

## Francesco RIPAMONTI – CURRICULUM VITAE (January 2020)

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### CONTACT INFORMATION

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### EDUCATION

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PhD in Applied Mechanics, grade merito  
Politecnico di Milano, March 2006  
Thesis topic: numerical and experimental investigation of noise radiated in wheel-rail rolling contact  
Supervisor: Prof. Stefano Bruni

Degree cum laude in Mechanical Engineering (5 year combined Bachelor/Master's program)  
Politecnico di Milano, December 2002  
Thesis topic: development of a measuring technique for noise source mapping during pass-by railway tests  
Supervisor: Prof. Stefano Bruni

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### MAIN RESEARCH INTERESTS

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- Active and passive vibration control
- Smart structures
- Rail vehicle dynamics and control (with special emphasis on ride comfort)
- Rail and road vehicle aerodynamics (cross wind induced loads and related limit safety conditions)
- Railway noise
- Tyre noise
- Cable dynamics
- Winter sports

The approach to the research topics listed above includes both theoretical/numerical modelling and lab/field experiments.

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### RESEARCH PROJECTS

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He participated to the following research projects funded by EU or National/Regional Grants:

- "FP5-2001-GROWTH-1: High PERFORMANCE rail TRACKs (HIPERTRACK)" [http://cordis.europa.eu/project/rcn/54522\\_en.html](http://cordis.europa.eu/project/rcn/54522_en.html) (01/01/2003-30/06/2004)
- "FP6-2002-TRANSPORT-1: New concepts for turnouts in urban rail transit infrastructure (TURNOUTS)" [http://cordis.europa.eu/project/rcn/74281\\_en.html](http://cordis.europa.eu/project/rcn/74281_en.html) (01/11/2003-31/01/2007)
- "FP6-SME-2004-Horizontal research activities involving SME's - Wind Early Alarm system for Terrestrial transport Handling Evaluation of Risks (WHEATER)" [http://cordis.europa.eu/project/rcn/86545\\_en.html](http://cordis.europa.eu/project/rcn/86545_en.html) (01/10/2004-30/09/2006)
- "Accordo Quadro Regione Lombardia 2011 (Grants funded by Lombardia Region) - Strutture Ibride per la Meccanica e l'Aerospazio (Hybrid structures for mechanic and aerospace applications)" <http://www.progettostima.it/> (18/02/2011-17/08/2013)
- "Sistema di Monitoraggio Ambientale con Rete di sensori e Telemonitoraggio indossabile a supporto di servizi di salute, prevenzione e sicurezza per l'Active Aging (SMARTA)" <http://www.smarta-project.it/> (01/03/2014-31/05/2015)

He is involved in the activities of the research groups:

- "MECHATRONICS AND SMART STRUCTURES", Dipartimento di Meccanica del Politecnico di Milano", con particolare riferimento al controllo attivo e semi-attivo di sistemi meccanici, sistemi intelligenti e integrati, Sistemi Micro-Elettro-Meccanici (MEMS, sia attuatori sia sensori), dispositivi di raccolta di energia, applicazioni robotiche innovative. <http://www.mecc.polimi.it/ricerca/sezioni/meccanica-dei-sistemi/meccatronica-e-smart-structures/>
- "POLIMI SOUND AND VIBRATION LABORATORY (PSVL - laboratorio interdipartimentale)", con particolare riferimento alla riduzione delle vibrazioni e del rumore negli ambienti di lavoro e domestici, al comfort vibrazionale e acustico dei mezzi di trasporto, all'inquinamento acustico prodotto dal traffico stradale e su rotaia, nonché alle tecniche sperimentali e ai metodi per l'analisi e la ricostruzione di campi acustici, tematiche in continua crescita a livello scientifico e tecnico. <http://www.polimi.it/ricerca-scientifica/strutture-di-ricerca/laboratori-interdipartimentali/psvl-polimi-sound-and-vibration-laboratory/>

He was and he is responsible for different Tests and Research Projects funded by public and private companies:

- "Analisi FEM di tre pacchi lamellari, in due differenti taglie, secondo opportune condizioni di carico/vincolo" - MAINA Organi di Trasmissione S.p.A. (01/04/2012-01/01/2013)

- "Prova a fatica su prigionieri fissaggio motore di vettura da competizione (AUDI R18 - 24h Le Mans)" - YCOM srl (09/11/2012-05/12/2012)
- "Nuove soluzioni per attrezzi da discesa su neve" - Studio Polaris S.a.s. (27/09/2013-27/06/2014)
- "Analisi sperimentale delle vibrazioni di una macchina innovativa per la verniciatura di tubetti" - Martinenghi s.r.l. (02/04/2014-22/01/2016)
- "Prova di smorzamento e fatica meccanica su conduttore composito fibra di carbonio/alluminio" - TRATOS CAVI SpA (17/04/2014-17/12/2014)
- "Progettazione di un sistema passivo di rilevamento sorgenti acustiche e ascolto direttivo long range" - Sitep Italia S.p.A. (14/05/2014-16/06/2019)
- "Prove di tipo su distanziatore smorzante binato" - Gorla Morsetterie srl (12/06/2014-05/03/2015)
- "Sitep - SPL Cannone Acustico" - Sitep Italia S.p.A. (17/12/2014-25/07/2016)
- "Prove sul conduttore a corda di lega di alluminio (ZTAL – Lega Fe-Ni rivestita di alluminio (ACI) Ø 16,00 mm)" - De Angeli Prodotti srl (09/04/2015-16/09/2015)
- "Type tests on triple spacer" - Guangzhou Xinyuan Hengye Power Transmission Device Co.,Ltd (29/05/2015-08/09/2015)
- "Vibration test of Aircraft Warning Markers" - Statnett SF, Norwegian Power Grid Company (31/08/2015-26/07/2016)
- "characterization of spacer damper and training course" - Industrias Arruti S.A. (01/10/2015-14/12/2015)
- "Prove sul conduttore conduttore a corda di lega termoresistente di alluminio (TAL) Ø 37,35 mm" - De Angeli Prodotti srl (05/02/2016-08/07/2016)
- "Prove di caratterizzazione dinamica e fatica per ammortizzatori ruota Dubai" - A.Salvi & C SpA (18/04/2016-01/12/2016)
- "Prove di tipo su smorzatori di vibrazioni" - A.Salvi & C SpA (21/07/2016-27/12/2016)
- "Spacer-damper type tests" - Dalekovod Proizvodnja Ltd (03/11/2016-11/12/2017)
- "Damper Type Tests" - SA-RA Energy, Construction, Trade&Industry Co. Inc. (15/11/2016-)
- "Prove di tipo su smorzatori tipo Stockbridge" - DAMP S.R.L. (19/05/2017-8/11/2017)
- "Prove di serie - ammortizzatori idraulici per rotabili ferroviari" - Trenitalia SpA (26/09/2017-)
- "Prova vibrazioni batteria FZSONICK 46-200 secondo normativa IEC 61373 Edition 2.0" - FZSONICK SA (19/12/2017-12/09/2018)
- "Prove su conduttore Azalee 707" - Terna Rete Italia SpA (16/03/2018-29/10/2018)
- "Characterization of Stockbridge dampers" - Forjasul Canoas S.A. Industria Metalurgica (09/05/2019-)
- "Characterization of Stockbridge dampers" - UGUR TURKYURT AS (28/03/2019-12/06/2019)

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## TEACHING

### Current

- Meccanica Applicata alle Macchine, Bachelor's Degree Course in Mechanical Engineering, from A.Y. 2019-2020
- Noise and Vibration Engineering, Master Degree Course in Mechanical/Automation Engineering, from A.Y. 2015-16 to present (Lecturer prof. Roberto Corradi)
- Meccanica delle Vibrazioni, Bachelor's Degree Course in Mechanical Engineering, from A.Y. 2013/2014 to present (Lecturer prof. Federico Cheli)

### Past

- Meccanica Applicata alle Macchine, Bachelor's Degree Course in Mechanical Engineering, from A.Y. 2004-05 to 2008-09 (Lecturer prof. Stefano Bruni and Andrea Curami)
- Dinamica dei Sistemi Meccanici, Master Degree Course in Mechanical Engineering, from A.Y. 2005-06 to 2006-07 (Lecturer prof. Stefano Bruni)
- Mechanical System Dynamics, Master Degree Course in Mechanical Engineering, from A.Y. 2007-08 to 2008-09 (Lecturer prof. Francesco Braghin)
- Mechanical Vibrations, Bachelor's Degree Course in Mechanical Engineering, from A.Y. 2009-10 to 2012-13 (Lecturer prof. Alberto Zasso and Paolo Pennacchi)
- Controllo delle Vibrazioni e del Rumore, Master Degree Course in Mechanical/Automation Engineering, from A.Y. 2013-14 to 2014-15 (Lecturer prof. Roberto Corradi)

### Student advising

From 2006 to date, supervisor of more than 50 MSc theses.

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## ACADEMIC RESPONSIBILITIES

He was and he is Responsible of Laboratory Activities in the following areas:

- Responsabile Tecnico di Area (RTA) per le prove in qualità presso il Dipartimento di Meccanica del Politecnico di Milano, Area Prove Dinamiche (PD) - Sistema Qualità Politecnico (SQP), DM/DOC.08.005. Research activity about the characterization of conductors for overhead transmission lines and associated fittings (dampers, spacer-dampers, suspensions)

- Responsabile per Attività Didattiche e di Ricerca in Laboratorio (RADRL) presso il Dipartimento di Meccanica del Politecnico di Milano per le aree di Laboratorio CLASD (Ed. B13) denominate: - "Cable Dynamics" - "Control of noise and vibration"
- Tecnico di Prova (TP) per attività sperimentali in accordo a norme tecniche e/o procedure interne del laboratorio su ammortizzatori di vibrazione (ITALCERT, certificato n. 121gSGQ11, conforme a norma UNI EN ISO 9001:2015)

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## SCIENTIFIC PUBLICATIONS

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### International Journals

- Ripamonti, F., Chiarabaglio, A. A smart solution for improving ride comfort in high-speed railway vehicles (2019) JVC/Journal of Vibration and Control, 25 (13), pp. 1958-1973. DOI: 10.1177/1077546319843377
- Ripamonti, F., Cola, F. Control system for a carbon fiber plate using an adaptive negative derivative feedback control algorithm (2018) JVC/Journal of Vibration and Control, 24 (21), pp. 4988-4999. DOI: 10.1177/1077546317740451
- Ripamonti, F., Furlan, V., Savio, A., Demir, A.G., Cheli, F., Ossi, P., Previtali, B. Dynamic behaviour of miniature laser textured skis (2018) Surface Engineering. DOI: 10.1080/02670844.2018.1512730
- Ripamonti, F., Furlan, V., Demir, A.G., Previtali, B., Derai, M., Cheli, F., Ossi, P.M. Innovative metallic solutions for alpine ski bases (2018) Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 36 (1), art. no. 01A108, . DOI: 10.1116/1.5002542
- Ripamonti, F., Orsini, L., Resta, F. A Nonlinear Sliding Surface in Sliding Mode Control to Reduce Vibrations of a Three-Link Flexible Manipulator (2017) Journal of Vibration and Acoustics, Transactions of the ASME, 139 (5), art. no. 051005, . DOI: 10.1115/1.4036502
- Serra, M., Resta, F., Ripamonti, F. Dependent modal space control: Experimental test rig (2017) JVC/Journal of Vibration and Control, 23 (15), pp. 2418-2429. DOI: 10.1177/1077546315616699
- Ripamonti, F., Leo, E., Resta, F. Experimental and numerical comparison between two nonlinear control logics (2016) International Journal of Applied Mechanics, 8 (5), art. no. 1650061, . DOI: 10.1142/S1758825116500617
- Cinquemani, S., Diana, G., Fossati, L., Ripamonti, F. A smart structure for wind tunnel investigation of a bridge deck's vortex-induced torsional motion (2016) Mechatronics, 33, pp. 108-120. DOI: 10.1016/j.mechatronics.2015.11.003
- Cola, F., Resta, F., Ripamonti, F. A negative derivative feedback design algorithm (2014) Smart Materials and Structures, 23 (8), art. no. 085008, . DOI: 10.1088/0964-1726/23/8/085008
- Ambrosio, P., Cazzulani, G., Resta, F., Ripamonti, F. An optimal vibration control logic for minimising fatigue damage in flexible structures (2014) Journal of Sound and Vibration, 333 (5), pp. 1269-1280. DOI: 10.1016/j.jsv.2013.11.010
- Serra, M., Resta, F., Ripamonti, F. Dependent modal space control (2013) Smart Materials and Structures, 22 (10), art. no. 105004, . DOI: 10.1088/0964-1726/22/10/105004
- Cazzulani, G., Moschini, S., Resta, F., Ripamonti, F. A diagnostic logic for preventing structural failure in concrete displacing booms (2013) Automation in Construction, 35, pp. 499-506. DOI: 10.1016/j.autcon.2013.06.004
- Ambrosio, P., Resta, F., Ripamonti, F. An H2 norm approach for the actuator and sensor placement in vibration control of a smart structure (2012) Smart Materials and Structures, 21 (12), art. no. 125016, . DOI: 10.1088/0964-1726/21/12/125016
- Cazzulani, G., Resta, F., Ripamonti, F., Zanzi, R. Negative derivative feedback for vibration control of flexible structures (2012) Smart Materials and Structures, 21 (7), art. no. 075024, . DOI: 10.1088/0964-1726/21/7/075024
- Cheli, F., Ripamonti, F., Schito, P., Tomasini, G. Numerical-experimental analysis of wind-break fences for high speed railway lines(2012) Civil-Comp Proceedings, 98, . DOI: 10.4203/ccp.98.160
- Bagordo, G., Cazzulani, G., Resta, F., Ripamonti, F. A modal disturbance estimator for vibration suppression in nonlinear flexible structures (2011) Journal of Sound and Vibration, 330 (25), pp. 6061-6069. DOI: 10.1016/j.jsv.2011.07.014
- Cazzulani, G., Ghielmetti, C., Giberti, H., Resta, F., Ripamonti, F. A test rig and numerical model for investigating truck mounted concrete pumps (2011) Automation in Construction, 20 (8), pp. 1133-1142. DOI: 10.1016/j.autcon.2011.04.015
- Cazzulani, G., Resta, F., Ripamonti, F. A feedback and feedforward vibration control for a concrete placing boom (2011) Journal of Vibration and Acoustics, Transactions of the ASME, 133 (5), art. no. 051002, . DOI: 10.1115/1.4003932
- Cazzulani, G., Resta, F., Ripamonti, F. Active modal tuned mass damper for smart structures (2011) Engineering Letters, 19 (4), .
- Cheli, F., Ripamonti, F., Sabbioni, E., Tomasini, G. Wind tunnel tests on heavy road vehicles: Cross wind induced loads- Part 2 (2011) Journal of Wind Engineering and Industrial Aerodynamics, 99 (10), pp. 1011-1024. DOI: 10.1016/j.jweia.2011.07.007
- Resta, F., Ripamonti, F., Cazzulani, G., Ferrari, M. Independent modal control for nonlinear flexible structures: An experimental test rig (2010) Journal of Sound and Vibration, 329 (8), pp. 961-972. DOI: 10.1016/j.jsv.2009.10.021
- Cheli, F., Ripamonti, F., Rocchi, D., Tomasini, G. Aerodynamic behaviour investigation of the new EMUV250 train to cross wind (2010) Journal of Wind Engineering and Industrial Aerodynamics, 98 (4-5), pp. 189-201. DOI: 10.1016/j.jweia.2009.10.015
- Cigada, A., Lurati, M., Ripamonti, F., Vanali, M. Moving microphone arrays to reduce spatial aliasing in the beamforming technique: Theoretical background and numerical investigation (2009) Journal of the Acoustical Society of America, 124 (6), pp. 3648-3658. DOI: 10.1121/1.2998778
- Cigada, A., Ripamonti, F., Vanali, M. The delay & sum algorithm applied to microphone array measurements: Numerical analysis and experimental validation (2007) Mechanical Systems and Signal Processing, 21 (6), pp. 2645-2664. DOI: 10.1016/j.ymsp.2007.01.001

### National Journals

- Lurati, M., Ripamonti, F., Rocchi, D., Vanali, M. UTILIZZO DI ARRAY MICROFONICI PER LA LOCALIZZAZIONE DI SORGENTI SONORE: CONFRONTO TRA DIVERSE CONFIGURAZIONI DEI MICROFONI E VALIDAZIONE SPERIMENTALE (2006) Rivista Italiana di Acustica.
- Lurati, M., Ripamonti, F., Vanali, M. TECNICHE PER L'IDENTIFICAZIONE DI SORGENTI SONORE: CONFRONTO TRA BEAMFORMING E OLOGRAFIA ACUSTICA (2007) Rivista Italiana di Acustica.
- Cattaneo, A., Ripamonti, F., Rocchi, D., Vanali, M. IL BEAMFORMING PER L'INDIVIDUAZIONE DI SORGENTI ACUSTICHE SU STRUTTURE CIVILI DI GRANDI DIMENSIONI (2010) Rivista Italiana di Acustica.

#### International/National Conferences

- Ripamonti, F., Bussini, A., Resta, F. Active self-tuned mass damper for vibration control and continuous monitoring of civil structures (2019) Proceedings of SPIE - The International Society for Optical Engineering, 10970, art. no. 109702L, . DOI: 10.1117/12.2511760
- Ripamonti, F., Bussini, A., Resta, F. Completely automated modal analysis procedure based on the combination of different OMA methods (2018) Proceedings of SPIE - The International Society for Optical Engineering, 10599, art. no. 1059926, . DOI: 10.1117/12.2296493
- Ripamonti, F., Baro, S., Molgora, M. Active vibration control for a smart panel with enhanced acoustic performances (2017) Proceedings of SPIE - The International Society for Optical Engineering, 10164, art. no. 101642W, . DOI: 10.1117/12.2258224
- Ripamonti, F., Chiarabaglio, A., Resta, F. A semi-active damper in vertical secondary suspension for the comfort increase in passenger trains (2017) Proceedings of SPIE - The International Society for Optical Engineering, 10164, art. no. 1016437, . DOI: 10.1117/12.2258225
- Corradi, R., Mazzola, L., Ripamonti, F. Optimisation of secondary suspension dampers to improve the ride comfort of high-speed rail vehicles (2016) ICSV 2016 - 23rd International Congress on Sound and Vibration: From Ancient to Modern Acoustics, .
- Ripamonti, F., Buscemi, M., Cazzulani, G., Resta, F. A smart solution for the vibration suppression in cables for the electric power distribution (2016) Proceedings of SPIE - The International Society for Optical Engineering, 9803, art. no. 98031D, . DOI: 10.1117/12.2219111
- Ripamonti, F., Bucca, G., Fava, V., Resta, F. A smart-hose for concrete displacing booms (2016) Proceedings of SPIE - The International Society for Optical Engineering, 9803, art. no. 980349, . DOI: 10.1117/12.2219120
- Ripamonti, F., Orsini, L., Resta, F. Non-linear control logics for vibrations suppression: A comparison between model-based and non-model-based techniques (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9431, art. no. 94312Q, . DOI: 10.1117/12.2084163
- Ripamonti, F., Resta, F., Viviani, A. A robust two-way switching control system for remote piloting and stabilization of low-cost quadrotor UAVs (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9431, art. no. 94310X, . DOI: 10.1117/12.2084161
- Cheli, F., Colombo, L., Ripamonti, F. An innovative solution for carving Ski based on retractile blades (2015) Conference Proceedings of the Society for Experimental Mechanics Series, 6, art. no. A19, pp. 201-207. DOI: 10.1007/978-3-319-15048-2\_19
- Cheli, F., Ripamonti, F., Vendramelli, D. Design of UAV for surveillance purposes (2015) Conference Proceedings of the Society for Experimental Mechanics Series, 6, art. no. A18, pp. 193-199. DOI: 10.1007/978-3-319-15048-2\_18
- Errico, G., Fava, V., Resta, F., Ripamonti, F. Use of spring-roll EAP actuator applied as end-effector of a hyper-redundant robot (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9431, art. no. 94312V, . DOI: 10.1117/12.2081361
- Cinquemani, S., Diana, G., Fossati, L., Ripamonti, F. A smart model of a long-span suspended bridge for wind tunnel tests (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9431, art. no. 94311Z, . DOI: 10.1117/12.2082886
- Cazzulani, G., Cinquemani, S., Ronchi, M., Ripamonti, F. Identification of sensor fault for the performance and stability of centralized control logics (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9435, art. no. 94353E, . DOI: 10.1117/12.2085114
- Ripamonti, F., Cazzulani, G., Cinquemani, S., Resta, F., Torti, A. Adaptive active vibration control to improve the fatigue life of a carbon-epoxy smart structure (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9431, art. no. 94312P, . DOI: 10.1117/12.2084159
- Salehi, M., Albertelli, P., Goletti, M., Ripamonti, F., Tomasini, G., Monno, M. Indirect model based estimation of cutting force and tool tip vibrational behavior in milling machines by sensor fusion (2015) Procedia CIRP, 33, pp. 239-244. DOI: 10.1016/j.procir.2015.06.043
- Cazzulani, G., Borroni, M., Ripamonti, F., Braghin, F. A realtime identification algorithm for active control of smart structures (2014) 2014 IEEE Conference on Control Applications, CCA. Part of 2014 IEEE Multi-conference on Systems and Control, MSC 2014, art. no. 6981381, pp. 415-420. DOI: 10.1109/CCA.2014.6981381
- Cazzulani, G., Ripamonti, F., Resta, F. Fatigue damage reduction for flexible structure through active control (2014) 2014 IEEE Conference on Control Applications, CCA 2014, art. no. 6981562, pp. 1729-1734. DOI: 10.1109/CCA.2014.6981562
- Ripamonti, F., Cola, F., Resta, F. An optimal approach in negative derivative feedback control gain synthesis (2014) Proceedings of SPIE - The International Society for Optical Engineering, 9057, art. no. 90571U, . DOI: 10.1117/12.2045305
- Ripamonti, F., Leo, E., Resta, F. A comparison between non linear control logics applied to a 3-segments manipulator (2014) Proceedings of SPIE - The International Society for Optical Engineering, 9057, art. no. 90572K, . DOI: 10.1117/12.2045308

- Bassetti, M., Braghin, F., Dezza, F.C., Ripamonti, F. Design of an inertial measurement unit for enhanced training (2014) Conference Proceedings of the Society for Experimental Mechanics Series, 6, pp. 275-285. DOI: 10.1007/978-3-319-04729-4\_22
- Bassetti, M., Braghin, F., Dezza, F.C., Ripamonti, F. Design of an inertial measurement unit for enhanced training (2014) Conference Proceedings of the Society for Experimental Mechanics Series, 6, pp. 275-285. DOI: 10.1007/978-3-319-04729-4\_22
- Corradi, R., Mazzola, L., Ripamonti, F., Rosa, L. Influence of underbody suspended equipment on rail ride comfort (2014) ASME 2014 12th Biennial Conference on Engineering Systems Design and Analysis, ESDA 2014, 2, . DOI: 10.1115/ESDA2014-20630
- Ripamonti, F., Resta, F., Borroni, M., Cazzulani, G. An adaptive optimal control for smart structures based on the subspace tracking identification technique (2014) Proceedings of SPIE - The International Society for Optical Engineering, 9057, art. no. 905735, . DOI: 10.1117/12.2045311
- Serra, M., Resta, F., Ripamonti, F. An active control logic based on modal approach for vibration reduction through the eigenstructure assignment (2013) 2013 IEEE International Conference on Mechatronics, ICM 2013, art. no. 6518511, pp. 58-62. DOI: 10.1109/ICMECH.2013.6518511
- Morlacchi, M., Resta, F., Ripamonti, F. An adaptive non-model based control logic for vibration suppression in flexible structures (2013) 2013 IEEE International Conference on Mechatronics, ICM 2013, art. no. 6518512, pp. 63-68. DOI: 10.1109/ICMECH.2013.6518512
- Ambrosio, P., Ripamonti, F., Resta, F., Braghin, F. A sensor and actuator placement technique for active vibration control using  $H_{\infty}$  norm (2013) 2013 IEEE International Conference on Mechatronics, ICM 2013, art. no. 6518522, pp. 120-125. DOI: 10.1109/ICMECH.2013.6518522
- Cazzulani, G., Balduzzi, T., Ripamonti, F., Rocchi, D. Active damping for wind-tunnel aeroelastic models of large civil structures (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8690, art. no. 869003, . DOI: 10.1117/12.2009790
- Serra, M., Resta, F., Ripamonti, F. A comparison between the IMSC and the DMSC for vibration suppression of smart flexible structures (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8688, art. no. 868823, . DOI: 10.1117/12.2009670
- Ambrosio, P., Braghin, F., Resta, F., Ripamonti, F. An active control logic to improve the fatigue strength of smart flexible structures (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8688, art. no. 86881U, . DOI: 10.1117/12.2009678
- Morlacchi, M., Resta, F., Ripamonti, F., Tomasini, G. An adaptive non-model-based control strategy for smart structures vibration suppression (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8688, art. no. 86882J, . DOI: 10.1117/12.2009663
- Bassetti, M., Braghin, F., Milani, D., Ripamonti, F., Tomasini, G. Analysis and modeling of a piezoelectric energy harvester for powering a wireless sensor (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8688, art. no. 86882A, . DOI: 10.1117/12.2012239
- Cazzulani, G., Resta, F., Ripamonti, F. Improving the performance of resonant controls for vibration suppression using a negative derivative feedback (2012) ASME 2012 11th Biennial Conference on Engineering Systems Design and Analysis, ESDA 2012, 1, pp. 795-800. DOI: 10.1115/ESDA2012-82602
- Cazzulani, G., Moschini, S., Ripamonti, F., Resta, F. A real-time algorithm for fault detection in construction machinery (2012) ASME 2012 11th Biennial Conference on Engineering Systems Design and Analysis, ESDA 2012, 1, pp. 801-809. DOI: 10.1115/ESDA2012-82603
- Cazzulani, G., Resta, F., Ripamonti, F. Vibration reduction on a nonlinear flexible structure through resonant control and disturbance estimator (2012) Proceedings of SPIE - The International Society for Optical Engineering, 8341, art. no. 83411H, . DOI: 10.1117/12.915185
- Cazzulani, G., Resta, F., Ripamonti, F. Linear and non-linear systems identification for adaptive control in mechanical applications vibration suppression (2012) Proceedings of SPIE - The International Society for Optical Engineering, 8341, art. no. 83411V, . DOI: 10.1117/12.915190
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Development, use and marketing of patents

- Procedimento di controllo delle vibrazioni di un braccio articolato per il pompaggio di calcestruzzo e relativo dispositivo (IT2008UD0057 2008-03-17)
- Method to control the vibrations in an articulated arm for pumping concrete, and relative device (EP2103760 B1 2017-09-20, US8082083 B2 2011-12-20, CN101538941 B 2012-11-07)
- Banco prova per dispositivi stabilizzatori di veicoli pesanti di lavoro (IT2012MI1609 2012-09-26)
- Test bench for stabilizer devices on heavy vehicles (EP2713152 A1 2014-04-02)
- Apparato, e relativo metodo, per il controllo delle vibrazioni di un braccio articolato (ITMI20121903 2012-11-08)
- Apparatus and corresponding method to control the vibrations of an articulated arm (EP2730531 B1 2018-07-18, CN103807351 B 2017-07-18)
- Banco prova per carrelli ferroviari (ITMI20130399 U1 2015-05-15)
- Dispositivo di erogazione di materiale fluido quale calcestruzzo (ITMI2014A001583 2016-11-29)
- Metodo di trattamento di una soletta per un'attrezzatura di scivolamento (ITUA20162890 2016-04-26)
- Method for treating a sliding surface of a sliding device and the sliding device comprising that sliding surface (EP3238791 A1 2017-11-01)
- Sistema di identificazione e controllo attivo di vibrazioni in una struttura, e relativo metodo, N. di priorità: 102018000007173, Data di deposito: 13/07/2018
- Sistema di monitoraggio di movimento o vibrazione indotto da vento in almeno un cavo sospeso, in particolare un cavo aereo conduttore di una linea elettrica di trasmissione o distribuzione; relativo metodo e relativo sensore, N. di priorità: 102018000011059, Data di deposito: 13/12/2018
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