

BARBARA MARCHETTI

EDUCATION

UNIVERSITY OF PADOVA

PADOVA, Italy

PHD

January 2004

Thesis: *Development of a measurement device based on laser Doppler vibrometry for the characterization of Micro-Electro-mechanical devices*

Advisors: Prof. Enrico Primo Tomasini-Università Politecnica delle Marche;

Prof. Joseph Vignola – Naval Research Laboratory (Washington DC)

POLYTECHNIC UNIVERSITY OF MARCHE

Ancona, Italy

Master Degree in Mechanical Engineering

July 2000

Cum Laude

AWARDS AND HONORS

Best Master degree thesis, Rotary club, 2002

Award for successful completion of frescoes diagnostic at the US Capitol, US

Senate- Senator Trent Lott, 2003

Best paper award Oliver Torry Fuller, APT bulletin, 2004

Best innovation idea, Enel Green Power, 2015

Outstanding editorial board member, Petroleum Journal, 2019

TEACHING EXPERIENCE

ECAMPUS UNIVERSITY

Novedrate, Italy

Associate professor, Department:

Environmental energy, 04/ 2025- Present

Mechanical Plants, 03/2020- Present

Logistic, 03/2020- Present

Quality control 03/2020- 08/2024

CATHOLIC UNIVERSITY OF AMERICA

Washington DC

Instructor, Mechanical engineering department:

Dynamics, Fall/Spring/Summer 2018-2019

Introduction to Environmental Engineering, Fall/Spring/Summer 2018-2019

Dynamics, Summer 2017

MARYLAND UNIVERSITY (MD)

Dynamics, Fall/Spring 2018-2019

TEACHING INTERESTS

Energy, Environmental energy, Thermodynamics, Heat transfer, Dynamics,

LEADERSHIP AND SERVICE

Coordinator of the Industrial Engineering bachelor's and master's degree programs, 04-2024 to present

Coordinator of the Computer Science Engineering bachelor's and master's degree programs, 04/2021-04/2024

Italian government, Presidency of Ministries, Extraordinary office for earthquake reconstruction, consultant for energy systems and applications, 2024 to present

Italian government, Senate of the Republic, consultant for energy systems and applications, 01/2023-12/2023

PROFESSIONAL EXPERIENCE

UNIVERSITY OF ECAMPUS

Novedrate, Italy

Associate Professor, Dep of Theoretical and Applied Sciences (DISTA)

07/2014-Present

Coordinated undergraduate and master's programs in engineering education. Led curriculum planning, quality assurance, and academic strategy alignment as Course Coordinator. Supported 100% accreditation renewal through effective program governance.

Designed and delivered full-time courses in Mechanical Plants, Quality Control, Logistics 4.0. Environmental Energy, Integrated applied research and industry trends to enhance student learning outcomes.

Promoted and secured competitive research funding through public-private partnerships and grant proposals. Advanced university research profile in industrial engineering.

Conducted advanced research on CO₂ pipeline transport technologies, in collaboration with Saipem Spa, focusing on impurity impacts, thermodynamic behavior, and flow properties. Delivered technical insights for stable pipeline operation, including hydrate risk and corrosion potential due to free water formation.

Defined pre-commissioning and commissioning procedures for CO₂ pipelines in collaboration with Saipem Spa. Recommended depressurization configurations under low-temperature conditions and assessed pipeline behavior during depressurization.

Performed ductile fracture propagation and leakage detection system analysis to enhance pipeline safety and integrity in collaboration with Saipem Spa.

Developed decommissioning strategies for offshore oil platforms, supporting sustainable end-of-life asset management in collaboration with ENI Spa.

Led economic and environmental assessments of a SAGD oil recovery facility in collaboration with Saipem Spa. Provided sustainability-focused optimization for Canadian oil sands extraction.

Designed and validated a simulation model for multiphase flow in choke valves, accurately predicting two- and three-phase flow regimes using ENI Spa field data.

Engineered and implemented an experimental two-phase flow loop for component testing and performance optimization (in collaboration with SAIPEM Spa).

Created mathematical models for air drying simulation in pipelines and multiphase vessel blowdown of hydrocarbons, contributing to safe and efficient hydrocarbon system operation (in collaboration with SAIPEM Spa).

Invented and developed an innovative system for the disassembly and recycling of photovoltaic panels, supporting circular economy practices in collaboration with Enel Green Power Spa.

Led feasibility analyses for biomass energy plants, including technical, economic, and environmental evaluations (in collaboration with Municipality of Castelfidardo). Designed a pilot plant to convert biomass from public green maintenance into renewable energy.

Member of the Editorial Board of Energies (MDPI), Current Chinese Science, and permanent Editorial Board Member of the Elsevier journal Petroleum, contributing to the peer-review process and scientific advancement in energy and environmental research.

Served as Scientific Committee Member of the 19th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), held in Rome, September 8–12, 2024. Supported the promotion of sustainable development strategies through resource-efficient technologies and knowledge-based policy innovation.

Appointed Scientific Committee Member of the 20th SDEWES Conference, held in Dubrovnik starting September 15, 2024, continuing to support international dialogue on sustainability in energy, water, and environmental systems.

Invited as a Keynote Speaker at WSESA-2025, the World Summit on Environmental Science and Applications, contributing to global discussions on innovation and collaboration to address critical environmental challenges.

Served as a member of the Biomass Panel Steering Committee of the European Technology Platform on Renewable Heating and Cooling (RHC-Platform). Contributed to strategic planning

and policy development for the advancement of renewable biomass technologies in the heating and cooling sectors across Europe.

**PRESIDENCY OF MINISTRIES, EXTRAORDINARY OFFICE FOR
EARTHQUAKE RECONSTRUCTION
Consultant, Office of Sisma 2016 reconstruction**

Rome, Italy
01/2024 -Present

Provided expert consultancy for the Sisma 2016 Earthquake Reconstruction Project. Delivered regulatory analysis and eco-sustainability assessments to ensure environmental compliance.

Evaluated and proposed high-efficiency energy solutions with minimal environmental impact for post-disaster redevelopment efforts.

Identified renewable energy funding incentives and promoted energy communities to support long-term local energy resilience and sustainability.

**CATHOLIC UNIVERSITY OF AMERICA
Visiting Professor, Mechanical Engineering Department**

Washington DC, USA
26/06/2017-05/08/2017
01/07/2018-31/07/2019

2017- Supported the organization and served as **member of the technical committee** of the 1st International Workshop "*The Challenges of Climate Change*," hosted by the Engineering Center for the Care of the Earth (ECCE) at the School of Engineering, The Catholic University of America. Contributed to scientific programming and speaker coordination, supporting international collaboration on climate resilience and sustainable engineering solutions.

2019- Supported the organization and served as **member of the technical committee** of the 2nd International Workshop "*Costal Resilience Challenges*", hosted by the Engineering Center for the Care of the Earth (ECCE) at the School of Engineering, The Catholic University of America. Contributed to scientific programming and speaker coordination, supporting international collaboration on climate resilience and sustainable engineering solutions.

2019- Served as a **member of the scientific committee** for the *11th International Conference on Climate Change: Impacts and Responses*, held at the Pryzbyla Center, The Catholic University of America, Washington, D.C., April 16–18, 2019. Supported the review and selection of scientific contributions, promoting high-impact research on climate change adaptation and mitigation strategies.

2019-Principal Investigator for a project funded by the U.S. government agency Architect of the Capitol (AOC), aimed at assessing the structural integrity and conservation state of the frescoes inside the President's Room of the U.S. Capitol. Coordinated an international research team with partners from university eCampus (Prof. Barbara Marchetti – PI), Università Politecnica delle Marche (Prof. Francesco Corvaro), and The Catholic University of America (Prof. Joseph Vignola, Prof. Diego Turo). Successfully led on-site measurement campaigns using advanced diagnostic techniques to support long-term preservation strategies for historic artworks. Production of complete report and presentation of results to the Architect of the Capitol committee.

NAVAL RESEARCH LABORATORY
Researcher, Experimental Techniques Section

Washington DC, USA
01/06/2002-30/04/2003
01/02/2004-31/03/2004

Conducted research on development and optimization of MEMS microsensors for environmental characterization and art diagnostics. Delivered innovative sensor solutions supporting advanced monitoring applications during tenure at Naval Research Laboratory.

Led the Italian team in the Capitol Pilot Project, a U.S. Senate–funded study on the use of Laser Doppler Vibrometry (LDV) for detecting structural defects in artworks. Coordinated a large-scale diagnostic survey (~700 m²) of frescoes and wall paintings in the U.S. Capitol Building to identify areas at risk of detachment or delamination.

Recognized with an official award from U.S. Senator Trent Lott on behalf of the U.S. Senate for outstanding research contributions during tenure at the Naval Research Laboratory. The related publication

UNIVERSITA' POLITECNICA DELLE MARCHE
Grant holder

Ancona, Italy
01/01/2004-01/01/2010

Served as investigator in multiple European research projects, focusing on innovation in non-destructive testing, quality control, and sustainability in industrial and conservation fields. Led cross-disciplinary research teams and delivered impactful results in applied science and technology.

Led the FP7 project *DRYCHECK* (Grant Agreement No. 262029), developing an electrical impedance-based system to monitor and control the drying process in sausages.

Carried out research activities in EU project *SENSOCER* (GRD1 2001-2004 40008) to develop a non-contact ultrasonic system for real-time density measurement in green ceramic tiles.

Carried out research activities in on the *MONOTONE* project (G1RD-CT-2002-2005 00783), focused on detecting surface texture defects in ceramic tiles using innovative inspection techniques.

Advanced laser-based vibration measurement methods through project *LAVINYA* (G6RT-CT-2002-05093), enhancing the application of laser Doppler vibrometry and full-field techniques.

Carried out research activities in the *CAMALEON* project (I/03/B/F/PP-154145), developing e-learning platforms for non-contact measurement techniques and quality control training.

Contributed to sustainable materials research through the *DIPP* project (COLL-CT-2005-012609), which developed particleboard panels with improved mechanical performance and reduced environmental impact.

Carried out research activities in research in the *LASERACT* project (2005–2008), applying multitask laser-based non-destructive technologies in cultural heritage conservation diagnostics.

Conducted research within nationally funded projects supported by the Italian Ministry of University and Research (MIUR), focusing on innovation in logistics, measurement systems, and diagnostic technologies.

Participated in *PRIN 2008* (Prot. 2008YPMXJ3), contributing to the modeling, simulation, and experimental validation of innovative logistics networks for pharmaceutical management in public healthcare.

Carried out research in *PRIN 2005* on the development and application of experimental and numerical techniques for the characterization of Micro-Electro-Mechanical Systems (MEMS).

Contributed to *PRIN 2002*, focusing on the use of electro-optical measurement techniques for the diagnostics of structural components.

TECHNICAL SKILLS

Simapro software for LCA analysis, Laser doppler vibrometry measurement and data processing, Particle image velocimetry measurements and data processing, Thermal measurements by thermal camera and data processing, flow-assurance methods and models.

PRESENTATIONS

2024 COP29, side events organized by GSE (Energy Management body of the Italian government) and during the side events organized by RSE (the Research body of the Italian government focusing on energy), Baku, Azerbaijan, November 11-22

2023 COP28, side event organized by RSE (the Research body of the Italian government focusing on energy) at the Italian Pavillon "Albedo for Africa", Dubai, UAE, November 30-December 13

2022 European Biomass Conference and Exhibition, May 9-22, Online

2022 REST- International Conference on Renewable Energies and Smart Technologies, Tirana, Albania, July 28-29

2019 11th International Conference on Climate Change: Impacts and Responses, Washington, D.C., USA; April 16–18

2015 21th ISSAT International Conference on Reliability and Quality in Design, Philadelphia, Pennsylvania, USA, August 6-8

2014 13th International Conference Multiphase flow in Industrial Plants, Sestri Levante (GE), Italy, September 17-19

Summer School Francesco Turco, 11-13-September-2013

2012 18th ISSAT International Conference on Reliability and Quality in Design, Boston (MA), USA, July 26-28

2011 17 th ISSAT International Conference on Reliability and Quality in Design, Vancouver, Canada, August 4-6

2010 WAMS-The International Workshop on Applied Modeling and Simulation, Buzios, Brasil. Buzios, Rio de Janeiro, May 5-7

2006 Intl AIVELA Conference on Vibration Measurements by Laser and Noncontact Techniques

2005 6th International Conference on Vibration Measurement by Laser Technique: Advances and Applications

2004 16 th World Conference on Non Destructive Testing. Montreal

2004 ISMA 2004. Leuven, Spetember, 20 - 22

2002 Intl AIVELA Conference on Vibration Measurements by Laser and Noncontact Techniques

REFERENCES

- Mugnini A., Caresana F., Marchetti B., Polonara F., Arteconi A.
Integrated design of heat pump systems: A multi-objective optimized design methodology considering the mutual influence of design and control
(2025) Applied Thermal Engineering, 271, art. no. 126323
DOI: 10.1016/j.applthermaleng.2025.126323
- Tortorelli A., Sabina G., Marchetti B.
A Cooperative Multi-Agent Q-Learning Control Framework for Real-Time Energy Management in Energy Communities
(2024) Energies, 17 (20), art. no. 5199
DOI: 10.3390/en17205199
- Harizi W., Vitali M., Corvaro F., Marchetti B., Chrigui M.
Experimental and numerical study of mixed convection heat transfer in a vented cavity partially filled with a porous medium: Effects of reynolds and rayleigh numbers on Nusselt number and flow regimes
(2024) Numerical Heat Transfer; Part A: Applications
DOI: 10.1080/10407782.2024.2326200
- Marchetti B., Vitali M., Biancini G.
Renewable Energy Proliferation and the New Local Energy Community Paradigm: Analysis of a Case Study in Italy
(2024) Energies, 17 (7), art. no. 1599
DOI: 10.3390/en17071599
- Corvaro F., Marchetti B., Vitali M.
Validation of Velocity Field Measured with Particle Image Velocimetry of a Partially Heated Cavity
(2023) Heat Transfer Engineering, 44 (2), pp. 141 - 153
DOI: 10.1080/01457632.2022.2034084
- Biancini G., Moradi R., Cioccolanti L., Marchetti B., Moglie M., Del Zotto L.
A general model for air gasification of heterogenous municipal solid waste
(2023) Energy Conversion and Management, 278, art. no. 116749
DOI: 10.1016/j.enconman.2023.116749
- Vitali M., Biancini G., Marchetti B., Corvaro F.
On the Sublimation of Dry-Ice: Experimental Investigation and Thermal Modelling of Low-Temperatures on a Sandy Soil
(2023) Energies, 16 (2), art. no. 987
DOI: 10.3390/en16020987
- Vitali M., Leporini M., Masi O., Speranza A., Corvaro F., Marchetti B.
Net zero Flow Assurance - Validation of various equations of state for the prediction of VLE and density of CO₂-rich mixtures for CCUS applications
(2023) International Journal of Greenhouse Gas Control, 125, art. no. 103877
DOI: 10.1016/j.ijggc.2023.103877
- Vitali M., Zuliani C., Corvaro F., Marchetti B., Tallone F.
Statistical analysis of incidents on onshore CO₂ pipelines based on PHMSA database
(2022) Journal of Loss Prevention in the Process Industries, 77, art. no. 104799
DOI: 10.1016/j.jlp.2022.104799
- Vitali M., Corvaro F., Marchetti B., Terenzi A.
Thermodynamic challenges for CO₂ pipelines design: A critical review on the effects of impurities, water content, and low temperature
(2022) International Journal of Greenhouse Gas Control, 114, art. no. 103605
DOI: 10.1016/j.ijggc.2022.103605
- Williams J., Corvaro F., Vignola J., Turo D., Marchetti B., Vitali M.
Application of non-invasive active infrared thermography for delamination detection in fresco
(2022) International Journal of Thermal Sciences, 171, art. no. 107185
DOI: 10.1016/j.ijthermalsci.2021.107185
- Biancini G., Cioccolanti L., Marchetti B., Moglie M.
EVALUATION OF MUNICIPAL LANDFILL LEACHATE TREATMENT BY MICROALGAE
(2022) European Biomass Conference and Exhibition Proceedings, pp. 79 - 85
- Biancini G., Moglie M., Marchetti B., Cioccolanti L.
Life Cycle Impact Assessment of Municipal Solid Waste Management Systems: Improved design for environmental footprint minimization
2022 International Conference on Renewable Energies and Smart Technologies, REST 2022
DOI: 10.1109/REST54687.2022.10022921

Vignola A., Corvaro F., Vignola J., Turo D., Marchetti B., Vitali M.
Application of a non-invasive measurement technique to detect anomalies in frescoes at the US Capitol
(2022) *Journal of Physics: Conference Series*, 2204 (1), art. no. 012053
DOI: 10.1088/1742-6596/2204/1/012053

Biancini G., Marchetti B., Cioccolanti L., Moglie M.
Comprehensive Life Cycle Assessment Analysis of an Italian Composting Facility concerning Environmental Footprint Minimization and Renewable Energy Integration
(2022) *Sustainability (Switzerland)*, 14 (22), art. no. 14961
DOI: 10.3390/su142214961

Vitali M., Biancini G., Marchetti B., Corvaro F.
Experimental and numerical analysis of the convective flow induced over a dry-ice bank with Particle Image Velocimetry
(2022) *Journal of Physics: Conference Series*, 2385 (1), art. no. 012056
DOI: 10.1088/1742-6596/2385/1/012056

Vitali M., Zuliani C., Corvaro F., Marchetti B., Terenzi A., Tallone F.
Risks and safety of co2 transport via pipeline: A review of risk analysis and modeling approaches for accidental releases
(2021) *Energies*, 14 (15), art. no. 4601
DOI: 10.3390/en14154601

Leporini M., Terenzi A., Marchetti B.
Improvement of a multiphase flow model for wellhead chokes under critical and subcritical conditions using field data
(2021) *Journal of Petroleum Exploration and Production Technology*, 11 (3), pp. 1487 - 1503
DOI: 10.1007/s13202-021-01114-4

Afshari F., Sahin B., Marchetti B., Polonara F., Corvaro F., Leporini M., Afshari F.
Numerical study on drag coefficient and evaluation of the flow patterns in perforated particles
(2021) *Heat Transfer Research*, 52 (14), pp. 47 - 61
DOI: 10.1615/HEATTRANSRES.2021038829

Marchetti B., Leporini M., Corvaro F., Olivieri A., Ighani M., Chiarucci M.
Application of infrared thermography to determine the correlation between skin temperature and onset of graft versus host disease in patients after bone marrow transplantation: A preliminary study
(2020) *International Journal of Thermal Sciences*, 156, art. no. 106350
DOI: 10.1016/j.ijthermalsci.2020.106350

Leporini M., Marchetti B., Corvaro F., Polonara F.
Reconversion of offshore oil and gas platforms into renewable energy sites production: Assessment of different scenarios
(2019) *Renewable Energy*, 135, pp. 1121 - 1132
DOI: 10.1016/j.renene.2018.12.073

Leporini M., Marchetti B., Corvaro F., di Giovine G., Polonara F., Terenzi A.
Sand transport in multiphase flow mixtures in a horizontal pipeline: An experimental investigation
(2019) *Petroleum*, 5 (2), pp. 161 - 170
DOI: 10.1016/j.petlm.2018.04.004

Leporini M., Terenzi A., Marchetti B., Giacchetta G., Corvaro F.
Experiences in numerical simulation of wax deposition in oil and multiphase pipelines: Theory versus reality
(2019) *Journal of Petroleum Science and Engineering*, 174, pp. 997 - 1008
DOI: 10.1016/j.petrol.2018.11.087

Terenzi A., Marchetti B., Leporini M., Poesio P., Liu J.
Experimental and Numerical Study of Multiphase Flow Phenomena and Models in Oil & Gas Industry
(2019) *Petroleum*, 5 (2), pp. 113
DOI: 10.1016/j.petlm.2019.04.004

Giacchetta G., Marchetti B., Leporini M., Terenzi A., Dall'Acqua D., Capece L., Cocci Grifoni R.
Pipeline wax deposition modeling: A sensitivity study on two commercial software
(2019) *Petroleum*, 5 (2), pp. 206 - 213
DOI: 10.1016/j.petlm.2017.12.007

Cunningham A., Vignola A., Turo D., Corvaro F., Ryan T.J., Vignola J.F., Marchetti B.
Structural vibration analysis of Fresco cohesion
(2019) *Journal of the Acoustical Society of America*, 146 (4)

Leporini M., Terenzi A., Marchetti B., Corvaro F., Polonara F.
On the numerical simulation of sand transport in liquid and multiphase pipelines
(2019) *Journal of Petroleum Science and Engineering*, 175, pp. 519 - 535
DOI: 10.1016/j.petrol.2018.12.057

Marchetti B., Corvaro F., Polonara F., Leporini M.
Development of an innovative and sustainable model for integrating river maintenance with energy production from residual biomass
(2018) *Resources*, 7 (2), art. no. 27
DOI: 10.3390/resources7020027

Afshari F., Zavaragh H.G., Sahin B., Grifoni R.C., Corvaro F., Marchetti B., Polonara F.
On numerical methods; optimization of CFD solution to evaluate fluid flow around a sample object at low Re numbers
(2018) *Mathematics and Computers in Simulation*, 152, pp. 51 - 68
DOI: 10.1016/j.matcom.2018.04.004

Marchetti B., Corvaro F., Giacchetta G., Polonara F., Cocci Grifoni R., Leporini M.
Double Green Process: a low environmental impact method for recycling of CdTe, a-Si and CIS/CIGS thin-film photovoltaic modules
(2018) *International Journal of Sustainable Engineering*, 11 (3), pp. 173 - 185
DOI: 10.1080/19397038.2018.1424963

Leporini M., Corvaro F., Marchetti B., Polonara F., Benucci M.
Experimental and numerical investigation of natural convection in tilted square cavity filled with air
(2018) *Experimental Thermal and Fluid Science*, 99, pp. 572 - 583
DOI: 10.1016/j.expthermflusci.2018.08.023

Leporini M., D'Alessandro V., Mancini E., Terenzi A., Marchetti B., Giacchetta G., Grifoni R.C.
A new integrated approach to study the thermal and mechanical response of vessels subject to a safe blowdown process
(2018) *Journal of Loss Prevention in the Process Industries*, 53, pp. 103 - 114
DOI: 10.1016/j.jlp.2017.06.003

Corvaro F., Giacchetta G., Marchetti B., Recanati M.
Reliability, Availability, Maintainability (RAM) study, on reciprocating compressors API 618
(2017) *Petroleum*, 3 (2), pp. 266 - 272
DOI: 10.1016/j.petlm.2016.09.002

Dall'Acqua D., Terenzi A., Leporini M., D'Alessandro V., Giacchetta G., Marchetti B.
A new tool for modelling the decompression behaviour of CO₂ with impurities using the Peng-Robinson equation of state
(2017) *Applied Energy*, 206, pp. 1432 - 1445
DOI: 10.1016/j.apenergy.2017.09.118

Dall'Acqua D., Benucci M., Corvaro F., Leporini M., Cocci Grifoni R., Del Monaco A., Di Lullo A., Passucci C., Marchetti B.
Experimental results of pipeline dewatering through surfactant injection
(2017) *Journal of Petroleum Science and Engineering*, 159, pp. 542 - 552
DOI: 10.1016/j.petrol.2017.08.068

Leporini M., Terenzi A., Marchetti B., Giacchetta G., Polonara F., Corvaro F., Grifoni R.C.
Modelling the pressurization induced by solar radiation on above ground installations of LPG pipeline systems
(2017) *Journal of Physics: Conference Series*, 923 (1), art. no. 012023
DOI: 10.1088/1742-6596/923/1/012023

Corvaro F., Benucci M., Marchetti B., Grifoni R.C., Polonara F.
The role of an electrically heated front cover on the thermal performance of a radiator
(2017) *International Journal of Fluid Mechanics Research*, 44 (5), pp. 409 - 425
DOI: 10.1615/interjfluidmechres.2017018766

Brandoni C., Marchetti B., Ciriachi G., Polonara F., Leporini M.
The impact of renewable energy systems on local sustainability
(2016) *International Journal of Productivity and Quality Management*, 18 (2-3), pp. 385 - 402
DOI: 10.1504/IJPM.2016.076716

Bevilacqua M., Ciarapica F.E., Giacchetta G., Paciarotti C., Marchetti B.
Innovative Maintenance Management Methods in Oil Refineries
(2016) *Springer Series in Reliability Engineering*, pp. 197 - 226
DOI: 10.1007/978-1-4471-6778-5_7

Giacchetta G., Leporini M., Marchetti B.
Evaluation of the economic impact of a new high value process for the management of the end of life of thin film photovoltaic modules
(2015) *International Journal of Productivity and Quality Management*, 15 (4), pp. 528 - 541
DOI: 10.1504/IJPM.2015.069712

Giacchetta G., Leporini M., Marchetti B.
Economic and environmental analysis of a Steam Assisted Gravity Drainage (SAGD) facility for oil recovery from Canadian oil sands
(2015) *Applied Energy*, 142, pp. 1 - 9
DOI: 10.1016/j.apenergy.2014.12.057

D'Alessandro V., Giacchetta G., Leporini M., Marchetti B., Terenzi A.
Modelling blowdown of pressure vessels containing two-phase hydrocarbons mixtures with the partial phase equilibrium approach
(2015) *Chemical Engineering Science*, 126, pp. 719 - 729
DOI: 10.1016/j.ces.2015.01.019

Carducci F., Del Monaco A., Giacchetta G., Leporini M., Marchetti B.
Development and application of an innovative tool to automate the process of results extraction from the thermo-hydraulic simulator Olga
(2015) *Petroleum*, 1 (2), pp. 164 - 168
DOI: 10.1016/j.petlm.2015.06.003

- Giacchetta G., Corvaro F., Nardini G., Benucci M., Dall'Acqua D., Marchetti B.
Development and implementation of an experimental test bench for foam characterization in oil & gas applications
(2015) Proceedings - 21st ISSAT International Conference on Reliability and Quality in Design, pp. 189 - 193
- Savino M.M., Mazza A., Marchetti B.
Lean manufacturing within critical healthcare supply chain: An exploratory study through value chain simulation
(2015) International Journal of Procurement Management, 8 (1-2), pp. 3 - 24
DOI: 10.1504/IJPM.2015.066285
- Giacchetta G., Leporini M., Marchetti B.
Technical and economic analysis of different cogeneration systems for energy production from biomass
(2014) International Journal of Productivity and Quality Management, 13 (3), pp. 289 - 309
DOI: 10.1504/IJPQM.2014.060419
- Ciatteo V., Giacchetta G., Marchetti B.
Dynamic model for the economical evaluation of different technical solutions for reducing naval emissions
(2014) International Journal of Productivity and Quality Management, 14 (3), pp. 314 - 335
DOI: 10.1504/IJPQM.2014.064808
- Giacchetta G., Leporini M., Marchetti B., Terenzi A.
Numerical study of choked two-phase flow of hydrocarbons fluids through orifices
(2014) Journal of Loss Prevention in the Process Industries, 27 (1), pp. 13 - 20
DOI: 10.1016/j.jlp.2013.10.014
- Giacchetta G., Leporini M., Marchetti B.
Economic and environmental optimization of a new high value process for the management of the end of life of thin film photovoltaic modules
(2014) Proceedings of the Summer School Francesco Turco, 09-12-September-2014, pp. 100 - 107
- Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
An empirical study of ISO 9000 on the supply chain of a company leader in the heating sector
(2013) International Journal of Quality and Reliability Management, 30 (8), pp. 897 - 916
DOI: 10.1108/IJQRM-Feb-2012-0024
- Giacchetta G., Marchetti B.
Medical waste management: a case study in a small size hospital of central Italy
(2013) Strategic Outsourcing: An International Journal, 6 (1), pp. 65 - 84
DOI: 10.1108/17538291311316072
- Giacchetta G., Marchetti B.
Innovative experimental-numerical method for quality control during sausages production
(2013) International Journal of Productivity and Quality Management, 12 (4), pp. 379 - 392
DOI: 10.1504/IJPQM.2013.056733
- Crivellini A., Giacchetta G., Marchetti B., Marchetti C., Paciarotti C., Terenzi A.
Development and validation of a model for the simulation of the air drying phenomena in pipelines
(2013) International Journal of Mathematical Modelling and Numerical Optimisation, 4 (4), pp. 351 - 373
DOI: 10.1504/IJMMNO.2013.059203
- Giacchetta G., Leporini M., Marchetti B.
Evaluation of the environmental benefits of new high value process for the management of the end of life of thin film photovoltaic modules
(2013) Journal of Cleaner Production, 51, pp. 214 - 224
DOI: 10.1016/j.jclepro.2013.01.022
- Giacchetta G., Marchetti B.
Supplier Satisfaction Survey as a management tool for reengineering the procurement process
(2013) International Journal of Procurement Management, 6 (2), pp. 170 - 186
DOI: 10.1504/IJPM.2013.052468
- Giacchetta G., Leporini M., Marchetti B., Terenzi A.
Numerical study of choked two-phase flow of hydrocarbons fluids through orifices
(2013) Proceedings of the Summer School Francesco Turco, 11-13-September-2013, pp. 86 - 94
- Brandoni C., Polonara F., Ciriachi G., Marchetti B.
Employment impact of renewable energy generation on sustainable communities
(2013) Proceedings of the Summer School Francesco Turco, 11-13-September-2013, pp. 346 - 351
- Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Experimental flexible two-phase loop for quality optimization of piping components
(2013) Proceedings of the Summer School Francesco Turco, 11-13-September-2013, pp. 328 - 333
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84982881461&partnerID=40&md5=a85388ec3ab5a2bcc21c4fa31c32920d>
- Bevilacqua M., Ciarapica F.E., Marchetti B.
Development and test of a new fuzzy-QFD approach for characterizing customers rating of extra virgin olive oil
(2012) Food Quality and Preference, 24 (1), pp. 75 - 84

DOI: 10.1016/j.foodqual.2011.09.005

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Evaluation of MTBF and MTTR trends for a selected equipment in an oil refinery
(2012) Proceedings - 18th ISSAT International Conference on Reliability and Quality in Design, pp. 253 - 257

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Development of an innovative criticality index for turnaround management in an oil refinery
(2012) International Journal of Productivity and Quality Management, 9 (4), pp. 519 - 544
DOI: 10.1504/IJPM.2012.047196
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84862189515&doi=10.1504%2fIJPM.2012.047196&partnerID=40&md5=b3547f79c1b852854effcbe6f5718565>

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
A carbon footprint analysis in the textile supply chain
(2011) International Journal of Sustainable Engineering, 4 (1), pp. 24 - 36
DOI: 10.1080/19397038.2010.502582
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-79951817427&doi=10.1080%2f19397038.2010.502582&partnerID=40&md5=494bd5354ab6ac1c3462ff717d364364>

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Development of a criticality index for preventive maintenance programme
(2011) Proceedings - 17th ISSAT International Conference on Reliability and Quality in Design, pp. 284 - 288
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84886926946&partnerID=40&md5=a08a75b5584fb10d1ab78d75985060d1>

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Turnaround management in a oil refinery
(2011) Proceedings - 17th ISSAT International Conference on Reliability and Quality in Design, pp. 253 - 257

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Implementation of a quality procedure based on Delphi method and the ISO/TS 16949:2009 in the production of stainless steel tubes for automotive exhaust systems
(2011) International Journal of Quality and Reliability Management, 28 (8), pp. 841 - 866
DOI: 10.1108/02656711111162514

Bevilacqua M., Ciarapica F.E., Marchetti B.
Integration of BPR and RFID technology in a process industry: Spare parts warehouse management analysis
(2011) International Journal of RF Technologies: Research and Applications, 2 (3-4), pp. 205 - 223
DOI: 10.3233/RFT-2011-012

Bevilacqua M., Ciarapica F.E., Giacchetta G., Marchetti B.
Overview on the application of ISO/TS 16949:2009, in a worldwide leader company in the production of stainless steel tubes for automotive exhaust systems
(2011) International Journal of Productivity and Quality Management, 7 (4), pp. 410 - 439
DOI: 10.1504/IJPM.2011.040542

Marchetti B., Cannella F., Caso T., Margesin B.
Experimental - Numerical dynamic characterization of series RF MEMS
(2006) Conference Proceedings of the Society for Experimental Mechanics Series

Marchetti B., Vignola J.F., Cannella F., Caso T.
Development of a coupled numerical - Experimental analysis based on laser Doppler vibrometry for the dynamic characterization of silicon based micro paddle oscillators
(2006) Proceedings of SPIE - The International Society for Optical Engineering, 6345, art. no. 63451A
DOI: 10.1117/12.693063

Vignola J., Bucaro J., Tressler J., Ellingston D., Kurdila A., Adams G., Marchetti B., Agnani A., Esposito E., Tomasini E.P.
Proper orthogonal decomposition analysis of scanning laser Doppler vibrometer measurements of plaster status at the US Capitol
(2004) Proceedings of SPIE - The International Society for Optical Engineering, 5503, pp. 358 - 366
DOI: 10.1117/12.579766

Cannella F., Marchetti B.
Evaluation of thermal loading effects of laser Doppler vibrometer applied to micro electro mechanical systems (MEMS)
(2004) Proceedings of SPIE - The International Society for Optical Engineering, 5503, pp. 468 - 477
DOI: 10.1117/12.579567

Castellini P., Marchetti B., Margesin B.
Scanning laser doppler vibrometer for vibrational analysis of micro-electro-mechanical-systems (MEMS)
(2004) Proceedings of the 2004 International Conference on Noise and Vibration Engineering, ISMA, pp. 2281 - 2287
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-13344286012&partnerID=40&md5=9ff25e4eff510387aefc5a312a7c8fd9>

Kurdila A.J., Prazenica R.J., Vignola J., Ellingston D., Adams G., Marchetti B., Agnani A., Esposito E., Tomasini E.
Scanning laser doppler vibrometry for delamination detection in frescoes
(2004) Collection of Technical Papers - AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, 1, pp. 333 - 341

Castellini P., Esposito E., Marchetti B., Paone N., Tomasini E.P.

New applications of Scanning Laser Doppler Vibrometry (SLDV) to non-destructive diagnostics of artworks: mosaics, ceramics, inlaid wood and easel painting

(2003) Journal of Cultural Heritage, 4 (SUPPL. 1), pp. 321 - 329

DOI: 10.1016/s1296-2074(02)01148-2

Castellini P., Marchetti B., Tomasini E.P.

Scanning laser Doppler vibrometer for dynamic measurements on small- and micro-systems

(2002) Proceedings of SPIE - The International Society for Optical Engineering, 4827, pp. 486 - 492

DOI: 10.1117/12.468137

Marchetti B., Montanini R., Rondini C., Maggiorana P., Rossi G.L.

Definition of FBG sensor photoelastic coefficient by laser doppler vibrometry

(2002) Proceedings of SPIE - The International Society for Optical Engineering, 4827, pp. 277 - 287

DOI: 10.1117/12.468171

Castellini P., Esposito E., Marchetti B., Paone N., Tomasini E.P.

New applications of scanning laser doppler vibrometry (SLDV) to non-destructive diagnosis of artworks: Mosaics, ceramics, inlaid wood and easel painting

(2001) Proceedings of SPIE - The International Society for Optical Engineering, 4402, pp. 162 - 171

DOI: 10.1117/12.445659