

Prof. Pier Giorgio MALERBA –Short *Curriculum Vitae* (September 2015)

T.Y. Lin Medal 2014

Vice President IABMAS (Int. Ass. for Bridge Maintenance and Safety)

President of the IABMAS Italian Group.

Personal Data

Born in Castelnovo Bariano (Rovigo, Italy), on December 26, 1947.

Position and Affiliation

Professor of Bridge Theory and Design

Department of Civil and Environmental Engineering

Politecnico di Milano - P.za L. da Vinci, 32 - 20133 MILAN, Italy

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Research Areas:

Experimental Analysis. Experimental techniques (applications of the Moire' interferometric method to the strain analysis of plates).

Numerical Techniques. Semianalytical Finite Difference and Finite Element Methods. F.E. based on Spline Interpolation Functions. Special Methods for the analysis of bridge structures. Cable structures and cable roofs.

Finite Element Analysis of Reinforced Concrete Structures. Constitutive modelling of material response under multiaxial stresses. Time dependent behaviour due to creep and shrinkage. Stability of slender members. Influence of geometrical non-linearities on stability of large structures. General Methods and Techniques for non Linear Analysis.

Design, Structural Assessment and Safety Evaluation. Structural application of the artificial intelligence methods (fuzzy logic, genetic algorithms, ...). Structural Optimisation. Form finding and optimization of cable structures and cable roofs. Stress path adapting Strut & Tie Models. Reliability and life time performance of concrete structures. Structural assessment in presence of uncertainties. Ultimate behaviour and Reliability of R.C. structures in aggressive environments. Structural Robustness.

Education and Degrees:

1972 Degree in Aeronautical Engineering from Politecnico of Milan, Italy.
1966 High school ("Liceo Classico")

Professional Qualification:

1972-present Professional experience as consultant for aero-elasticity verifications of two commercial aeroplanes and as designer and consultant for bridges, large roofs, water reservoirs.
1973-74 Lieutenant Junior grade in the Corps of Engineers of the Italian Air Force
1974 Professional Engineer (PE) Qualification

Academic Appointments:

2001-present Full Professor, Bridge Theory and Design, Politecnico di Milano.
1991-2001 Full Professor, Structural Analysis, University of Udine, Udine, Italy.
1980-1991 Associate Professor, Computer Structural Analysis, Politecnico di Milano.
1977-1980 Lecturer, Bridge and Shell Theory and Design, Politecnico di Milano.
1972-1977 Laboratory Technician, Politecnico di Milano.

Teaching areas:

Structural Engineering - Finite Element Analysis - Reinforced and Prestressed Concrete Structures - Bridge Theory and Design - Shell Theory and Design.

Courses held at the Politecnico di Milano and at the Udine University:

2011-present Bridge Theory and Design, Politecnico di Milano.
2001-2011 Bridge Theory and Design 1 (Ponti 1), Faculty of Civil Engineering, Politecnico di Milano.
2001-2011 Bridge Theory and Design 2 (Ponti 2), Faculty of Civil Engineering, Politecnico di Milano.
2003-present Structural Analysis, Faculty of Architecture, Politecnico di Milano.
1991-2001 Structural Analysis and Design, University of Udine, Udine, Italy.
1980-2001 Computer Structural Analysis, Faculty of Civil Engineering, Politecnico di Milano.
1977-1980 Lecturer of Bridge and Shell Theory and Design, Fac.of Civil Engineering, Politecnico di Milano.
1980-2000 Computer Structural Analysis, Grad. School for Concr. Struct., F.Ili Pesenti, Politecnico Milano.
2001-present Bridge Theory and Design, Master in Concrete Structures, F.Ili Pesenti, Politecnico di Milano.

Short Courses:

- Scientific Coordinator and Organizer of the Graduate Courses for Continuing Education at CISM (International Centre for Mechanical Sciences) - DESEG Division:
 - 1993 "Civil Engineering Structures Monitoring", Director and Editor of the Proceedings CISM, Structural Engineering Series Vol. No. 9 (In Italian).
 - 1997 "Limit and Non Linear Analysis of Reinforced Concrete Structures", Director and Editor of the Proceedings CISM, Structural Engineering Series Vol. No. 10 (In Italian).
 - 2000 "Advanced Design Techniques for Prestressed and Reinforced Concrete Structures". Director.
 - 2012 "Life-Cycle Design of Bridges", IABSE Italian Group Course. Coordinator.
- Scientific Coordinator and Organizer of the yearly Advanced Course for Continuing Education (Politecnico di Milano) on *Bridges and Viaducts*.

Year	Subject
1998	Bridge and Viaducts: Conception, design, analysis and management, <i>Joint Coordinator</i>
1999	Bridge and Viaducts: Conception, design, analysis and management, <i>Joint Coordinator</i>
2000	Bridge Design according to the Eurocodes, <i>Joint Coordinator</i>
2002	Bridge Design according to the Eurocodes
2003	Connection and Intersection Bridges and Viaducts.
2004	Inspection Maintenance and Repair of Bridges and Viaducts
2005	Inspection Maintenance and Repair of Bridges and Viaducts
2006	Cable Stayed and Suspended Bridges
2007	Arch Bridges
2008	Life Cycle Design of Bridges
2009	Life Cycle Design of Bridges

Research Projects and Contracts at Politecnico di Milano:

- 2012-2013 "Life cycle evaluation of sensible infrastructures and selection of the necessary repairing works", Eupolis Lombardia (a Lombardia Region Institute) – Scientific Coordinator. 40,0 k€.
- 2011-2012 "Inspection procedures and maintenance specifications for the subway network of Milan". ATM S.p.A. Scientific Coordinator. 80,0 k€.
- 2009 "Restoration and refurbishment of the Marchiondi Spagliardi Institute. Structural Design". Cariplo Foundation Grant, 22,0 k€.
- 2005-2006 "Durability Assessment of Bridge Structures in Aggressive Environments". PRIN-Research Project of National Relevance 2004 – Scientific Coordinator and Local Scient. Coord. 63.0 k€.
- 2003-2004 "Structural Analysis and Optimal Design of Cable-Supported Bridges under Uncertainty". PRIN-Research Project of National Relevance 2002. National Scientific Coordinator and Local Scientific Coordinator. 76.2 k€.
- 2004-2006 "Analysis and Optimization of the Structural Performance of an Innovative Precast System", Research Contract Styl-Comp. 32,0 k€.
- 2004-2005 "Performance Verification of the Structural Elements of a Caisson for Mobile High Water Defense Barriers", (Venice Barriers) Research Contract MO.S.E. 50,0 k€.
- 2005-2006 "Statical Behaviour of the cardanic joint hanging the ties of a new Arch Bridge" Research Contract METROPOLITANA MILANESE S.p.A. 20,0 k€.
- 2003-2006 Scientific Support for the Firm Web Site. Consultant Contract FERRIERE NORD S.p.A., Period 2003-2006. 15,0 k€.
- 2000 "Mechanical Degradation and Durability of Normal and High Performance Concrete Structures (Degradamento Meccanico e Durabilità delle Strutture in Calcestruzzo normale e ad alte prestazioni)", PRIN, Local Scientific Coordinator.
- 1997 "Safety assessment of High Performance Concrete Structures (La sicurezza delle strutture in calcestruzzo ad alte prestazioni)", PRIN, Local Scientific Coordinator.

Membership in Professional Societies:

- IABSE International Association for Bridge and Structural Engineering
- IABMAS International Association for Bridge Maintenance and Safety
- ACI American Concrete Institute
- IALCCE International Association for Life Cycle Civil Engineering.
- AICAP Associazione Italiana Cemento Armato e Cemento Armato Precompresso

Scientific Recognitions, Honors and Awards:

- 2014 T.Y. Lin Medal. Prize for outstanding contributions to bridge analysis and design. This award is made to a member of the Int. Ass. of Bridge Maintenance and Safety (IABMAS) who through contributions in bridge maintenance, safety and life cycle cost, has helped substantially to strengthen the scientific base of bridge engineering. Awards Ceremony on Wednesday, July 7th, 2014, Jin Jiang Tower Hotel, Shanghai, China.
- 2012 Honorary Chair of the 16th Int. Conf. on Bridge Maintenance, Safety, and Management, Stresa, July 8-12, 2012.
- 2011 "A twin diverging arches bridge in Milan Portello", received a special mention by the Italian Association of Steel Constructors (Associazione Costruttori Acciaio Italiani, ACAI). Ref. MALERBA P.G., P. GALLI, M. DI DOMIZIO (2010). A new landmark arch bridge in Milan. In: IABSE

- SYMPOSIUM Venice 2010: Large Structures and Infrastructures for Environmentally Constrained an. Venice - Italy, 22/9/2010 - 24/9/2010, p. 1-8, IABSE.
- 2009 Fellow of the Engineering Academy of the Czech Republic (since 2009).
- 2008 The design of the "Restoration and refurbishment of the Marchiondi Spagliardi Institute", a masterpiece of the "brutalist architecture", has been selected for the financial support by the Italian Government.
- 2008 Nomination for the ECCS Bridge Award 2008 of the cable-stayed bridge "Alcide De Gasperi", Parma, Italy. Ref. MALERBA P.G., P. GALLI, P. SORBA (2007). The new cable-stayed bridge over River Parma. In: 5th Int. Conf. on current and future trends in In Bridge Design, Constr. and Maint., Beijing, China, 2007, Sept.17-18, p.1-8.
- 2007 IABSE. Best Paper published in Structural Engineering International, Journal of IABSE, in the year 2006. Ref. F. Biondini, D. M. Frangopol, P. G. Malerba (2006). Time-variant performance of the Certosa cable-stayed bridge. STRUCTURAL ENGINEERING INTERNATIONAL, vol. 16, p. 235-244, ISSN: 1016-8664. - AIPC - IVBH ETH Hoggenberg CH - 8093 Zur, ISBN: 9783857481222
- 2006 Awarded of the "Ambrogino d'Oro" ("Golden Medal of Saint Ambrose", the highest award of Milan Municipality) for the activity as designer and quality controller of the works for the refurbishment, upgrading and enlargement of the Teatro alla Scala. 24/05/2006, Ref. P. G. MALERBA (2011). The new life of the Teatro alla Scala. Structure and Infrastructure Engineering, vol. 7, p. 51-64, ISSN: 1573-2479.

Roles in Scientific and Technical Committees.

- President of the IABMAS Italian Group, since 2013.
- Vice President of the International Association for Bridge Maintenance, Safety and Management (IABMAS), since 2012.
- Executive Board Member, International Association for Bridge Maintenance, Safety and Management (IABMAS), since 2010.
- From 2003 o 2005, Member of the Scientific Committee for the Messina Strait Bridge. The Committee works brought to the tender document "Basis of Design and Expected Performance Levels for the Bridge".
- Member of the Scientific Committee of the new Italian Building Code 2004 – 2005.
- Member of the Scientific Committee for preservation of the Roman Catholic Cathedral in Trento, 2003.

Membership to Editorial Boards:

- Studies and Researches, Annual Review of Structural Concrete, Italcementi Gr., Starrylink Editor, since 2001.
- International Journal of Lifecycle Performance Engineering, Inderscience Publisher, since 01/2011.

Editor Activity and Books:

- 2000 "Ponti e viadotti: Concezione Progetto, Analisi e Gestione". *Pitagora Editrice*, Bologna, pp. 679, ISBN 88-371-1209-2. Co-editor with F. Martinez y Cabrera and C. Gentile.
- 1998 "Analisi Limite e Non Lineare di Strutture in Calcestruzzo Armato. Tecniche di Calcolo Manuale e Automatico", *International Centre for Mechanical Sciences, C.I.S.M., Udine, Collana di Ing. Strutturale, No. 10*. ISBN 8885137091.
- 1995 "Monitoraggio delle Strutture dell'Ingegneria Civile", *International Centre for Mechanical Sciences, C.I.S.M., Udine, Collana di Ingegneria Strutturale, No. 09*. ISBN 8885137113.
- 1981 G. Toniolo, P. G. Malerba: "Metodi di discretizzazione dell'analisi strutturale", *Masson Italia Editori*, ISBN 88.214.0541.9

Selected Keynotes and Invited Lectures:

- "Stable and diverging time dependent behaviours in some type of bridge structures", *The 1th World Congr. on Advances in Structural Eng. And Mechanics (ASEM11+), September, 18-23, Seoul, Korea, 2011*.
- "Managing Old Bridges", IABMAS'10 – 5th Int. Conf. on Bridge Maintenance, Safety, and Management, Philadelphia, July, 11-15, 2010.
- "The New Life of the Teatro alla Scala", *Int. Symposium on Life Cycle Science in structural engineering, Varenna, June, 10-14, Italy, 2008*.
- Influence of Geometrical Nonlinearities on Stability of Long Span Bridges", *ASEM'08 - Advances in Structural Engineering and Mechanics, Jeju, May 26-28, 2008*.
- "The New Teatro alla Scala", *Int. Symposium on Life Cycle Science and Engineering*, Kansai University, Osaka, Japan, November, 2005.
- "On the Structural Analysis of Long Span Suspension Bridges", Keynote Lecture, *2nd Int. Conf. on Structural Engineering and Construction (ISEC-02)*, Rome, September 23, 2003.
- "Tools for the conceptual design of structures", Invited Lecture, *ASEM'02 - Advances in Structural Engineering and Mechanics, Busan, August 21-23, 2002*.

Member of the following Conference Scientific Committees:

- IABMAS'14 - 7th Int. Conf. on Bridge Maintenance, Safety, and Management, Shanghai, July 7-11, 2014.
- ASEM'13, 2013 World Congr. on Advances in Structural Eng. and Mechanics, Jeju, August 25-29, 2013.
- IALCCE'12 – 3rd Int. Symposium on Life Cycle Civil Engineering, Vienna, October, 03-06, 2012.
- IABMAS'12 - 6th Int. Conf. on Bridge Maintenance, Safety, and Management, Stresa, July 8-12, 2012.

- ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics, Seoul, Sept., 18-23, 2011.*
- IALCCE'10 – *2nd Int. Symposium on Life Cycle Civil Engineering, Taiwan, Taipei, October 27-31, 2010.*
- IABMAS'10 - *5th Int. Conf. on Bridge Maintenance, Safety, and Management, Philadelphia, July 11-15, 2010.*
- IABMAS'08 - *4th Int. Conf. on Bridge Maintenance, Safety, and Management, Seoul, July 13-17, 2008.*
- IALCCE'08 – *1th Int. Symposium on Life Cycle Civil Engineering, Varenna, Italy, June, 11-14, 2008.*
- ASEM'08, *4th Int. Conf. on Advances in Structural Engineering and Mechanics, Jeju, May 26-28, 2008.*
- IABMAS'06 - *3rd Int. Conf. on Bridge Maintenance, Safety, and Management, Porto, July 16-19, 2006.*
- fib 2006 - *1st fib Congress, Naples, June 5-8, 2006.*
- ASEM'04, *3th Int. Conf. on Advances in Structural Engineering and Mechanics, Seoul, Sept. 02-04, 2004.*
- ISEC'02 - *2nd Int. Conf. on Structural Engineering and Construction, Rome, Sept. 23-26, 2003.*
- ASEM'02, *2th Int. Conf. on Advances in Structural Engineering and Mechanics, Busan, Aug. 21-23, 2002.*
- ASEM'99, *1th Int. Conf. on Advances in Structural Engineering and Mechanics, Seoul, Aug. 23-25t, 1999.*

Organizer of the following Workshops, Conference Special Sessions and Mini-Symposia:

- *IABMAS - 2° Workshop - Gruppo Italiano IABMAS, (IABMAS Italian Group), Università di Padova, Aula Magna, 15-16 Dicembre 2014.* Ispezione, Manutenzione, Sicurezza e Gestione dei Ponti. Bridge Inspection, Maintenance, Safety and Management.
- "Dangerous Details", *7th Int. Conf. on Bridge Maintenance, Safety, and Management (IABMAS'14), Shanghai, China, July 07-11, 2014.*
- *IABMAS - 1° Workshop - Gruppo Italiano IABMAS, (IABMAS Italian Group), Politecnico di Milano, Aula Castigliano, 14-15 Ottobre, 2013.* Ispezione, Manutenzione, Sicurezza e Gestione dei Ponti. Bridge Inspection, Maintenance, Safety and Management.
- "Integral Bridges: Design and Technological Issues", *6th Int. Conf. on Bridge Maintenance, Safety, and Management (IABMAS'12), Stresa, July 08-12, 2012.*
- "Structural Assessment in Complex Exposure Conditions", *ASEM11+, The 1th World Congr. on Advances in Structural Eng. and Mechanics, Seoul, Sept., 18-23, 2011.*
- "Computational prediction and in field validation of bridge performance", *IABMAS'10 - 5th Int. Conf. on Bridge Maintenance, Safety, and Management, Philadelphia, July 11-15, 2010.*
- "Design expectations, monitoring response and maintenance decisions", *4th Int. Conf. on Bridge Maintenance, Safety, and Management (IABMAS'08), Seoul, July 13-17, 2008.*
- "New Approaches, Concepts and Methods for Large Structures Design", *ASEM'08 - Advances in Structural Engineering and Mechanics, Jeju, May 26-28, 2008.*
- "Handling Uncertainty in Structural Analysis and Design", *3rd Int. Conf. on Bridge Maintenance, Safety, and Management (IABMAS'06), Porto, July 16-19, 2006.*
- "Identification, Modeling, Analysis and Control of Uncertainties in Design of Large Span Bridges", *2nd Int. Conf. on Bridge Maintenance, Safety, and Management (IABMAS'04), Kyoto, October 19-22, 2004.*
- "Tools for the conceptual design of structures", *ASEM'02 - Advances in Structural Engineering and Mechanics, Busan, August 21-23, 2002.*

Selected Publications:

- 2015 Quagliaroli, M., Malerba, P.G., Albertin, A., Pollini, N., (2015), (2015), "The role of prestress and its optimization in cable domes design", *Computers and Structures*, 161, 17-30, <http://dx.doi.org/10.1016/j.compstruc.2015.08.017 - 0045-7949>.
- 2015 Malerba, P., G., Comaita, G., "Design and Construction of two integral bridges for the runway of Milan Malpensa Airport", *Structure and Infrastructure Engineering*, 2015, Vol. 11, No. 4-6, April-June, pp. 486-500. DOI: 10.1080/15732479.2014.951862.
- 2014 Quagliaroli, M., Malerba, PG, Sgambi, L., (2014), "A parametric subdomain discretization for the analysis of the multiaxial response of reinforced concrete sections", *Advances in engineering Software*, (Published online). <http://dx.doi.org/10.1016/j.advengsoft.2014.12.005>.
- 2014 Malerba, P., G., (2014), "Inspecting and repairing old bridges: experiences and lessons", *Structure and Infrastructure Engineering*, 2014, Vol. 10, No. 4, pp. 443-470, (Published online). DOI: 10.1080/15732479.2013.769010.
- 2014 Biondini, F., Malerba P., G., (2014), "Structural Safety of segmental concrete bridges during construction", *7th Int. Conf. on Bridge Maintenance, Safety and Management (IABMAS 2014), Shanghai, Chin, Philadelphia, PA, USA, July 07-11, 2014.*
- 2014 Malerba, P., G., Comaita, G. (2014), "Design and Construction of two integral bridges for the runway of Milan Malpensa Airport", *Structure and Infrastructure Engineering*, 2014, Vol.0 , No. 4, pp. 1-15, (Published online). DOI: 10.1080/15732479.2014.951862.
- 2014 Malerba, P., G., (2014), "Inspecting and repairing old bridges: experiences and lessons", *Structure and Infrastructure Engineering*, 2014, Vol. 10, No. 4, pp. 443-470, (Published online). DOI: 10.1080/15732479.2013.769010.
- 2013 Briccola, D., Conti, E., Malerba, P. G., Quagliaroli, M., (2013), "Multiaxial Interaction Domains of R.C. sections derived through an parametric subdomains discretization", *ASEM'13, 2013 World Congr. on Advances in Structural Eng. and Mechanics, Jeju, August 25-29.*
- 2013 Sgambi, L., Malerba, P., G., (2013), "Residual bearing capacity of riveted steel ties deformed by the swelling of interstitial rust", *ASEM'13, 2013 World Congr. on Advances in Structural Eng. and Mechanics, Jeju, August 25-29.*

- 2012 Sgambi, L., Malerba, P., G., Gotti, G., Ielmini, D. (2012), "The influence of degradation phenomena on collapse modes in prestressed concrete beams", *Int. Journal of Life Cycle Performance Engineering*, Vol. 1, No. 1, 41-63.
- 2012 Malerba P. G., Patelli M., Quagliaroli M. (2012): "An extended Force Density Method for the Form Finding of cable systems with new forms", *Structural Engineering and Mechanics*, 42(2), 191-210.
- 2011 P. G. Malerba, M. Quagliaroli, L. Sgambi (2011): "Nondeterministic time dependent mechanics of elementary prestressed and cable stayed concrete bridges models", ASEM11+, *The 1th World Congr. on Advances in Struct.I Eng. and Mechanics*, Seoul, Sept., 18-23, 2011.
- 2011 P. G. Malerba, (2012): "Stable and Diverging Time Dependent Behaviours in some types of Bridge Structures", ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics*, Seoul, Sept., 18-23, 2011.
- 2011 F. Biondini, P. G. Malerba, M. Quagliaroli (2011): "Structural Optimization of Cable Systems by Genetic Algorithms", ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics*, Seoul, Sept., 18-23.
- 2011 Malerba P. G. (2011), "The new life of the Teatro alla Scala", *Structure and Infrastructure Engineering*, Vol. 7, No. (1-2), 51-64.
- 2011 M. G. Magistretti, P. G. Malerba, Y. Rivela (2011): Robustness of Reinforced Concrete Structures", ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics*, Seoul, Sept., 18-23, 2011.
- 2011 E. Garavaglia, P. G. Malerba. L. Sgambi (2011): "Fuzzy-Monte Carlo simulation for the safety assessment of bridge piers in presence of scouring", ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics*, Seoul, Sept., 18-23, 2011.
- 2011 G. Gotti, D. Ielmini, P. G. Malerba, L. Sgambi (2011): "Influence of Corrosive Phenomena on the mechanical behaviour of R.C. Elements", ASEM11+, *The 1th World Congr. on Advances in Structural Eng. and Mechanics*, Seoul, Sept., 18-23, 2011.
- 2011 G. Comaita, P. G. Malerba (2011): "Twin Runway Integral Bridges at Milano Malpensa Airport, Italy", *Structural Engineering International*, Vol. 21, No. 2, May, 206-209.
- 2010 Camossi G., Malerba P.G., Sgambi L. (2010): "Role of uncertainties on time dependent behavior of prestressed and cable stayed concrete bridges", *5th Int. Conf. on Bridge Maintenance, Safety and Management (IABMAS 2010)*, Philadelphia, PA, USA, Jul 11-15.
- 2008 F. Biondini, P.G. Malerba, D. M. Frangopol (2008), "Uncertainty Effects on Lifetime Structural Performance of Cable-Stayed Bridges", *Probabilistic Engineering Mechanics*, 23(4), 509-522.
- 2006 F. Biondini, P.G. Malerba, D. M. Frangopol (2006): "Time-variant Performance of the Certosa Cable-stayed Bridge", *Structural Engineering International*, 16(3), 235-244.
- 2006 F. Biondini, F. Bontempi F., D.M. Frangopol, P. G. Malerba P.G. (2006): "Probabilistic Service Life Assessment and Maintenance Planning of Concrete Structures", *Journal of Structural Engineering*, ASCE, 132(5), 810-825.
- 2004 Messina Strait Bridge (2004): "Basis of Design and Expected Performance Levels for the Bridge", *Doc. G.C.G.F. 04.01*, Oct. 27.10.04.
- 2004 F. Biondini, F. Bontempi, P.G. Malerba (2004): "Fuzzy Reliability of Concrete Structures", *Computers and Structures*, 82(13-14), 1033-1052.
- 2004 F. Biondini, F. Bontempi, P.G. Malerba, D.M. Frangopol (2004): "Cellular Automata Approach to Durability Analysis of Concrete Structures", *ASCE Journal of Structural Engineering*, 130(11), 1724-1737.
- 2004 F. Biondini, F. Bontempi, P.G. Malerba, D.M. Frangopol (2004): "Reliability of Material and Geometrically Nonlinear Reinforced and Prestressed Concrete Structures", *Computers and Structures*, 82(13-14), 1021-1031.
- 2001 F. Biondini, F. Bontempi, P.G. Malerba (2001); "Bridges Emerging from the Structural Cooperation between Straight and Curved Superstructures". *Proceedings of First International Conference on Structural Engineering and Construction (ISEC)*, Honolulu, Hawaii, USA, January 24–26.
- 2001 F. Biondini, F. Bontempi, P.G. Malerba (2001): "Reliability Assessment of Concrete Structures by using Fuzzy Theory and Genetic Algorithms". *Proceedings of First International Conference on Structural Engineering and Construction (ISEC)*, Honolulu, Hawaii, USA, January 24–26.
- 2001 F. Bontempi, M. Giudici, P.G. Malerba, F. Martinez y Cabrera (2001): "A generalized matrix approach to the aeroelastic analysis of cable stayed bridges". *IABSE Conference, Cable-Supported Bridges - Challenging Technical Limits*, June, 12-14, Seoul Korea.
- 2001 F. Biondini, F. Bontempi, P.G. Malerba, F. Martinez y Cabrera (2001): "Reliability Assessment of Cable-Stayed Bridges", *IABSE Conference, Cable-Supported Bridges - Challenging Technical Limits*, June, 12-14, Seoul, Korea.
- 2001 F. Biondini, F. Bontempi, P. G. Malerba (2001): "Stress Path Adapting Strut-and-Tie Models in Cracked and Uncracked R.C. Elements", *Structural Engineering and Mechanics*, Vol. 12, No. 6, 685-698. ISSN: 1225-4568.
- 2000 F. Biondini, F. Bontempi, P.G. Malerba (2000): "The Search for Structural Schemes by Optimality Criteria and Soft-Computing Techniques". *Proceedings of Structural Morphology Conference*, 179-187, Delft, The Netherlands, August 17–19.
- 2000 A. Baseggio, F. Biondini, F. Bontempi, P.G. Malerba, M. Gambini (2000): "Structural Morphology Optimization by Evolutionary Procedures". *Proceedings of Structural Morphology Conference*, 264-271, Delft, The Netherlands, August 17–19.
- 2000 F. Martinez y Cabrera, C. Gentile, P. G. Malerba (Editors) (2000): "Ponti e viadotti: Concezione Progetto, Analisi e Gestione". *Pitagora Editrice*, Bologna, pp. 679, ISBN 88-371-1209-2.

- 1999 F. Biondini, F. Bontempi, P.G. Malerba (1999): "Optimal Strut and Tie Models in Reinforced Concrete Structures", *Computer Assisted Mechanics and Eng. Sciences*, Vol. 6, 279-293.
- 1998 P.G. Malerba (Editor) (1998): "Analisi Limite e Non Lineare di Strutture in Calcestruzzo Armato. Tecniche di Calcolo Manuale e Automatico", *International Centre for Mechanical Sciences, C.I.S.M., Udine, Collana di Ingegneria Strutturale, No. 10.*
- 1997 F. Bontempi, P. G. Malerba (1997): "The role of softening in the numerical analysis of r.c. framed structures", *Structural Engineering and Mechanics*, Vol. 5, No. 6, Nov., 785-801.
- 1995 F. Bontempi, P.G. Malerba, L. Romano (1995): "Il modello MCFT (Modified Compression Field Theory) nell'analisi per elementi finiti di strutture piane in C.A.", *Studi e Ricerche*, Vol. 16, 173-207.
- 1995 F. Bontempi, P.G. Malerba, L. Romano (1995): "Formulazione diretta secante dell'analisi non lineare di telai in c.a. e c.a.p.", *Studi e Ricerche*, Vol. 16, 351-386.
- 1995 P. G. Malerba (Editor) (1995): "Monitoraggio delle Strutture dell'Ingegneria Civile", *International Centre for Mechanical Sciences, C.I.S.M., Udine, Collana di Ingegneria Strutturale, No. 09.*
- 1991 Malerba, P.G., "Formazione del Modello. Fonti di errore. Interpretazione dei risultati", contributo al volume "Analisi per elementi finiti: Modellazione Strutturale e Controllo dei risultati", Editors B.A. Schrefler e A.A. Cannarozzi, *Int. Centre for Mech. Sciences, C.I.S.M., Udine, Collana di Ing. Strutt.*
- 1982 P. G. Malerba (1982): "Il Metodo delle Linee ed alcune sue applicazioni all'analisi delle piastre e delle strutture da ponte", *Ingegneria*, U. Hoepli Editore, N. 3-4, Marzo-Aprile, 61-80.
- 1982 P. G. Malerba, R. Colombo (1982): "Il Metodo delle Linee nell'analisi delle piastre ortotrope con appoggi interni. Applicazioni ai problemi di ripartizione trasversale del carico in impalcati da ponte continui in retto e in curva", *Ingegneria*, U. Hoepli Editore, N. 5-6, Maggio-Giugno, 137-151.
- 1982 P. G. Malerba, F. Casola (1982): "Una formulazione del Metodo delle Linee per l'analisi delle piastre a spessore variabile e lunghezza infinita. Applicazioni all'analisi degli sbalzi da ponte", *Ingegneria*, U. Hoepli Editore, N. 7-8, Luglio-Agosto, 197-210.
- 1977 O. De Donato, P. Gambarova, P. G. Malerba (1997): "Elastoplastic stress and strain diffusion in a rhomboidal steel panel", *Meccanica*, June 1977, 99-110.