Guido Camata – Engineering
PHD ENG
Structural Engineer Consultant

Guido Camata is a Structural Engineering Professor at the University of Chieti- Pescara and at the University of Colorado, Boulder, USA and managing partner of ASDEA S.r.l.

Dr. Camata has over 10 years of experience in the implementation of civil engineering projects covering a wide range of sectors: public and private buildings, infrastructure, civil and structural engineering and risk assessment.

Dr. Camata obtained a Master degree in Civil engineering from the University of Bologna, Italy. He worked at ISIS Canada (Intelligent Sensing for Innovative Structures) in Winnipeg, Canada, and after at the University of Colorado at Boulder, where he completed a doctorate in structural engineering. At the University of Colorado he also worked as a researcher. Since 2004, he has been working with the Structural Department Engineering of “G. D'Annunzio” University in Chieti-Pescara, Italy. He regularly is a visiting professor and since 2011 adjunct professor at the University of Colorado, USA.

Dr. Camata's research experience includes both experimental and numerical work, his main research interests are:

- structural analysis, structural dynamics, earthquake engineering
- testing, design and analysis of structures,
- computational methods in nonlinear analysis,
- fracture mechanics
- seismic risk
- application of nonlinear analysis in seismic design codes.

He is specialized in coordination of design and implementation of civil works, technical norms in seismic areas and seismic risk assessment.

Reviewer for the following academic journals:

Journal of Structural Engineering, ASCE, ACI Structural Journal, Composite Part B, Elsevier, Journal of Materials Science, Springer, Journal of Engineering Mechanics, ASCE

He has published over 60 papers in international journals, books and conferences. He has a broad experience as a structural designer and he has been involved with the design of a wide range of existing and new structures.

Academic Experience

The University of Chieti-Pescara, Italy

2011 Aggregate Professor
2008-2011 Assistant Professor
2004-2005 Lecturer

The University of Colorado, Boulder, USA

2009-2011 Visiting Professor
2011 Adjunct Professor
200-2004 Researcher





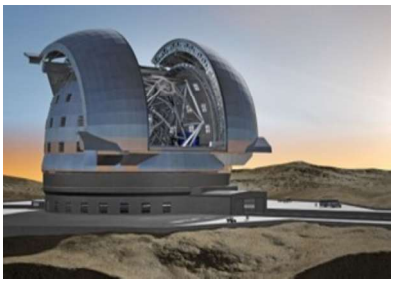


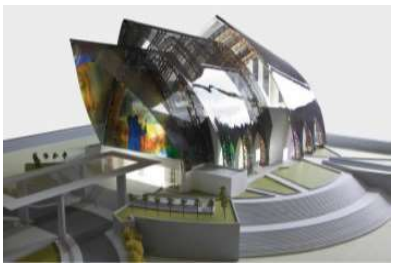
Research Experience

- Dr. Camata has research experience in several Universities/Research Institutes:
- Università of Limerick, Ireland,
- ISIS Canada (Intelligence Sensing for Innovative Structures), University of Winnipeg, Manitoba, Canada.
- University of Colorado at Boulder, USA University of Chieti-Pescara
- The research activity has been published in several scientific papers on international journal and conferences.

Experimental Experience

Dr. Camata has long experience on experimental research acquired at ISIS Canada, University of Manitoba, Winnipeg, Canada and at the University of Colorado at Boulder. He has been responsible for research on FRPs, bridge decks, hybrid FRP-concrete structures and debonding FRP issues.





General Experience

2009 to 2012

Probabilistic Seismic Hazard Study and Seismic isolation design of the E-ELT Telescope, the largest telescope ever designed in the world, Chile (for ESO European Organization for astronomical research in the southern hemisphere).

2012

Structural design for the refurbishment of the school “Masciangioli” Italy (for Progetto Integrato).

2006 to 2012

Structural design for the refurbishment of the school “Mordani” Italy (for Comune di Ravenna)

2011

- Final design for L'Aquila Courthouse office building
- Structural design for the refurbishment of "G. Mazzini" hospital of Teramo

- Structural design for the refurbishment of the school “Giovan Battista Vico” school, Italy (for TOL & SA Costruzioni S.r.l.)

2009 to 2011

- Structural design for the refurbishment of the Abruzzo Region Headquarters (for the region of Abruzzo)
- Structural design for the refurbishment of “Palazzo Valloni” monument; (for Cicchetti Engineering)

2008 to 2011

Structural Design and works supervision of the new Febo Group Headquarters Building, Pescara, Italy (For Febo Group)

2008 to 2010

Structural design of biological filtration system of the new "Malta South" waste water treatment plant

2010

- Definitive Design and Seismic isolation of 12 bridges in Grotta Minarda, Italy (for SGI Spa)
- Seismic vulnerability assessment of the Ravenna City Hall, Italy, very large monument of the XIII Century (for the County of Ravenna)

2006 to 2010

Structural Design and works supervision of S.Pellegrino Hospital, Mantua, Italy (for Coghi S.p.a.)

2009

Executive Design of Gulf Cement Company – Sea Water desalination plant, Qatar (for SGI Spa)

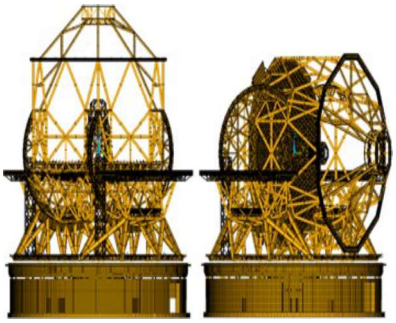
2006

Seismic Retrofit of an existing 75 meter high industrial tower using FRP at a high temperature; the first accomplished in the world using this technique at such a high temperature, Pederobba, Veneto, Italy (for TAI S.r.l., Cementirossi, S.p.a.)

Selected Publications

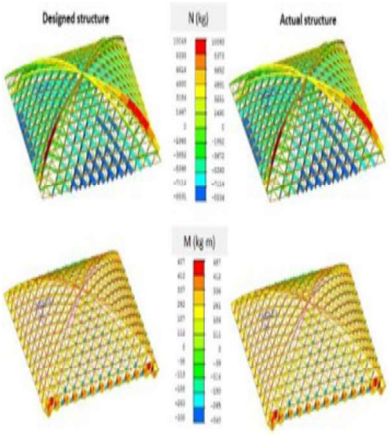
2012

- Tarque N, Camata G, Spacone E, Varum H, and Blondet M. 2012. Elastic and inelastic parameters for representing the seismic in-plane behaviour of adobe wall. Submitted to Terra 2012, Catholic University of Peru. Lima, Peru.
- Tarque N, Camata G, Spacone E, Varum H, and Blondet M. 2012. Non-linear dynamic analysis of an adobe module. Submitted to Terra 2012, Catholic University of Peru. Lima, Peru.
- Tarque N, Camata G, Spacone E. 2011. Non-linear static analysis of an adobe wall with Midas FEA. Structural modelling: magazine di ingegeneria strutturale. Vol 4, 12-15. Italy.



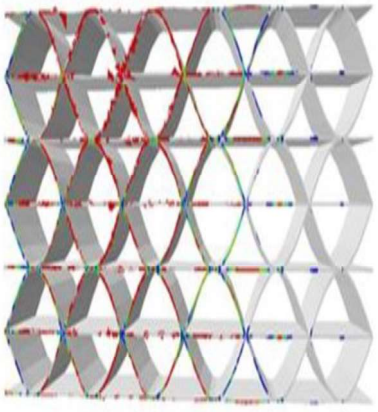
2011

- Tarque N, Camata G, Spacone E, Varum H, and Blondet M. 2011. Numerical modeling of adobe walls under monotonic in-plane loads. Submitted to Computers and Structures Journal.
- Cantagallo C., Camata G., Spacone E. and Corotis R. (In press). The variability of deformation demand with ground motion intensity. Journal of Probabilistic Engineering Mechanics, Elsevier.
- Ucci, M., Camata, G., Spacone, E., Lilliu, G., Manie, J., Schreppers, G. J., 2011 "Nonlinear soil-structure interaction of a curved bridge on the Italian Tollway A25", Proceedings of the EuroDyn 2011 Conference, Leuven, Belgium, July.



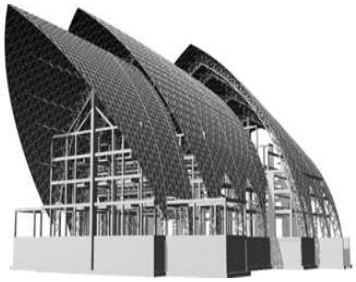
2010

- Cantagallo C., Camata G., Spacone E., Corotis R. (2010), The Variability of Deformation Demand with Ground Motion Intensity, Computational Stochastic Mechanics – Proc. of the 6th International Conference (CSM-6), Rhodos, Greece, June 13-16
- Tarque N, Camata G, Spacone E, Varum H and Blondet M. 2010. Numerical modeling of in-plane behaviour of adobe walls. In proceedings of 8th National Conference on Seismology and Earthquake Engineering. University of Aveiro, Aveiro, Portugal.



FEA, damage at peak load

- Camata, G.; Shing, P.B. 2010. Static and fatigue load performance of a GFRP honeycomb bridge deck. Composites, Part B 41: 299-30
- Massimo Meghella, Giorgia Faggiani, Enrico Spacone, Guido Camata, Giuseppe Brando. 2010. A risk analysis framework for the safety assessment of dams in Italy. 8th ICOLD European Club Symposium Austria, Innsbruck 22-23 September.

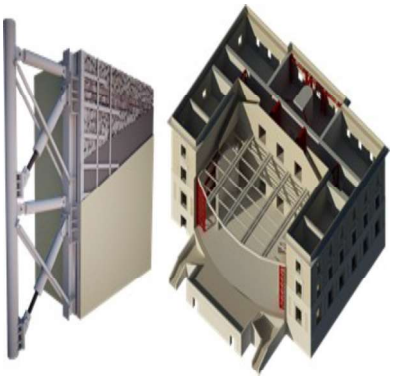


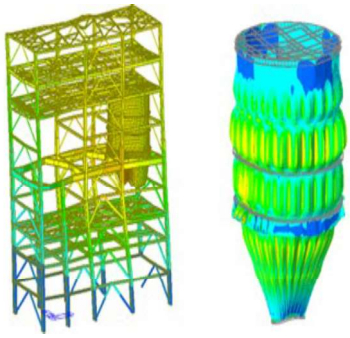
2009

- Camata G., Biondi S., De Matteis G., Lai C., Spacone E., Vanzi I., Vasta M. (2009) Post Damage Assessment of the L'Aquila, Abruzzi April 6, 2009 Earthquake. Keynote address, COMPDYN, June 22-24, Rhodes, Greece
- "Rebuilding L'Aquila following the 2009 Earthquake: Priorities and Perspectives," (with
- A.B. Liel, J. Sutton, G. Camata, E. Spacone and R. Bricker-Ford), ICASP 11, August, 2011, Zurich, Switzerland.
- Biondi S., Camata G., Spacone E. Valente C. (2009) Ambient Vibration Identification of a masonry tower, ANIDIS, Bologna, Italy.

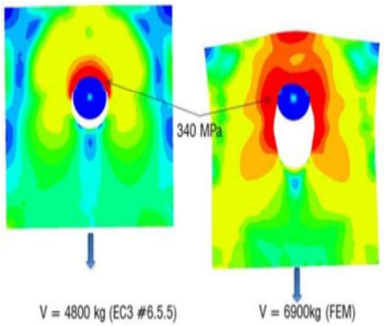
2008

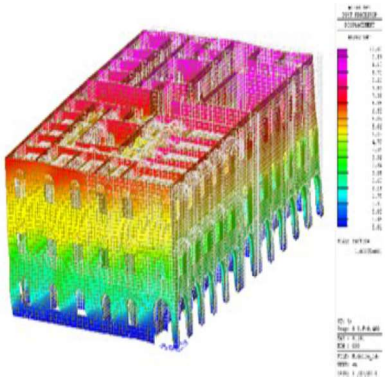
- Bosco M., Camata G., De Stefano M., Ghersi A., Lucchini A., Magliulo G., Marino I., Martinelli E., Monti G., Petti L., Saetta A, Spacone E., Trombetti T. (2008) Guidelines for Nonlinear Analyisis of Existing Reinforced Concrete Buildings. Assessment and Reduction of the Vulnerability of Existing Reinforced Concrete Buildings.
- Camata G., L. Cifelli, E. Spacone, J. Conte, M. Loi and P. Torrese. (2008) Seismic safety assesment of the tower of the S.Maria Maggiore Cathedral in Guardiagrele, Italy Proc. The Ninth International Conf. on Computational Structure Technology, edited by Topping and M. Papadrakakis. Athens, Greece 2-5 September.
- Camata G., L. Cifelli, E. Spacone, J. Conte and P. Torrese. (2008) Safety Analysis of the bell tower of S.Maria Maggiore cathedral in Guardiagrele (Italy) Proc. 14th World Conference on Earthquake Engineering (14WCEE), Beijing, China 12-17 October.





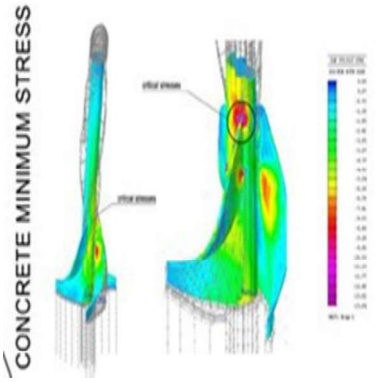
- Spacone E., Camata G., Faggella M. (2008) Nonlinear models and nonlinear procedures or seismic analysis of reinforced concrete frame structures. In: Charmpis D.C., Papadrakakis M., Lagaros N.D., Tsompanakis Y. Computational Structural Dynamics and Earthquake Engineering. ISBN: 9780415452618. Taylor and Francis (Netherlands).
- Spacone E., Camata G. and Faggella M. (2008). Nonlinear models and nonlinear procedures for seismic analysis of reinforced concrete frame structures keynote Lecture, ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, M. Papadrakakis, D.C. Charmpis, N.D. Lagaros, Y. Tsompanakis (eds.), Rethymno, Crete, Greece, 13- 16 June.

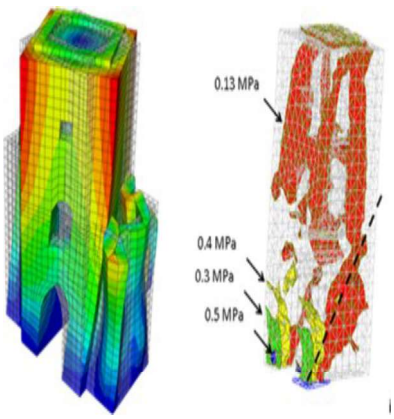




2007

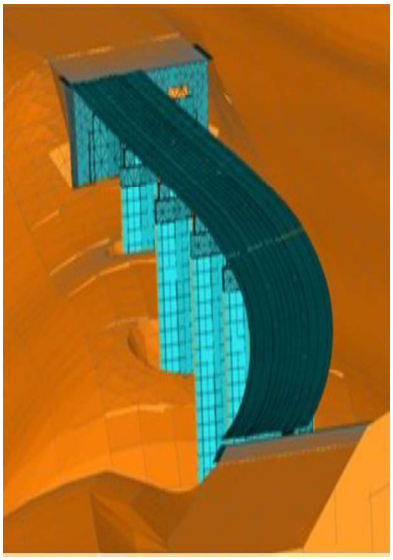
- Camata, G., Spacone, E., and Zarnic, R. (2007) "Experimental and Nonlinear Finite Element Studies of RC Beams Strengthened with FRP Plates." Composites: Part B, Elsevier, 38, 277-288.
- Thomsen, H., Spacone, E., Limkatanyu, S., and Camata, G. (2003) "Failure Mode Analyses of Reinforced Concrete Beams Strengthened in Flexure with Externally Bonded Fiber Reinforced Polymers." ASCE Journal of Composites for Construction, 8(2), 123-131.
- Camata G., Spacone E. and Zarnic R. (2007) "Experimental and Nonlinear Finite Element Studies of RC Beams Strengthened with FRP Plates." Composites Part B: Engineering, Elsevier.
- Benedetti A., Camata G., Mangoni E. and Pugi F. (2007). "Out of plane seismic resistance of walls: collapse mechanisms and retrofit techniques" The Tenth North American Masonry Conference (10 NAMC), June 3-6.
- Saouma V., Camata G., Sbaizero O., Tussiwant G. and Viggiani G. (2007). "Applications of the Cohesive Crack Model to Concrete, Rock, Ceramics and Polymers" FraMCoS-6, Catania, June 17-22.
- Camata G., Pasquini F. and Spacone E. (2007). "High Temperature Flexural Strengthening with Externally Bonded FRP Reinforcement" FRPRCS-8, University of Patras, July 16-18.





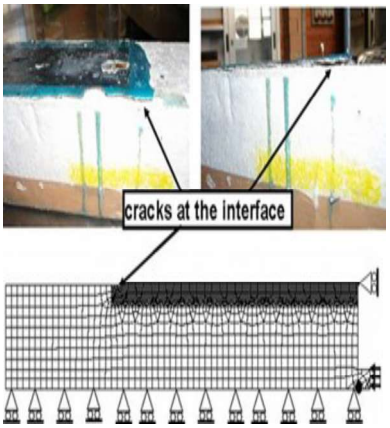
2005

- Camata G. and Shing B. "Evaluation of GFRP Honeycomb Beams for the O'Fallon Park Bridge." Journal of Composite for Construction, ASCE, 8, (6), November/ December 2005, 545-555.



2004

- Camata G., Spacone E., Al Mahaidi R. and Saouma V. (2004). "Analysis of Test Specimens for Cohesive Near-Bond Failure of Fiber-Reinforced Polymer-Plated Concrete." Journal of Composite for Construction, ASCE, 8 (6), 528-538.
- Camata G., Corotis R. and Spacone E. (2004). "Simplified Stochastic Modeling and Simulation of Unidirectional Fiber Reinforced Composites." Journal of Probabilistic Engineering Mechanics, Elsevier, 19 (1-2), 33-40.
- Thomsen H., Spacone E., Limkatanyu S. and Camata G. (2004). "Failure Mode Analyses of Reinforced Concrete Beams Strengthened in Flexure with Externally Bonded Fiber Reinforced Polymers." Journal of Composite for Construction, ASCE, 8 (2), 123-131.
- Camata G. and Spacone, E. (2004). "Brittle-Failures of RC Structural Members Strengthened with Fiber Reinforced Polymers." Proc., Innovative Materials and Technologies for Construction and Restoration, IMTCR-04, 6/9 June 2004 Lecce, Italy, volume 2, 97-106.



2003

- Camata G., Spacone E. and Saouma V. (2003). "Nonlinear modeling of debonding failure of RC structural members srengthened with FRP laminates." Proc., 6th International Symposium on Fibre-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, FRPRCS-6, July 8-10, Singapore.
- Limkatanyu S., Thomsen H., Spacone E. and Camata G. (2003). "Parametric Studies of RC Beams Strengthened in Flexure with Externally Bonded FRPs." Proc., 6th International Symposium on Fibre-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, FRPRCS-6, July 8-10, Singapore.
- Camata G., Spacone E., Al Mahaidi R. and Saouma V. (2003). "Modeling FRP strengthened reinforced concrete structural members using nonlinear fracture mechanics." Proc., International Conference on Composites in Construction, September 16-19, Rende (CS), Italy.