composite Structures*, 94(1), pp. 75–83.

Carrera, E., Crisafulli, D., Giunta, G., Belouettar, S., Evaluation of various through the thickness and curvature approximations in free vibration analysis of cylindrical composites shells, *International Journal of Vehicle Noise and Vibration*, 7(3), pp. 212–237.

Biscani, F., Giunta, G., Belouettar, S., Carrera, E., Hu, H., Variable kinematic beam elements coupled via Arlequin method, *Composite Structures*, 93(2), pp. 697–708.

2010 **Giunta, G., Belouettar, S., Carrera, E.**, Analysis of FGM beams by means of classical and advanced theories, *Mechanics of Advanced Materials and Structures*, 17(8), pp. 622–635.

Carrera, E., Giunta, Refined beam theories based on a unified formulation, *International Journal of Applied Mechanics*, 2(1), pp. 117–143.

Carrera, E., Giunta, G., Nali, P., Petrolo, M., Refined beam elements with arbitrary cross-section geometries, *Computers and Structures*, 88(5-6), pp. 283–293.

2009 **Carrera, E., Giunta,G.**, Hierarchical evaluation of failure parameters in composite plates, *AIAA Journal*, 47(3), pp. 692–702.

Carrera, E., Giunta, G., Exact, hierarchical solutions for localized loadings in isotropic, laminated, and sandwich shells, *Journal of Pressure Vessel Technology, Transactions of the ASME*, 131(4), pp. 0412021–04120214.

2008 **Carrera, E., Giunta,G.**, Hierarchical models for failure analysis of plates bent by distributed and localized transverse loadings, *Journal of Zhejiang University: Science A*, 9(5), pp. 600–613.

2007 **Carrera, E., Giunta, G., Brischetto, S.**, Hierarchical closed form solutions for plates bent by localized transverse loadings, *Journal of Zhejiang University: Science A*, 8(7), pp. 1026–1037.

Referenced Conference Proceedings

2014 **Giunta, G., Belouettar, S.**, "A static analysis of three-dimensional functionally graded beams through hierarchical one-dimensional finite elements", XII International Conference of Numerical Analysis and Applied Mathematics, 22-28 September 2014, Rhodes, Greece.

2011 **Giunta, G., Belouettar, S.**, Hierarchical theories for a linearised stability analysis of FGM beams, *Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*. art. no. AIAA 2011-1855.

2010 **Varello, A., Demasi, L., Carrera, E., Giunta, G.**, An improved beam formulation for aeroelastic applications, *Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, art. no. 2010-3032.

2009 **Giunta, G., Carrera, E., Belouettar, S.**, A refined beam theory with only displacement variables and deformable cross-section, *Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference*, art. no. 2009-2370.

Unreferenced Conference Proceedings

2015 **Giunta, G., Belouettar, S., Polit, O., Gallimard, L., Vidal, P., D'Ottavio, M.**, "Analysis of three-dimensional beams via hierarchical finite elements and a proper generalised decomposition", IV 4th African Conference on Computational Mechanics (AfriCOMP'15), 7-9 January 2015, Marrakech, Morocco.

Huang, Q., Yang, J., Huang, W., Hu, H., Giunta, G., Belouettar, S., "A new FourierâĹŠrelated double scale analysis for wrinkling analysis of thin films on compliant substrates", XVIII International Conference on Composite Structures (ICCS18), 15-18 June 2015, Lisbon, Portugal.

2014 **Giunta, G., Belouettar, S., Hu, H.**, "Investigation of instability phenomena in sandwich plates by means of hierarchical models Fourier-related double scale analysis", I International Conference on Mechanics of Composites (MECHCOMP2014), 8-12 June 2014, Stony Brook, USA.

Yang, J., Huang, Q., Hu, H., Giunta, G., Belouettar, S., Potier-Ferry, M., "A new finite element model with unified formulation for wrinkling analysis of thin films on compliant substrates", I International Conference on Computational and experimental methods for composite materials and structures (compositesHarbin), 10-12 September 2014, Harbin, China.

2013 **Giunta, G., Belouettar, S.**, "One-Âŋdimensional hierarchical modelling of three-dimensional functionally graded beam structure", I International Conference on Science and Technology of Heterogeneous Materials and Structures (ICSTHMS 2013), 11-13 October 2013, Wuhan, China.

Giunta, G., Metla, N., Belouettar, S., "Optimisation of three-dimensional functionally graded beams using a hierarchical modelling", III African Conference on Computational Mechanics (Africomp2013), 30 July to 2 August 2013, Livingstone, Zambia.

Giunta, G., Belouettar, S., "Effective electro-elastic properties of continuous fibers reinforced multi-functional composites with functionally graded ZnO interphase", VI ECCOMAS Conference on Smart Structures and Materials, 24-26 June 2013, Turin, Italy.

Giunta, G., Belouettar, S., Neves, A., Ferreira, A. Carrera, E., "A thermo-mechanical analysis of fgm plates via collocation with radial basis functions", XVII International Conference on Composite Structures (ICCS17), 17-21 June 2013, Porto, Portugal.

2012 **Crisafulli, D., Giunta, G., Carrera E., Belouettar, S.**, "Thermo-mechanical analysis of isotropic and orthotropic beams using a unified formulation", XI International Conference on Computational Structures Technology and IIX International Conference on Engineering Computational Technology, 4-7 September 2012, Dubrovnik, Croatia.

2012 **Giunta, G., Belouettar, S.**, "Higher-order models for the analysis of functionally graded beams", V International Symposium on Design, Modelling and Experiments of Advanced Structures and Systems, 28-31 October 2012, Ulrichsberg, Austria.

Giunta, G., Belouettar, S., "Hierarchical FEM models of FGM beam structures", X World Congress on Computational Mechanics, 8-13 July 2012, São Paulo, Brazil.

Koutsawa, Y., Giunta, G., Belouettar, S., "Hierarchical modeling of piezoelectric three-dimensional beams via hierarchical modeling", Mechanics of Nano, Micro and Macro Composite Structures, 18-20 June 2012, Turin, Italy.

Crisafulli, D., Giunta, G., Belouettar, S., Carrera E., "Thermo-mechanical analysis of functionally graded beams via hierarchical modeling", Mechanics of Nano, Micro and Macro Composite Structures, 18-20 June 2012, Turin, Italy.

2011 **Giunta, G., Catapano, A., Belouettar, S., Carrera, E.**, "Static analysis of laminated and sandwich beams via a unified formulation", XVI International Conference on Composite Structures, 28-30 June 2011, Porto, Portugal.

Giunta, G., Crisafulli, D., Carrera, E., Belouettar, S., "Free vibration analysis of FGM beams by means of classical and advanced theories", XVI International Conference on Composite Structures, 28-30 June 2011, Porto, Portugal.

2010 **Carrera, E., Giunta, G., Petrolo, M.**, "A modern and compact way to formulate classical and advanced beam theories", X International Conference on Computational Structures Technology, 14-17 September 2010, Valencia, Spain.

Giunta, G., Belouettar, S., Carrera, E., "Analysis of FGM beams by means of a unified formulation", IX World Congress on Computational Mechanics and IV Asian Pacific Congress on Computational Mechanics, 19-23 July 2010, Sydney, Australia.

Biscani, F., Giunta, G., Hu, H., Carrera, E., Belouettar, S., "Hierarchical beam models coupling via the Arlequin method", IV European Conference on Computational Mechanics, 16-21 May 2010, Paris, France.

2008 **Giunta, G., Carrera, E.**, "Stochastic evaluation of failure parameters for composites plates via CUF FEM hierarchical models", 79th Meeting of the International Association of Applied Mathematics and Mechanics, 31 March-4 April 2008, Bremen, Germany.

2007 **Giunta, G., Carrera, E.**, "Hierarchical models for laminated composites shells under localized bending loading", XI International Conference on Enhancements of Computational Methods in Engineering and Science, 3-6 December 2007, Kyoto, Japan.

Giunta, G., Carrera, E., "Stochastic modal analysis of composites plates via closed form hierarchical models", XIX AIDAA Congress, 17-21 September 2007, Forlì, Italy.

Giunta, G., Carrera, E., "Stochastic evaluation of failure parameters for composites plates via closed form hierarchical models", XVIII AIMETA Congress, 11-14 September 2007, Brescia, Italy.

2006 **Carrera, E., Giunta, G., Brischetto, S.**, "Evaluation of failure parameters in laminates by means of hierarchical plate models", Conference on Damage of Composite Materials, 18-19 September 2006, Stuttgart, Germany.

Giunta, G., Carrera, E., "Stochastic static analysis of FE models by means of Newton's series approximation", III European Conference on Computational Mechanics, 5-9 June 2006, Lisbon, Portugal.

2005 **Giunta, G., Carrera, E., Calvi, A.**, "Monte Carlo simulation method coupled to higher-order derivatives method response surface applied to stochastic FEM analyses", XVIII AIDAA Congress, 19-22 September 2005, Volterra, Italy.

Contact Persons

1 Dr. S. Belouettar, Materials Research and Technology Department, Luxembourg Institute of Science and Technology (LIST), Luxembourg,
email: salim.balouettar@list.lu.

2 Prof. E. Carrera, Department of Mechanical and Aerospace Engineering, Politecnico di Torino, Italy,
email: erasmo.carrera@polito.it.

3 Prof. A. J. M. Ferreira, Department of Mechanical Engineering, Universidade do Porto, Portugal,
email: ferreira@fe.up.pt.

4 Dr. A. Calvi, European Space Agency, ESTEC, The Netherlands,
email: adriano.calvi@esa.int.

5 Dr. M. D'Ottavio, Laboratoire Energétique Mécanique Electromagnétisme, Université Paris Ouest Nanterre La Défense, France,
email: michele.d_ottavio@uparis10.fr.