Curriculum Vitae

INFORMAZIONI PERSONALI

Nome MARCO
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FORMAZIONE TITOLI

Marco Cammalleri was born in 1971. Master's degree in Mechanical Engineering, Associate Professor at the Department of Engineering of the University of Palermo, National Scientific Qualification as Full Professor in Mechanics of Machines.

ATTIVITA' DIDATTICA

He currently holds the course of "Mechanics of Machines" for the Mechanical Engineering bachelor's degree, and the course of "Dynamic and Control of Mechanical Systems" for the Master's degree in Mechanical Engineering.

RICERCHE FINANZIATE

- Principal Investigator of the multidisciplinary research project "DIT Dynamic Irreversible Thermoporation" financed by funds of the European Community under PO FESR 2007/13.
- Member of the two Research Program of National Interest PRIN in 2002 and 2005.
- Scientific director of eight research projects financed by the University of Palermo from 2004 to 2007, in 2012 and 2018.
- Two additional research projects as a young researcher in the years 2000 and 2001, financed by the University of Palermo.

INCARICHI / CONSULENZE

- Director of the Historical Museum of Engines and Mechanism.
- Member of the Scientific Committee of the Department of Engineering.
- Member of the Board of the PhD Course in Mechanical, Manufacturing, Management and Aerospace Innovation.
- Member of the Scientific Committee of the Museum System.
- Member of the Council of the Department of Engineering.
- Member of the Mechanical Engineering Degree Course.

ASSOCIAZIONI SCIENTIFICHE

IFToMM Italy (International Federation for the Promotion of Mechanism and Machine Science).

Associazione Scientifica Italiana di Meccanica Applicata alle Macchine ETS.

PUBBLICAZIONE

49) RS Diarrassouba K., Cammalleri M., Balancing of Multi-Stage Pump Using the Coupling Hub, International Journal of Engineering Research and Technology. ISSN 0974-3154, Volume 12, Number 7 (2019), pp. 929-935.

48) CIS Zhou X., Qin D., Rotella D., Cammalleri M. (2019) Hybrid electric vehicle powertrain design: construction of topologies and initial design schemes. In: Advances in Italian Mechanism Science. IFToMM ITALY 2018. Mechanisms and Machine Science, vol 68. Springer.

47) CIS Rotella D., Cammalleri M., Qin D., Zhou X. (2019) A Simple Method for the Design of Hybrid Electric Power-Split CVTs: A Case Study. In: Advances in Italian Mechanism Science. IFToMM ITALY 2018. Mechanisms and Machine Science, vol. 68. Springer.

46) RI Rotella D., Cammalleri M., Power losses in power-split CVTs: A fast black-box approximate method, Mechanism and Machine Theory 128 (2018) 528–543, https://doi.org/10.1016/j.mechmachtheory.2018.06.011

45) RI Rotella D., **Cammalleri M.**, "Direct analysis of power-split CVTs: a unified method", Mechanism and Machine Theory 121 (2018) 116–127, doi: 10.1016/j.mechmachtheory.2017.10.006

44) RI Cammalleri M., Rotella D., "Functional design of power-split CVTs: An uncoupled hierarchical optimized model", Mechanism and Machine Theory 116 (2017) 294–309, doi: 10.1016/j.mechmachtheory.2017.06.003

43) RI Cammalleri M., Costanza A., "A Closed-Form Solution for Natural Frequencies of Thin Walled Cylinders with Clamped Edges", International Journal of Mechanical Sciences, Volume 110, May 2016, Pages 116–126, Elsevier, Doi: 10.1016/j.ijmecsci.2016.03.005.

42) RI Buffa G., Cammalleri M., Campanella D., La Commare U., Fratini L., "Linear friction welding of dissimilar AA6082 and AA2011 aluminum alloys: microstructural characterization and design guidelines", International Journal of Material Forming 12/2015; DOI:10.1007/s12289-015-1279-y.

41) RI Sorge, F; Cammalleri, M; Genchi, G; - "On the birth and growth of pendulum clocks in the Early on the History Modern Era. In Essays on the history of mechanical engineering".(2015) Springer, ISBN 978-3-319-22679-8 ISBN 978-3-319-22680-4.

40) RI Cammalleri M., Pipitone E., Rubino T., Geraci M.D., Bonura F., and Mammina C. , "Extended Validation Of Dynamic Irreversible Thermoporation (DIT), a Novel Thermal Process For Microbial Inactivation", Journal of Food Process Engineering, 2015, Wiley, doi: 10.1111/jfpe.12300.

39) RI Liga, A., Montesanto, S., Mannella, G. A., La Carrubba, V., Brucato, V. and Cammalleri, M. "Study of Heat Transfer Coefficients During Cooling of PET Bottles for Food Beverages". Heat and Mass Transfer (2016) 52:1479–1488. DOI 10.1007/ s00231-015-1652-x.

38) RI G. Buffa, M. Cammalleri, L. Fratini, D. Campanella, "Shear coefficient determination in Linear Friction Welding of aluminum alloys", Materials & Design (2015), vol. 82, pp. 238-246, Elsevier, doi:10.1016/j.matdes.2015.05.070

37) CIS G. Buffa, D. Campanella, A. Ducato, M. Cammalleri, L. Fratini, A. Astarita, A. Squillace and S. Esposito, "Experimental and numerical analysis of microstructure evolution during Linear Friction Welding of Ti6Al4V" in Procedia Manufacturing, Volume 1, 2015, Pages 429–44, doi:10.1016/j.promfg.2015.09.053.

36) RI R. Lombardo, T. Rubino, M. Cammalleri, "Dielectric properties of fruit nectars at low frequencies in the RF spectrum", International Journal of Food Properties, Taylor & Francis, vol. 18, issue 10, pp. 2312-2326. Doi: 10.1080/10942912.2014.973504 , 2015.

35) RI Cammalleri M., Pipitone E., Rubino T., Saporito L. and Mammina C, “Experimental evaluation of a new thermal process for microorganisms inactivation”, Journal of Food Process Engineering 38 (2015) 445–451 © 2015 Wiley Periodicals, Inc doi:10.1111/jfpe.12175

34) RI E. Pipitone, S. Beccari, M. Cammalleri, G. Genchi, “Experimental Model Based Linearization of a S.I. Engine Gas Injector Flow Chart”, Journal of Mechanical Engineering, Vol 60, No 11 (2014), doi: 10.5545/sv-jme.2013.1321.

33) RS G. Buffa, M. Cammalleri, D. Campanella, L. and A. Vairis, “Effective Linear Friction Welding Machine Redesign through Process Analysis”, Key Engineering Materials Vols. 622-623 (2014) pp 484-491, doi: 10.4028/www.scientific.net/KEM.622-623.484.

32) CN M. Cammalleri, A. Costanza - "Soluzione in forma chiusa per il calcolo delle frequenze naturali di cilindri a parete sottile a bordi incastrati”, 3° Congresso del Coordinamento della Meccanica Italiana, Napoli 30 giugno-01 luglio 2014.

31) CN M. Cammalleri, E. Pipitone, A. Cirello, F. Guttadauro, G. Genchi, "Progettazione e Verifica Sperimentale di una Microturbina Idraulica per l’Industria Alimentare”, 3° Congresso del Coordinamento della Meccanica Italiana, Napoli 30 giugno-01 luglio 2014.

30) CN G. Buffa, M. Cammalleri, D. Campanella, F. Bilello, L. Fratini, F. Micari - " Mappe di lavorabilità per giunti misti di alluminio mediante processo di saldatura linear friction welding”, 3° Congresso del Coordinamento della Meccanica Italiana, Napoli 30 giugno-01 luglio 2014

29) RI S. Beccari, E. Pipitone, M. Cammalleri, G. Genchi, “Model-based optimization of injection strategies for SI engine gas injectors”, Journal of Mechanical Science and Technology, Springer, Volume 28, Issue 8, August 2014, Pages 3311-3323, doi: 10.1007/s12206-014-0742-x.

28) CI F. Sorge, M. Cammalleri, G. Genchi, “On the isochronism of Galilei's horologium”, 2013 IFToMM Workshop on History of Machine and Mechanism Science, 21st and 22st November 2013, Palermo, Italy, ISBN 978-889-5430-84-3.

27 bis) N L. Saporito, F. Bonura, D. Geraci, T. Rubino, E. Pipitone, M. Cammalleri, Giovanni M. Giammanco, C. Mammina- Evaluation of irreversible dynamic thermoporation as a tool for the deduction of bacterial load in food matrices - Journal of Biological Research (Italy) 88.

27) CN L. Saporito, F. Bonura, D. Geraci, T. Rubino, E. Pipitone, M. Cammalleri, Giovanni M. Giammanco, C. Mammina, “Valutazione della Termoporazione Dinamica Irreversibile (DIT) come strumento per l’abbattimento della carica batterica in matrici alimentari” 86° Congresso SIBS della Società Italiana di Biologia Sperimentale, Palermo 24-25 Ottobre 2013.

26) RI M. Cammalleri, E. Pipitone, S. Beccari, G. Genchi, “A Mathematical Model for the Prediction of the Injected Mass Diagram of a S.I. Engine Gas Injector”, Journal of Mechanical Science and Technology, Springer vol. 11 (2013) pagg. 3253-3265, doi: 10.1007/s12206-013-0848-6.

25) CI F. Sorge, M. Cammalleri, “A Theoretical Approach to Pneumatic Muscle Mechanics” IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM) July 9-12, 2013 Wollongong, Australia, ISBN 978-1-4673-5318-2, doi: 10.1109/AIM.2013.6584228.

24) RI L. Fratini G. Buffa, M. Cammalleri, D. Campanella, “On the linear friction welding process of aluminum alloys: Experimental insights through process monitoring”, CIRP Annals - Manufacturing Technology, Elsevier, (2013), http://dx.doi.org/10.1016/j.cirp.2013.03.056.

23) RI F. Sorge, S. Beccari, M. Cammalleri, G. Genchi, E. Pipitone, “Three-mode pneumatic management of marine U-tank systems”, Ocean Engineering Elsevier ISSN: 0029-8018, vol. 55 (2012) pp. 175–183, http://dx.doi.org/10.1016/j.oceaneng.2012.07.034.

22) CN G. Buffa, M. Cammalleri, D. Campanella, L. Fratini, A. Pasta, "Ingegnerizzazione di una Macchina Prototipale per Processi di Saldatura Linear Friction Welding", 2° Congresso del Coordinamento della Meccanica Italiana, Ancona 25-26 giugno 2012.

21) RI Sorge, F., Cammalleri, M. “On the beneficial effect of rotor suspension anisotropy on viscous-dry hysteretic instability”. Meccanica, Springerlink, vol. 47, aprile 2012, ISSN 0025-6455, doi:10.1007/s11012-012-9549-y.

20) RI Sorge F., Cammalleri. M., “Helical Shift Mechanics of Rubber V-Belt Variators”, Journal of Mechanical Design, Volume 133, Issue 4, (2011). ISSN 1050-0472, doi: 10.1115/1.4003803.

19) CN M. Cammalleri, E. Pipitone, S. Beccari, G. Genchi "Modello dinamico di iniettore per motore ad accensione comandata", 1° Congresso del Coordinamento della Meccanica Italiana, Palermo 2010, ISBN 9788890510007.

18) RI Sorge F., Cammalleri. M. “Control of hysteretic instability in rotating machinery by elastic suspension systems subject to dry and viscous friction.”, Journal of Sound and Vibration Elsevier, Vol. 329, Issue 10, Pages 1686-1701, (2010) doi: 10.1016/j.jsv.2009.12.007.

17) CN Sorge F., Cammalleri. M. "Hysteretic whirl stabilization in rotor-shaft-bearing systems on dry friction suspension", XIX Congresso AIMETA, Ancona, 14-17 settembre 2009 ISBN 978-88-89720-69-1.

16) CI Sorge.F, Cammalleri. M., "An Efficient Damping Technique for the Unstable Hysteretic Rotor Whirl by Proper Suspension Systems", Ecotrib 2009, Pisa Italy, June 7-10, 2009. ISBN 978-884672426-7

15) CIS Cammalleri. M., Sorge F., "Approximate Closed-Form Solutions for the Shift Mechanics of Rubber Belt Variators", Proceeding of ASME (IDETC 2009), August 30 - September 2, 2009, San Diego, California, USA, ISBN:978-0-7918-3856-3, doi: 10.1115/DETC2009-86638.

14) CN Cammalleri M., Conti A., Sorge F., “Experimental results for a belt variator in transient conditions”, XVIII Congresso AIMETA, Brescia, 11-14 settembre 2007.

13 bis) RS Cammalleri M., "Efficiency of Split-Way CVT's. A simplified model" - SAE Transactions Journal of Engines , V116-3 – 2008, ISSN: 1946-3936, doi: 10.4271/2007-24-0133

13) RS Cammalleri M., "Efficiency of Split-Way CVT's. A simplified model" – SAE Technical Paper, vol. 2007-24-0133, ISSN: 0148-7191, doi:10.4271/2007-24-0133.

12) RS Sorge F., Cammalleri M. – “Development of Belt Drives and CVT in Vehicle Application: New Concepts and Trends” – Guest Editors of a special issue -International Journal of Vehicle Design (IJVD) Vol. 39/3 2005, pag. 173-297.

11 bis) R Cammalleri M. – “A New Approach to the Design of a Speed-Torque Controlled Rubber V-Belt Variator” CHUANDONG JISHU, vol. 20, p. 34-46 (2006).

11) RI Cammalleri M. – “A New Approach to the Design of a Speed-Torque Controlled Rubber V-Belt Variator” - Proceedings of Institution of Mechanical Engineering Vol. 219 D12 2005, pag. 1413 – 1428 - ISSN 0954-4070, doi: '10.1243/095440705X35080.

10) CN Beccari A., Cammalleri M. – “Progetto preliminare di trasmissioni CVT con due vie in parallelo” – XVII Congresso AIMETA, Firenze, 11-15 settembre 2005.

9) CN Cammalleri M., Beccari A. - “Studio di un Meccanismo Adattativo della Coppia Trasmissibile da un variatore”- XVI

Congresso AIMETA, Ferrara, 9-12 settembre 03.

8) CIS Beccari A., Cammalleri M., Sorge F. – “Experimental Results For a Two-Mode Split-Way CVT” – VDI Berichte 1709, pag. 165-178 –October 2002 – ISBN 3-18-091709-1

7) CIS Sorge F., Cammalleri M. – “Two-Dimensional Viscoelasticity in Rubber V-Belt Drives” – VDI Berichte 1709 , pag. 237-250, October 2002 – ISBN 3-18-091709-1.

6) CI Sorge F., Beccari A., Cammalleri M. – “Operative Variator Characterization for CVT Improvement” – Proceeding of JSME International Conference on Motion and Power Transmission, pag. 751-756 – Fukuoka (Japan), November 15-17 2001, http://ci.nii.ac.jp/naid/110002486075.

5) CN Sorge F., Cammalleri M. – “Viscoelastic Response of Rubber Belts” – XV Congresso AIMETA, Taormina, 26-29 settembre 2001.

4) CN Beccari A., Cammalleri M., Drago B., Pipitone E., “Ottimizzazione dell’anticipo di accensione ed emissioni NOx” – LVI Congresso ATI, Napoli 10-14 settembre 2001.

3) RI Beccari A., Cammalleri M. – “Implicit regulation for automotive variators”, Proceedings of Institution of Mechanical Engineering, Vol. 215 D6 2001, pag. 697-708, ISSN 0954/4070, doi: 10.1243/0954407011528275.

2) R Beccari A., Cammalleri M. - “Semiautomatic Variator for Split Power CVT'S” - ATA Motor Car Engineering, Vol. 11-12, pag. 407-412, 2000, ISSN 00012661.

1) CN Beccari A., Cammalleri M. - “Variatore automobilistico a regolazione implicita”- XIV Congresso AIMETA, Como, 6-9 ottobre 99.

Legenda

RI Rivista ISI

RS Rivista Scopus

R Rivista

CIS Congresso Internazionale Scopus

CI Congresso Internazionale

CN Congresso Nazionale

N Nota su rivista

ATTIVITA' SCIENTIFICHE

- Reviewer of the most relevant scientific journals and international congresses in the field of Applied Mechanics and automotive engineer, such as Mechanism and Machine Theory – Elsevier (Outstanding Reviewer Award in 2018); International Journal of Mechanical Sciences – Elsevier; Journal of Sound and Vibrations –Elsevier; Journal of Mechanical Design- ASME, Mechanical Science, SAE Congress, IFtoMM World Congress, et cetera.
- Speaker at several national and international conferences.
- PhD thesis supervisor.

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AMBITI DI RICERCA

His research activity is mainly focused on Power-Split Continuously Variable Transmissions (PS-CVT's), which represent the most promising solution for modern hybrid electric vehicles. Other research topics included: mechanics vibrations of and rotor dynamics, functional design and control of machines for LFW processes, dynamics of solenoid injectors, V-belt mechanics, analysis of machines of historical interest, food engineering.

ALTRE ATTIVITA

Outstanding Reviewer Award of Mechanism and Machine Theory ELSEVIER in 2018.

TC Service AWARD 2016 of IFToMM, International Federation for the Promotion of the Mechanism and Machine Science.