

Francesco RIPAMONTI – CURRICULUM VITAE (June 2023)

CONTACT INFORMATION

Prof. Francesco Ripamonti, PhD
Politecnico di Milano, Department of Mechanical Engineering
Address:
Phone:
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EDUCATION

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

MAIN RESEARCH INTERESTS

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

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

RESEARCH PROJECTS

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 (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 (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 (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)
- "Project: 101073037 — IN-NOVA — HORIZON-MSCA-2021-DN-01 - Active reduction of noise transmitted into and from enclosures through encapsulated structures"

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/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)

TEACHING

Current

- Meccanica Applicata alle Macchine, Bachelor's Degree Course in Industrial Production Engineering, from A.Y. 2019-2020
- Vibration Analysis and Vibroacoustics, Master Degree Course in Telecommunication Engineering, Computer Science and Engineering, Music and Acoustic Engineering, from A.Y. 2020-2021
- Vehicle Acoustics, Master Degree Course in Mechanical Engineering, from A.Y. 2024-2025

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)
- Noise and Vibration Engineering, Master Degree Course in Mechanical/Automation Engineering, from A.Y. 2015-16 to 2020-21 (Lecturer prof. Roberto Corradi)
- Meccanica delle Vibrazioni, Bachelor's Degree Course in Mechanical Engineering, from A.Y. 2013-14 to 2020-21 (Lecturer prof. Federico Cheli)

Student advising

From 2006 to date, supervisor of more than 70 MSc theses.

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)

MEMBERSHIPS

He is member of the following associations:

- The International Institute of Acoustics and Vibration, "To promote the interdisciplinary areas of study within acoustics and the mechanics of solids and fluids"
- Associazione Scientifica Italiana di Meccanica Applicata alle Macchine ETS

SCIENTIFIC PUBLICATIONS

International Journals

- Maggiore, E., Corsaro, C., Fazio, E., Mirza, I., Ripamonti, F., Tommasini, M., Ossi, P.M. Laser-Treated Steel Surfaces Gliding on Snow at Different Temperatures (2023) *Materials*, 16 (8), art. no. 3100, .
- Rapino, L., Liu, L., Dinosio, A., Ripamonti, F., Corradi, R., Baro, S. Processing of tyre data for rolling noise prediction through a statistical modelling approach (2023) *Mechanical Systems and Signal Processing*, 188, art. no. 110042, .
- Zanelli, F., Mauri, M., Castelli-Dezza, F., Ripamonti, F. Continuous Monitoring of Transmission Lines Sag through Angular Measurements Performed with Wireless Sensors (2023) *Applied Sciences (Switzerland)*, 13 (5), art. no. 3175, .
- Rapino, L., La Paglia, I., Ripamonti, F., Corradi, R., Di Lione, R., Baro, S. Measurement and Processing of Road Irregularity for Surface Generation and Tyre Dynamics Simulation in NVH Context (2023) *International Journal of Pavement Research and Technology*, .
- Longoni, F., Hägglund, A., Ripamonti, F., Pennacchi, P.L.M. Powertrain Modal Analysis for Defining the Requirements for a Vehicle Drivability Study (2022) *Machines*, 10 (12), art. no. 1120, .
- Liu, L., Ripamonti, F., Corradi, R., Rao, Z. Design and Characterization of a Test Bench For Interior Noise Investigations (2022) *International Journal of Acoustics and Vibrations*, 27 (3), pp. 245-256.
- Ronconi, I., Salierno, R., Liu, L., Giglio, A., Ripamonti, F., Paoletti, I. Numerical and Experimental Validation of Active Vibration Control Logic Performance of a Hybrid Noise Control-Based Brick (2022) *Acoustics*, 4 (3), pp. 720-732.
- Liu, L., Ripamonti, F., Corradi, R., Rao, Z. On the experimental vibroacoustic modal analysis of a plate-cavity system (2022) *Mechanical Systems and Signal Processing*, 180, art. no. 109459, .
- Simon, T., La Paglia, I., Ripamonti, F., Corradi, R., Baro, S. A Theoretical Model for Investigating the Structural Dynamics of a Rolling Tyre (2022) *Journal of Computational and Nonlinear Dynamics*, 17 (7), art. no. 071004, .
- Ripamonti, F., Giampà, A., Giona, R., Liu, L., Corradi, R. Numerical and experimental study of an active control logic for modifying the acoustic performance of single-layer panels (2022) *Journal of Sound and Vibration*, 520, art. no. 116608, .
- Liu, L., Ripamonti, F., Corradi, R., Rao, Z. The modified weighted residual formulation in the wave based method for plate bending problems: A general formulation for different types of edge restraints (2021) *Journal of Sound and Vibration*, 511, art. no. 116329, .
- Li, Q., Ripamonti, F., Corradi, R., Caccialanza, M. Simulation of deterministic tyre noise based on a monopole substitution model (2021) *Applied Acoustics*, 178, art. no. 108009, .
- Ripamonti, F., Furlan, V., Savio, A., Demir, A.G., Cheli, F., Ossi, P., Previtali, B. Dynamic behaviour of miniature laser textured skis (2020) *Surface Engineering*, 36 (12), pp. 1250-1260.
- Liu, L., Corradi, R., Ripamonti, F., Rao, Z. Wave based method for flexural vibration of thin plate with general elastically restrained edges (2020) *Journal of Sound and Vibration*, 483, art. no. 115468, .
- Liu, L., Corradi, R., Ripamonti, F., Rao, Z. Data on the flexural vibration of thin plate with elastically restrained edges: Finite element method and wave based method simulations (2020) *Data in Brief*, 31, art. no. 105883, .
- Ripamonti, F., Bussini, A., Resta, F., Cortes Camus, M.I. Development of a diagnostic technique for civil structures based on the model update of dynamic parameters (2020) *Proceedings of SPIE - The International Society for Optical Engineering*, 11380, art. no. 113800Z, .
- 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
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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)
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- 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)

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- 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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