

Carlo Rosso

Residency: Presenti in originale
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Politecnico di TORINO
Department of Mechanical and Aerospace Engineering
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Born: Presenti in originale
Nation:
Status:

Current position

Associate Professor, Department of Mechanical and Aerospace Engineering - Politecnico di Torino

Areas of specialization

Machine Design - Powertrain Component Design - Gears - Metal replacement

Appointments held

2004-2009	Grant recipient, Politecnico di Torino
2010	Professional experience, freelance
2011-2016	Assistant professor, Politecnico di Torino, Department of Mechanical and Aerospace Engineering
2016-now	Associate professor, Politecnico di Torino, Department of Mechanical and Aerospace Engineering

Education

2001	MSC in Mechanical Engineering, Politecnico di Torino
2001	ENG Professional qualification, Minister of Instruction and Research, Italian Government
2005	PHD in Machine Design and Construction, Politecnico di Torino

Academic activities

2019-today	Member of the Department council
2019-today	Member of the steering committee of the Technology Transfer Laboratory
2004-today	Reviewer for some of the main journals in Mechanical science
2021	Academic editor of Journal Shock and Vibration

Public activities

1999-2009	Member of the city council of Monesiglio
2009-2013	Mayor of Monesiglio
1999-2013	Member of the council of the local Comunità Montana
2020-today	President of the board of directors of GAL Langhe e Roero
2020-today	President of the board of directors of Pruno s.r.l.
2022-today	President of the board of directors of GeDy TrAss s.r.l.

Grants, honors & awards

2005-2008	Grant recipient position for Thermo Mechanical Fatigue study, Politecnico di Torino
2008-2009	PostDoc fellowship, Politecnico di Torino
2018	Grant for the construction of a test bench for measuring static transmission error in gears
2019	GeDy TrAss company, founded by Carlo Rosso, is awarded of the Politecnico di Torino spinoff honor

Scientific activity

Carlo Rosso's research topics are principally related to the static and dynamic analysis, to the design and the experimental validation of mechanical structures and components. He is in particular involved in life assessment and dynamic behaviour of components both from numerical and experimental points of view. These kinds of activities, deeply linked to industrial needs, allow Carlo Rosso to collaborate with several industrial and academic researchers in the automotive, food and aerospace fields. He is active member of the SAE International since 2005. He is also technical advisor of the Public Prosecutor's Offices of Torino, Mondovì, Ivrea and Vigevano.

Publications & talks

Journals

Bruzzone, Fabio and Carlo Rosso. "Effect of Web Flexibility in Gear Engagement: A Proposal of Analysis Strategy". In: *Vibration* 5.2 (Mar. 2022), pp. 200-212. DOI: 10.3390/vibration5020013. URL: <https://doi.org/10.3390/vibration5020013>.

- Brusa, E et al. "Envelope analysis applied to non-Hertzian contact simulations in damaged roller bearings". In: *IOP Conference Series: Materials Science and Engineering* 1038.1 (Feb. 2021), p. 012013. DOI: 10.1088/1757-899x/1038/1/012013. URL: <https://doi.org/10.1088/1757-899x/1038/1/012013>.
- Bruzzone, F et al. "Evaluation of the effect of profile modifications in gears subjected to sudden torque inversion". In: *IOP Conference Series: Materials Science and Engineering* 1038.1 (Feb. 2021), p. 012014. DOI: 10.1088/1757-899x/1038/1/012014. URL: <https://doi.org/10.1088/1757-899x/1038/1/012014>.
- Bruzzone, Fabio, Tommaso Maggi, et al. "2D nonlinear and non-Hertzian gear teeth deflection model for static transmission error calculation". In: *Mechanism and Machine Theory* 166 (Dec. 2021), p. 104471. DOI: 10.1016/j.mechmachtheory.2021.104471. URL: <https://doi.org/10.1016/j.mechmachtheory.2021.104471>.
- "Gear Teeth Deflection Model for Spur Gears: Proposal of a 3D Nonlinear and Non-Hertzian Approach". In: *Machines* 9.10 (Sept. 2021), p. 223. DOI: 10.3390/machines9100223. URL: <https://doi.org/10.3390/machines9100223>.
- Giorcelli, Mauro, Mattia Bartoli, et al. "High-Temperature Annealed Biochar as a Conductive Filler for the Production of Piezoresistive Materials for Energy Conversion Application". In: *ACS APPLIED ELECTRONIC MATERIALS* (2021). DOI: 10.1021/acsaem.0c00971. URL: <https://pubs.acs.org/doi/abs/10.1021/acsaem.0c00971>.
- Bartoli, M., C. Rosso, et al. "Effect of incorporation of microstructured carbonized cellulose on surface and mechanical properties of epoxy composites". In: *Journal of Applied Polymer Science* 137.27 (2020).
- Brusa, Eugenio, Fabio Bruzzone, Cristiana Delprete, Luigi Gianpio Di Maggio, et al. "Health Indicators Construction for Damage Level Assessment in Bearing Diagnostics: A Proposal of an Energetic Approach Based on Envelope Analysis". In: *Applied Sciences* 10.22 (Nov. 2020), p. 8131. DOI: 10.3390/app10228131. URL: <https://doi.org/10.3390/app10228131>.
- Bruzzone, F., C. Delprete, and C. Rosso. "Modelling Strategy and Parametric Study of Metal Gaskets for Automotive Applications". In: *COMPUTER MODELING IN ENGINEERING AND SCIENCES* 125 (2020), pp. 51–64. DOI: 10.32604/cmescs.2020.011023.
- Bruzzone, Fabio and Carlo Rosso. "Sources of Excitation and Models for Cylindrical Gear Dynamics: A Review". In: *Machines* 8.3 (July 2020), p. 37. DOI: 10.3390/machines8030037. URL: <https://doi.org/10.3390/machines8030037>.
- Delprete, C., E. Brusa, et al. "Bearing Health Monitoring Based on the Orthogonal Empirical Mode Decomposition". In: *Shock and Vibration* 2020 (Jan. 2020), pp. 1–9. DOI: 10.1155/2020/8761278. URL: <https://doi.org/10.1155/2020/8761278>.
- Razavykia, A. et al. "Functionality Analysis of Thermoplastic Composite Material to Design Engine Components". In: *SAE Technical Papers 2020-April*. April (2020).
- Rosso, C., F. Bruzzone, et al. "Influence of Micro Geometry Modification on Gear Dynamics". In: *SAE Technical Papers 2020-April*. April (2020).
- Rosso, C., T. Maggi, et al. "Test Bench for Static Transmission Error Evaluation in Gears". In: *SAE Technical Papers 2020-April*. April (2020).
- Rovarino, D. et al. "A Methodology for Automotive Steel Wheel Life Assessment". In: *SAE Technical Papers 2020-April*. April (2020).
- "Hardware and Virtual Test-Rigs for Automotive Steel Wheels Design". In: *SAE Technical Papers 2020-April*. April (2020).
- Bartoli, M., M.A. Nasir, et al. "Influence of pyrolytic thermal history on olive pruning biochar and related epoxy composites mechanical properties". In: *Journal of Composite Materials* (2019).
- Bartoli, Mattia et al. "Influence of Commercial Biochar Fillers on Brittleness/Ductility of Epoxy Resin Composites". In: *Applied Sciences* 9.15 (Aug. 2019), p. 3109. DOI: 10.3390/app9153109. URL: <https://doi.org/10.3390/app9153109>.

- Bonisolì, E., C. Rosso, S. Venturini, et al. "Improvements on Design and Validation of Automotive Steel Wheels". In: *Mechanisms and Machine Science* 73 (2019), pp. 1639–1649.
- Bruzzone, F., C. Delprete, and C. Rosso. "A proposal of a unique formula for computing compliance in bolted joints". In: *Procedia Structural Integrity* 24 (2019), pp. 167–177.
- Bruzzone, F., T. Maggi, et al. "Proposal of a novel approach for 3D tooth contact analysis and calculation of the static transmission error in loaded gears". In: *Procedia Structural Integrity* 24 (2019), pp. 178–189.
- Fiorentini, F. et al. "Study of two alternative cooling systems of a mold insert used in die casting process of light alloy components". In: *Procedia Structural Integrity* 24 (2019), pp. 569–582.
- Giorcelli, Mauro, Aamer Khan, et al. "Biochar as a cheap and environmental friendly filler able to improve polymer mechanical properties". In: *Biomass and Bioenergy* 120 (Jan. 2019), pp. 219–223. DOI: 10.1016/j.biombioe.2018.11.036. URL: <https://doi.org/10.1016%2Fj.biombioe.2018.11.036>.
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- Rosso, C., E. Bonisolì, and F. Bruzzone. "On the Implementation of Metastructures in Rotordynamics". In: *Conference Proceedings of the Society for Experimental Mechanics Series* (2019), pp. 43–51.
- "On the veering phenomenon potential in high speed gears design". In: *Conference Proceedings of the Society for Experimental Mechanics Series* (2019), pp. 135–142.
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- Khan, Aamer, Pravin Jagdale, et al. "Carbon from waste source: An eco-friendly way for strengthening polymer composites". In: *Composites Part B: Engineering* 132 (Jan. 2018), pp. 87–96. DOI: 10.1016/j.compositesb.2017.08.016. URL: <https://doi.org/10.1016%2Fj.compositesb.2017.08.016>.
- Curà, F., A. Mura, and C. Rosso. "Investigation of crack propagation path in tube gears". In: *Procedia Structural Integrity* 7 (2017), pp. 476–483.
- Delprete, C. and C. Rosso. "Weight reduction through material changing in engine: piston pin and connecting rod case studies". In: *INTERNATIONAL JOURNAL OF AUTOMOTIVE COMPOSITES* 3 (2017), pp. 83–100.
- Delprete, C., C. Rosso, G. Savino, et al. "Advanced vision approach applied to non-contact micro-measurements: a practical application". In: *International Journal of Advanced Manufacturing Technology* 88.1-4 (2017), pp. 471–481.
- Khan, Aamer, Patrizia Savi, et al. "Low-Cost Carbon Fillers to Improve Mechanical Properties and Conductivity of Epoxy Composites". In: *Polymers* 9.12 (Nov. 2017), p. 642. DOI: 10.3390/polym9120642. URL: <https://doi.org/10.3390%2Fpolym9120642>.
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- Rosso, C., E. Bonisolì, and F. Bruzzone. "Could the veering phenomenon be a mechanical design instrument?" In: *Conference Proceedings of the Society for Experimental Mechanics Series* 10B (2017), pp. 85–95.
- Bruzzone, F. and C. Rosso. "Benchmark of the rotordynamics capabilities of the most prominent finite element method software". In: *International Journal of Mechanics and Control* 17.2 (2016), pp. 11–18.
- Curà, F., A. Mura, and C. Rosso. "Crack propagation behavior in planet gears". In: *Procedia Structural Integrity* 2 (2016), pp. 3610–3616.
- "Influence of high speed on crack propagation path in thin rim gears". In: *Fatigue & Fracture of Engineering Materials & Structures* (2016). DOI: 10.1111/ffe.12481. URL: <http://dx.doi.org/10.1111/ffe.12481>.

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- Jagdale, P. et al. "Multiwalled carbon nanotube: Strength to polymer composite". In: *Nanomaterials in Joining* (2016), pp. 1-22.
- Rosso, C. and E. Bonisoli. "An unified framework for studying gear dynamics through model reduction techniques". In: *Conference Proceedings of the Society for Experimental Mechanics Series 6* (2016), pp. 233-242.
- Sauza-Bedolla, J. et al. "Industrial knowledge management tools applied to engineering education". In: *IFIP Advances in Information and Communication Technology 492* (2016), pp. 3-12.
- Curà, F., A. Mura, and C. Rosso. "Effect of centrifugal load on crack path in thin-rimmed and webbed gears". In: *Frattura ed Integrità Strutturale* 9.34 (2015), pp. 447-455.
- "Effect of rim and web interaction on crack propagation paths in gears by means of XFEM technique". In: *Fatigue and Fracture of Engineering Materials and Structures* 38.10 (2015), pp. 1237-1245.
 - "Investigation about crack propagation paths in thin rim gears". In: *Frattura ed Integrità Strutturale* 30 (2014), pp. 446-453.
- Delprete, C. and C. Rosso. "Residual life estimation under low-cycle and thermo-mechanical fatigue conditions: Proposal of a dedicated numerical code". In: *ASME 2014 12th Biennial Conference on Engineering Systems Design and Analysis, ESDA 2014 1* (2014).
- Delprete, C., C. Rosso, and C. Scarzella. "New concept for micro-manipulation systems: A practical experience". In: *International Journal of Advanced Manufacturing Technology* 74.5-8 (2014), pp. 1077-1085.
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- "Constitutive equations". In: *Lecture Notes in Electrical Engineering* 230 (2013), pp. 21-47.
 - "Implementation". In: *Lecture Notes in Electrical Engineering* 230 (2013), pp. 115-129.
 - "Multiphysics problems". In: *Lecture Notes in Electrical Engineering* 230 (2013), pp. 91-114.
 - "Preface". In: *Lecture Notes in Electrical Engineering* 230 (2013).
 - "Tonti diagrams". In: *Lecture Notes in Electrical Engineering* 230 (2013), pp. 1-9.
 - "Topological equations". In: *Lecture Notes in Electrical Engineering* 230 (2013), pp. 11-20.
- Bonisoli, E., G. Marcuccio, and C. Rosso. "Crossing and veering phenomena in crank mechanism dynamics". In: *Conference Proceedings of the Society for Experimental Mechanics Series 5* (2013), pp. 175-187.
- Curà, F., F. Gallo, and C. Rosso. "A study of fatigue in high speed gears". In: *International Journal of Mechanics and Control* 14.2 (2013), pp. 9-19.
- Curà, F. and C. Rosso. "Modelling of gear meshing: A numerical approach for dynamic behavior estimation of thin gears". In: *Conference Proceedings of the Society for Experimental Mechanics Series 1* (2013), pp. 319-333.
- Delprete, C., F. Freschi, et al. "A proposal of nonlinear formulation of cell method for thermo-Elastostatic problems". In: *CMES - Computer Modeling in Engineering and Sciences* 94.5 (2013), pp. 397-420.
- Bonisoli, E., C. Rosso, C. Delprete, and F. Stratta. "Inverse eigensensitivity approach in model updating of avionic components". In: *Conference Proceedings of the Society for Experimental Mechanics Series 4* (2012), pp. 149-165.
- Bonisoli, E., C. Rosso, and F. Di Monaco. "Nonlinear testing and models comparison of magneto-mechanical energy scavengers". In: *Conference Proceedings of the Society for Experimental Mechanics Series 6* (2012), pp. 63-69.
- Bonisoli, E., C. Delprete, and C. Rosso. "A modal-geometrical selection criterion for master nodes: Numerical and experimental testing". In: *Conference Proceedings of the Society for Experimental Mechanics Series 2* (2011), pp. 281-295.

- Rosso, C., E. Bonisoli, and C. Delprete. "A Modal-Geometrical Selection Criterion for master nodes applied to engine components". In: *SAE 2011 World Congress and Exhibition* (2011).
- Rosso, C., C. Delprete, et al. "Integrated CAD/CAE functional design for engine components and assembly". In: *SAE 2011 World Congress and Exhibition* (2011).
- Delprete, C., F. Freschi, et al. "Experimental validation of a numerical multiphysics technique for electro-thermo-mechanical problem". In: *COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineering* 29.6 (2010), pp. 1642–1652.
- Delprete, C., F. Pregno, and C. Rosso. "A proposal of an oil pan optimization methodology". In: *SAE Technical Papers* (2010).
- Delprete, C., C. Rosso, and A. Vercelli. "Thermo-mechanical analysis of a cast iron exhaust manifold: A comparison between the traditional and a new methodology". In: *SAE Technical Papers* (2010).
- Bonisoli, E., C. Delprete, and C. Rosso. "Proposal of a modal-geometrical-based master nodes selection criterion in modal analysis". In: *Mechanical Systems and Signal Processing* 23.3 (2009), pp. 606–620.
- Delprete, C., F. Freschi, et al. "Thermo-mechanical analysis using a multiphysics approach". In: *Journal of Physics: Conference Series* 181.1 (2009).
- Delprete, C., F. Pregno, and C. Rosso. "Internal combustion engine design: A practical computational methodology". In: *SAE International Journal of Engines* 2.1 (2009), pp. 263–270.
- Delprete, C. and C. Rosso. "An easy instrument and a methodology for the monitoring and the diagnosis of a rail". In: *Mechanical Systems and Signal Processing* 23.3 (2009), pp. 940–956.
- Delprete, C., C. Rosso, and R. Spadotto. "A strategy for quickly analyzing the brake disc mounting bell of racing cars". In: *SAE Technical Papers* (2008).
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- Rosso, C. "An easy methodology for designing powertrain bottom protection in composite material of a rally car". In: *SAE Technical Papers* (2008).
- Bonisoli, E., C. Rosso, and C. Delprete. "Numerical methodology for evaluating side impact effects in rally car". In: *SAE Technical Papers* (2007).
- Delprete, C., S. Fissore, and C. Rosso. "A numerical methodology for evaluating structural and dynamic behavior of a shaft in powertrain application". In: *SAE Technical Papers* 15 (2007).
- Delprete, C. and C. Rosso. "Design and numerical simulation of an optic fibre sensor for damage assessment of structures". In: *Key Engineering Materials* 347 (2007), pp. 393–398.
- Baldissera, P., C. Delprete, and C. Rosso. "Numerical and experimental analysis of exhaust manifold gasket". In: *SAE Technical Papers* (2006).
- Bonisoli, E., C. Delprete, and C. Rosso. "Comparison between dynamic condensation techniques in automotive application". In: *SAE Technical Papers* (2006).
- Delprete, C., E. Bonisoli, and C. Rosso. "A modal-geometrical selection criterion in dynamic condensation techniques". In: *Proceedings of 8th Biennial ASME Conference on Engineering Systems Design and Analysis, ESDA2006 2006* (2006).
- Delprete, C., C. Rosso, and R. Sesana. "Damage criterions in thermo-mechanical fatigue models". In: *Proceedings of 8th Biennial ASME Conference on Engineering Systems Design and Analysis, ESDA2006 2006* (2006).
- Delprete, C., M. Milanesio, and C. Rosso. "Rolling bearings monitoring and damage detection methodology". In: *Applied Mechanics and Materials* 3-4 (2005), pp. 293–302.
- Delprete, C. and C. Rosso. "Exhaust manifold thermo-structural simulation methodology". In: *SAE Technical Papers* (2005).
- "Multi-purpose transducer for railway applications". In: *Conference Proceedings of the Society for Experimental Mechanics Series* (2005).
 - "Numerical analysis of gear rattle". In: *SAE Technical Papers* (2005).

DELPRETE, C. and C ROSSO. "Modelling and simulation of flywheel energy storage systems for hybrid vehicle drivelines". In: *INTERNATIONAL JOURNAL OF MECHANICS AND CONTROL* 5 (1) (2004), pp. 35-47.

Proceedings of Conference

- Brusa, Eugenio, Fabio Bruzzone, Cristiana Delprete, Luigi Gianpio Di Maggio, et al. "A proposal of a technique for correlating defect dimensions to vibration amplitude in bearing monitoring". In: *Proceedings of the 5th European Conference of the Prognostics and Health Management Society*. Vol. 5. Prognostics and Health Management Society, 2020, pp. 1-14. ISBN: 978-1-936263-32-5. URL: <https://phmpapers.org/index.php/phme/article/view/1236>.
- Bianchi, Pietro, Cristiana Delprete, and Carlo Rosso. "Concept Development of a titanium piston for CO₂ reduction in highlyloaded gasoline engines". In: *CAE Conference 2016*. 2016.
- Delprete, Cristiana and Carlo Rosso. "Are plastic materials suitable for engine components? Some possible solutions". In: *Proceedings of ICAutoC 2016*. 2016, pp. 1-12.
- Cura, F., A. Mura, and C. Rosso. "A coupled MBS-FEM approach for computing the dynamic overloads in thin web gears". In: *Proceedings of Coupled MBS-FE Applications: From Classical Design to System Engineering*. Vol. Proceedings of Coupled MBS-FE Applications: From Classical Design to System Engineering. 2015. URL: <https://www.nafems.org/downloads/presentations/eu-mbs-turin2015/20-rosso-polito.pdf/>.
- Cura, F. and C. Rosso. "Ruote dentate ad alta velocità di rotazione: determinazione della vita utile". In: *Titolo volume non avvalorato*. 2013.
- Delprete, C., E. Raviolo, and C. Rosso. "Studio parametrico di guarnizioni per applicazioni motore". In: *Titolo volume non avvalorato*. 2013.
- Delprete, C., C. Rosso, and C. Scarzella. "Sistema innovativo per la manipolazione di micro-componenti". In: *Titolo volume non avvalorato*. 2013.
- Delprete, Cristiana, Maurizio Repetto, et al. "Non-linear Thermo-Elastostatic of an Exhaust Manifold". In: *Proceedings of ICCES'13*. 2013, pp. 1-30.
- Delprete, C., F. Freschi, et al. "Analisi Elastostatica Non-Lineare con il Metodo delle Celle". In: *Titolo volume non avvalorato*. 2012. ISBN: 9788897385431.
- Bracco, G. et al. "ISWEC: progetto di un prototipo in scala". In: *Titolo volume non avvalorato*. 2010.
- DELPRETE, C, C ROSSO, et al. "Progettazione funzionale integrata CAD/CAE per componenti motore - Integrated CAD/CAE functional design for engine components". In: *I° Congresso Nazionale del Coordinamento della Meccanica Italiana, 2010*. 2010, pp. 1-11.
- CANOVA, A. et al. "Tonti diagrams as a general framework for multiphysics". In: *COUPLED PROBLEMS 2009*. 2009.
- DELPRETE, C., S. TORNINCASA, et al. "Approccio integrato CAD/CAE per la progettazione di componenti motore". In: *Atti AIAS 2009, XXXVIII Convegno Nazionale, 2009*. 2009, pp. 1-10.
- Tornincasa, S. et al. "An Integrated Tool for Functional Drawing of Engine Main Components". In: *Titolo volume non avvalorato*. 2009.
- DELPRETE, C, F FRESCHI, et al. "Metodo delle celle e approccio Multiphysics: applicazione alla termomeccanica". In: *Titolo volume non avvalorato*. 2008. ISBN: 9788890191619.
- DELPRETE, C., C ROSSO, et al. "Sviluppo di un codice di calcolo per la stima della durata a fatica termomeccanica". In: *Titolo volume non avvalorato*. 2008. ISBN: 9788890191619.
- Delprete, Cristiana, Fabio Pregno, and Carlo Rosso. "Procedure per il dimensionamento e la verifica di componenti di motore termico". In: *Titolo volume non avvalorato*. 2008. ISBN: 9788890191619.
- Delprete, Cristiana, Carlo Rosso, Stefano Tornincasa, et al. "A tool for first attempt functional drawing of engine main components". In: *Titolo volume non avvalorato*. 2008. ISBN: 9788890191619.

- DELPRETE, C., S FISSORE, and C ROSSO. "Axial behavior of automotive clutch". In: *Titolo volume non avvalorato*. 2007.
- DELPRETE, C. and C ROSSO. "Drivetrain Modeling and Sensitivity Analysis to Simulation Parameters". In: *Titolo volume non avvalorato*. 2005.
- Delprete, Cristiana, M. Milanesio, and Carlo Rosso. "Monitoraggio di cuscinetti volventi con il metodo dell'involuppo". In: *Titolo volume non avvalorato*. 2005. ISBN: 9788890191619.
- Delprete, Cristiana and Carlo Rosso. "Analisi numerica di distribuzione meccanica automobilistica". In: *Titolo volume non avvalorato*. Vol. CD-ROM. 2005. ISBN: 9788890191619.
- DELPRETE, C and C. ROSSO. "Analisi dell'attenuazione delle vibrazioni propaganti in rotaia ferroviaria". In: *Titolo volume non avvalorato*. 2003.
- "Modellistica e simulazione di un sistema di accumulo inerziale a volano". In: *Titolo volume non avvalorato*. 2002.

Books

- Rosso, Carlo, Fabio Bruzzone, and Francesco Ciliberti. *Ruote dentate: progettazione e costruzione*. libreriauniversitaria.it, 2023. ISBN: 8833595609. URL: <https://www.libreriauniversitaria.it/ruote-dentate-rosso-carlo-libreriauniversitaria/libro/9788833595603>.
- Tagliaferro, Alberto, Carlo Rosso, and Mauro Giorcelli. *Biochar Emerging applications*. IOP, 2020. ISBN: 9780750326605. DOI: 10.1088/978-0-7503-2660-5. URL: <https://iopscience.iop.org/book/978-0-7503-2660-5>.

Patents

- ROSSO, CARLO et al. "Computationally efficient method for obtaining performing gears". 2020.
- PRANDI, MAURO, CARLO ROSSO, and FABIO BRUZZONE. "Macchina eolica". 2019.
- ROSSO, CARLO et al. "Metodo per determinare le deformazioni dei denti, preferibilmente per l'errore statico di trasmissione di ruote dentate". 2019.
- AVAGNINA, DAVIDE et al. "Braccio telescopico e veicolo semovente provvisto di tale braccio". 2018.
- BIANCHI, PIETRO, CRISTIANA DELPRETE, and CARLO ROSSO. "Pistone migliorato per motori termici alternativi". 2016.
- Delprete, Cristiana, Carlo Rosso, and Emanuele Raviolo. "A closing system for a connecting rod and for any two-part support of a rotating shaft". 2015.
- DELPRETE, C. and C ROSSO. "Measuring device for loads acting on rails". 2004.

Educational activity

Carlo Rosso gives lectures in the field of mechanical design at Politecnico di Torino since 2002, as assistant and examination commission member for graduate courses. He is also involved in lectures for a Master course (Structural Aspects in Diesel Engine Design and Energy Management for Powertrain) and for Ph.D. courses. He is tutor of more than 160 Bachelor (65) and Master Theses (95).

TEACHING (ALL THE YEARS ARE REFERRED TO 2000)

Fundamentals of structural mechanics for graduation in AUTOMOTIVE ENGINEERING and MECHANICAL ENGINEERING

02 - 07; 10 - 16; 22 14	Fundamentals of machine design for graduation in different engineering fields Internal combustion engine fundamentals for master in ENERGY MANAGEMENT FOR POWER-TRAINS
11 - 22	Powertrain components design for graduation in AUTOMOTIVE ENGINEERING
14 and 16	Vehicle design for graduation in MECHANICAL ENGINEERING
15, 17, 19	Application of cell method in multiphysics analysis for Ph.D. in ELECTRICAL, ELECTRONICS AND COMMUNICATIONS ENGINEERING and MECHANICAL ENGINEERING
15 and 16	Dynamic design of gears for Ph.D in MECHANICAL ENGINEERING

Service to the profession

Reviewer for Scientific Journals:

- Mechanical Systems and Signal Processing
- Meccanica
- Journal of Process Mechanical Engineering
- ASME congress Turbo Expo
- SAE Technical Paper Series
- Smart Science
- Engineering Science and Technology
- Journal of Advanced Manufacturing Technology
- Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science
- Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering
- Mechanics Based Design of Structures and Machines
- Sensors
- Energies
- Applied Sciences
- Machines
- Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications

Torino, April 17, 2023

Carlo Rosso