

MARCO FONTANA short CV (Feb 2022)

Short Bio

Marco Fontana completed his M.S. in Mechanical Engineering in 2003 at University of Pisa and his Ph.D. in Innovative Technologies in 2008 at Scuola Superiore Sant'Anna. He has been Assistant Professor at University of Trento (2016-2020) and he is now Associate Professor in Mechanics of Machine at Scuola Superiore Sant'Anna in Pisa (Italy) where he leads the research group on "Robotic mechanisms and materials".

Since the beginning of his career, he has contributed to the field of robotics with innovative design concepts and control strategies for robots and exoskeletons for human-machine interaction. Specifically, during his PhD studies he has developed a novel hand-exoskeleton for haptic interaction and contributed to the development of a one-of-a-kind full-body exoskeleton.

In a second phase of his career, Marco Fontana has initiated novel research topics that are focused on the design of innovative machines for energy harvesting. In this field, he has studied Dielectric Elastomer Generators for the conversion of energy carried by ocean waves. On this topic, he has led to fundamental researches on characterization, modeling, design, control and demonstration of components and integrated prototypes of wave energy converters based on dielectric elastomers. He has been PI and Co-PI of several research grants at national and European level. Marco Fontana assumed the role of coordinator for the project PolyWEC (funded by FP7 of European Commission) and for two projects funded by the Power Take Off programme of Wave Energy Scotland. Recently, he has been involved in the project WETFEEET funded by European Commission.

More recently, the work of Marco Fontana has been dedicated back to robotics, with specific focus on novel mechanisms and materials for robotic applications. In 2018-2020, he has been the coordinator of MAT4ROB, a project of the Industrial Engineering Department of the University of Trento, which aims at developing innovative technologies for robotic systems based on novel/smart materials and structures. Currently he is working on a novel kind of electrostatic transducers named Electrostatic Bellow Muscles and an innovative kind of electro-hydraulic mechanical transmission system for advanced robots.

Marco Fontana has published his researches in more than eighty papers (appeared in journals, conference proceedings and books), including prestigious editorial targets such as *Science Robotics*, the *Proceedings of Royal Society A* and *Renewable and Sustainable Energy Reviews*. Additionally, he has co-authored five book chapters and has filed five patents (two of which are currently licensed to companies for exploitation).

Personal information

ORCID: <https://orcid.org/0000-0002-5691-8115> , URL for web site: [institutional website](#)

Education

2008 **PhD, Innovative Technologies**, @SSSA¹. 100/100 with honors. Advisor: [Prof. A. Frisoli](#).

2003 **MS in Mech. Eng.**,@UNIPi, 110/110 with honors. Advisor: [Prof. M. Bergamasco](#)

2003 **Special Diploma in Engineering**, @SSSA. 100/100 with honors, awarded "Premio Ultimo Novecento". Advisor: Prof. Massimo Bergamasco.

Current positions

2020-now **Associate Prof.**, Mechanics of Machine - Institute of Mechanical Intelligence - SSSA. Head of *Robotic mechanisms and materials* group.

2018-now **Scientific Advisor**, CHEROS Engineering S.r.l., Spin-Off Company of SSSA.

Previous positions

2019-2020 **Associate Prof.**, Mechanics of Machine - Dep. of Industrial Eng. - UNITN.

¹The following short names are used: *SSSA*: Scuola Superiore Sant'Anna, Pisa, Italy; *UNITN*: University of Trento, Trento, Italy; *UNIPi*: University of Pisa, Italy.

2017-2020 **Steering Committee of MIND Lab**, Multidisciplinary Integrated Design Laboratory, Department of Excellence Grant of Italian Ministry of University and Education.
 2016-2019 **Assistant Prof.**, (tenure track), Mech.Eng. - Dep. of Industrial Eng., UNITN.
 2013-2016 **Adjunct Prof.**, Mechanics of Transducers, MS Mechanical Eng., UNIPI.
 2008-2016 **Assistant Prof.**, (RTDA-non tenured), Mechanical Engineering, SSSA.
 2007-2008 **Postdoctoral Associate**, Mechanical Engineering, SSSA.
 2004-2007 **Ph.D. Researcher**, Innovative Technologies, SSSA.

Competitive grants

Coordinator of international consortiums: *FET Energy*, PolyWEC (2012-2017), European Commission, FP7 (tot budget: 2.6 M€, 750 k€ for MF group); 2 grants from Wave Energy Scotland (total budget 90k£ and 500k£, with 30k£ and 150k£ for MF group).

PI/work-package leader: VERITAS Project, European Commission FP7 2009-2013 (grant for MF group 230k€), WETFEET Prj, H2020 2015-2018 (grant for MF group 230k€)

Awards and qualifications

Best Journal Paper Award in 2021, ASME-ASMS Adaptive Systems Dynamics and Controls TC Journal Paper Award 2021: received @ SMASIS 2021 Conference for the publication appeared on *Science Robotics* [J36];

Best Student Hardware Paper Competition 2021: ASME Adaptive Structures and Material Systems Technical Committee,

Best Demo Award: EAP-in-Action Award, 2021 - SPIE-EPAD Smart Struct. + Nondestruc. Eval.

Best Paper Award: RO-MAN: 22nd IEEE Intern. Symposium on Robot and Human Inter. Com. 2013; **Finalist:** best presentation I-RIM 3D, Rome 2019; best poster, AWEC 2017; best student paper, ASME-SMASIS14; 2nd Place, KUKA Robotics Best Paper, ICRA2009;

Qualifications: Scientific Qualification (Abilitazione Scientifica Nazionale) for Full Professor (Nov 2020 - Nov 2029) in Mechanics of Machines; Industrial Engineering Professional Qualification (2003).

Other: Best diploma thesis in Experimental Science of Scuola Superiore Sant'Anna (29 Nov 2003)

Invited speeches (selected)

Invited Speaker, SPIE-EAPAD Smart Structures + Nondestructive Evaluation. Long Beach, CA, 12-16 March 2023

Invited Speaker, MRS Spring Meeting, Symposium SB02: Materials, Power Sources, Sensors, Actuators and Mechanics for Untethered Soft Robots, Honolulu, Hawaii, 8-13 May 2022

Plenary speech, International Conference on Advanced Mechanism and Machine Technology, Hsinchu, Taiwan on October 29-30, 2021

Invited Seminar, ETIP Ocean: Investigating novel devices before moving towards convergence of design. "Wave energy converters based on dielectric elastomers: status and perspectives". Mar 2018.

Invited Presentation, Modelling, design and experimental testing of wave energy converters based on dielectric elastomer generators. ASME-SMASIS 2017, Conference On Smart Materials, Adaptive Structures & Intelligent Systems, Snowbird, Utah US, 20 Sept 2017.

Invited Talk, Artificial muscles, Workshop on Mathematical Physiology of Cardiac, Skeletal and Smooth Muscles, Scuola Normale Superiore, Pisa, 5-9 October 2015.

Keynote Talk at the Symposium of the International Network on Offshore Renewable Energy, Future emerging technologies in offshore renewable energy converters, Vico Equense, Napoli, Italy 25 May 2015.

Invited Talk, New Mechanisms and Concepts for Exploiting Electroactive Polymers for Wave Energy Conversion 26th November 2013. Wave Energy Center Seminars, Lisbon, Portugal.

Organisation of scientific meetings

Conference Program Committee: 2021 - now - SPIE-EAPAD Smart Structures + Nondestructive Evaluation; 2021 - Airborne Wind Energy Conference - AWEC 2021.

Session Chair : 2018 - IEEE, International Conference on Intelligent Robots and Systems; 2016-2018

- SPIE, Smart Materials and Structures NDE;

Session Co-Chair: 2015 - ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems; 2015 - SPIE, Smart Materials and Structures NDE.

Session Organizer: 2016 - ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Energy Harvesting Symposium.

Associate editor: 2021 - ICAR 2021, 20th International Conference on Advanced Robotics; 2013 - IEEE International Conference on Robot and Human Interactive Com.

Local Arrangements Chair: 2010 - IEEE Conf. on Robot and Human Interactive Com.

General Chair: 2008 - ENACTIVE International Conference on Enactive Interfaces 2008.

Teaching

I have been teaching the following topics in different courses at SSSA, UNITN and UNIPI:

Mechanics of Robots; Smart Materials; Mechanics of Traducers (actuators, sensor and generators); Engineering design project; Sustainable energy conversion; Mechanics of Machines.

Supervision of graduate students and postdoctoral fellows

2016- now **2 Post Doc** and **2 PhD** (ongoing) + Several **MS** Thesis Students.

2012-2016 **5 Post Docs** - *Now*: Senior Lecturer, Assistant Professor and Post-Doc in other Universities; **6 PhD** - *Now*: 1 of them involved in a SpinOff company or the rest are employed as researchers in other Universities + **Several Master/Diploma Students**.

Institutional responsibilities

2021-now **Head of Robotic Mechanisms and Materials Group**, Institute of Mechanical Intelligence, Scuola Superiore Sant'Anna.

2021-now **Vice-delegate for University Guidance (STEM area)**, Scuola Superiore Sant'Anna.

2019-2020 **Steering Committee of MIND Lab**, Multidisciplinary Integrated Design Laboratory, *Head of MAT4ROB Group* Department of Industrial Engineering, University of Trento.

2011-now **Member of the selection committees** 1 selection for Tenure Track Assistant Professor (RTB) Univ. fo Bologna 2021, and 4 different selections for Assistant Professor (RTA) in Mechanics of Machines @SSSA 2011-2019.

2017-now **Member of the PhD School** in Materials, Mechatronics and Systems Eng., UNITN.

2018-2020 **Delegate for University Guidance**, Industrial Engineering Department, UNITN.

2016-now **13 PhD examination committee/panel** : University of Firenze (2022); Politecnico di Milano (2021); Universidad Carlos III, Madrid (2021); UNITN (2019, 2017); TU Delft (2017), University of Bologna (2018); University of Padova (2017); SSSA (2017, 2018, 2019); University of Genova (2018).

2012- 16 **Head of PERCRO SEES** Laboratory, TeCIP Institute, Scuola Superiore Sant'Anna.

2008-now **Review panel for Master and Bachelor Thesis** at University of Pisa, Scuola Superiore Sant'Anna and University of Trento for a total of more than 20 thesis.

Reviewing and editorial activities

2014-2019 **Project review panel member** for: *Agence Nationale de la Recherche*, France; *Swiss National Science Foundation*; *BRIDGE Discovery*, Switzerland; *Ministry Of Science Technology And Space Of The State Of Israel* (Israel).

2014-2019 **Review and editorials:** *Editorial Board Member Scientific Reports* Nature Portfolio; *Associate Editor* for the section *Haptics* in *Frontiers in Virtual Reality*; *Reviewer* for: *Science Robotics*, Elsevier, *WileyJournal of Advanced Functional Materials*, *Journal of Mechanisms and Machine Theory*, *ASME Journal of Mechanisms and Robotics*, *ASME Journal of Intelligent Materials and Structure*, *IEEE ToM: Transaction on Mechatronics*, *IEEE RAM: Robotics and Automation Magazine*.

Memberships and Roles in Scientific Societies

- 2022 **Member of Wave-SPARC/DEEC-Tec Prize Advisory Board**, organized by National Renewable Energy Laboratories (US)
- 2021-now **Secretary of the ASME-ASMS TC** on Adaptive Systems Dynamics and Control.
- 2022-now **Chair of the Scientific Mission Grant Committee** (SMG), EuroEAP - European Society for Electromechanically Active Polymer Transducers& Artificial Muscles
- 2018-now **Member (elected), ASME-ASMS Branch** on Adaptive Structures & Material Systems
- 2016-now **Member (elected), Technical Committee** ASME - Adaptive Structures and Material Systems; Topic: Adaptive systems dynamics and control.
- 2006-now **Member** of ASME, IEEE, SPIE, EuroEAP Society, GMA (Italian Group of Applied Mech.).

Publications - Journals

In review

- R1 Hydrostatic Transmissions for Lightweight Human-Friendly Robotic Arms, Bolignari M., Rizello G., Zaccarian L., **Fontana M.**, *IEEE Transactions on Robotics* (in review).

Published/accepted:

- J44 Adhesion state estimation for electrostatic gripper based on online capacitance measure, Sîrbu I.D., Davella S., Bolignari M., Tripicchio P., Pancheri L., **Fontana M.**, *Actuators* (accepted).
- J43 Barium titanate functionalization with organosilanes: effect on particle compatibility and permittivity in nanocomposites, Zamperlin N., Bottacini A., Callone E., Pegoretti A. **Fontana M.**, Dirè S, *Molecules* (accepted)
- J42 A multi-mode, multi-frequency dielectric elastomer actuator , Gratz-Kelly S., Rizello G., **Fontana M.**, Seelecke S., Moretti G. *Advanced Functional Materials*, **32.34** (2022): 2201889.
- J41 Actuator and Contact Force Modeling of An Active Soft Brace for Scoliosis, Ali A., Fontanari V., Schmoelz W., **Fontana M.**, *Bioengineering*, **9**(7), p.303.
- J40 Analysis and Preliminary Design of a Passive Upper Limb Exoskeleton, Vazzoler G., Berselli G., **Fontana M.**, Frisoli A. *IEEE Transactions on Medical Robotics and Bionics*, **4** (3), 558-569.
- J39 High-frequency voltage-driven vibrations in dielectric elastomer membranes, Moretti G., Rizello G., **Fontana M.**, Seelecke S. *Mechanical Systems and Signal Processing*, **168**, 2022.
- J38 A broadbanded pressure differential wave energy converter based on dielectric elastomer generators, Righi M., Moretti G., Forehand D., Vertechy R., **Fontana M.** *Nonlinear Dynamics*, **105**, 2021.
- J37 Exploring the limits of a hybrid actuation system through Co-Design, Grandesso G., Bravo G., Wensing P.M., **Fontana M.** Del Prete A. *IEEE Access*, **9**, 2021.
- J36 Electrostatic bellow muscle actuators and energy harvesters that stack up, Sîrbu I.D., Moretti G., Bortolotti G., Bolignari M., Dirè S., Fambri L., Vertechy R., **Fontana M.** *Science Robotics*, **6**, eaz5796, 2021.
- J35 Smith-predictor-based torque control of a rolling diaphragm hydrostatic transmission, Bolignari M., Rizzello G., Zaccarian L., **Fontana M.** *Robotic Automation Letters*, **6** (2), 2021.
- J34 Hardware-in-the-loop Simulation of Wave Energy Converters based on Dielectric Elastomer Generators, Moretti G., Scialò A., Malara G., Muscolo G.G., Arena F., Vertechy R., **Fontana M.** *Meccanica*, **56** (5), 2021.

- J33 Spinal Deformities and Advancement in Corrective Orthoses, Ali A., Fontanari V., **Fontana M.**, Schmoelz W. *Bioengineering*, **8** (1), 2021.
- J32 Effect of Hydrothermal Treatment and Doping on the Microstructural Features of Sol-Gel Derived BaTiO₃ Nanoparticles, Zamperlin, N., Ceccato, R., **Fontana, M.**, Pegoretti, A., Chiappini, A. and Dirè, S. *Materials*, **14** (15), p.4345, 2021.
- J31 Dynamics Modelling of Human-Machine Control Interface for Underwater Teleoperation. Muscolo G.G., Marcheschi S. **Fontana M.**, Bergamasco M. *Robotica*, **39** (4), 2021.
- J30 A lumped parameter model for strip-shaped dielectric elastomer membrane transducers with arbitrary aspect ratio, Rizzello G., Loew P., Agostini L., **Fontana M.** and Seelecke S. *Smart Materials and Structures*, **29** (11), 2020.
- J29 A Novel Linear Pneumatic Actuator with Tunable-Compliance Constraint, Muscolo G., **Fontana M.** *Journal of Mechanics and Control* (In print), **21** (2), 2020.
- J28 A review on dielectric elastomer generator systems, Moretti G., Rosset S., Vertechy R., Anderson I., **Fontana M.** *Advanced Intelligent System*, **2** (10), 2020.
- J27 Styrenic-Rubber Dielectric Elastomer Actuator with Inherent Stiffness Compensation, Moretti G., Sarina L., Agostini L., Vertechy R., Berselli G., **Fontana M.** *Actuators*, 2020, **9** (44).
- J26 Design and experimental characterization of a high performance hydrostatic transmission for robot actuation, Bolignari M., **Fontana M.** *Meccanica* **55**, 2020.
- J25 Rapid Fabrication of Electro-Adhesive Devices with Inkjet Printed Electrodes, Bedrozzi N., Chen Y., Luzi L., **Fontana M.**, Fassi I., Tosatti L., Vertechy R. *Robotics and Automation Letters* **5** (2), 2020.
- J24 A passively regulated full-toroidal continuously variable transmission, Milazzo M., Moretti G., Burchianti A., Mazzini D., Calogero M.O., Stefanini C., **Fontana M.** *Meccanica* **55**, 2020.
- J23 Advances in the development of dielectric elastomer generators for wave energy conversion. Moretti G., Santos-Herran M., Forehand D., Alves M., H. Jeffery, Vertechy R., **Fontana M.** *Renewable & Sustainable Energy Reviews* **117**, 2020.
- J22 Modelling and field testing of a breakwater-integrated U-OWC wave energy converter with dielectric elastomer generator. Moretti G., Malara G., Scialò A., Daniele L., Romolo A., Vertechy R., **Fontana M.**, Arena F. *Renewable Energy*, **146**, 2020.
- J21 Dielectric elastomer materials for large-strain actuation and energy harvesting: a comparison between styrenic rubber, natural rubber and acrylic elastomer, Chen Y., Agostini L., Moretti G., **Fontana M.**, Vertechy R. *Smart Materials and Structures* **28** (11), 2019.
- J20 Future emerging technologies in the wind power sector: a European perspective, Watson S., Moro A., Reis V., Baniotopoulos C., Barth S., Bartoli G., Bauer F., Boelman F., Bosse D., Cherubini A., Croce A., Fagiano L., **Fontana M.**, Gambier A., Gkoumas K., Golightly C., Latour M.I., Jamieson P., Kaldellis J., Macdonald A., Murphy J., Muskulus M., Petrini F., Pigolotti L., Rasmussen F., Schild P., Schmehl R., Stavridou N., Tande J., Taylor N., Telsnig T., Wiser R. *Renewable & Sustainable Energy Reviews* , **113**, 2019.
- J19 Modelling and testing of a wave energy converter based on dielectric elastomer generators Moretti G., Papini G.P.R., Daniele L., Forehand D., Ingram, D., Vertechy R., **Fontana M.** *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **475** (2222), 2019.

- J18 Resonant wave energy harvester based on dielectric elastomer generator, Moretti G., Papini Rosati G.P., Righi M, Forehand D., Ingram D., Vertechy R., **Fontana M.** *Smart Materials and Structures* **27** (3), 2018
- J17 Control of an Oscillating Water Column Wave Energy Converter Based on Dielectric Elastomer Generator, Papini Rosati G.P., Moretti G., Vertechy R., **Fontana M.** *Nonlinear Dynamics*, **92** (2), 2018
- J16 A New Class of Variable Capacitance Generators Based on the Dielectric Fluid Transducer, Duranti M., Righi M, Vertechy R., **Fontana M.** *Smart Materials and Structures*, **26** (11), 2017.
- J15 Fabrication and Test of an Inflated Circular Diaphragm Dielectric Elastomer Generator Based on PDMS Rubber Composite. Moretti G., Righi M., Vertechy R., **Fontana M.** *Polymers*, **9**, 2017
- J14 Trackhold: A Novel Passive Arm-Support Device. Lenzo B, **Fontana M.**, Marcheschi S, Salsedo F, Frisoli A, Bergamasco M. *Journal of Mechanisms and Robotics*. **8** (2), 2016
- J13 Simplified Model of Offshore Airborne Wind Energy Converters, Cherubini A., Vertechy R., **Fontana M.** *Renewable Energy*, **88**, 2016
- J12 Desktop Haptic Interface for Simulating Hand-Tremor, Papini Rosati G.P., **Fontana M.**, Bergamasco, M. *IEEE Transactions on Haptics*, **9** (1), 2016
- J11 Airborne Wind Energy Systems: A review of the technologies. Cherubini A., Papini A., Vertechy R., **Fontana M.** *Renewable & Sustainable Energy Reviews*, **51**, 2015.
- J10 Model-Based Design and Optimization of a Dielectric Elastomer Power Take-Off for Oscillating Wave Surge Energy Converters, Moretti G., **Fontana M.**, Vertechy R. *Meccanica*, **50** (11), 2015
- J9 Experimental characterization of thermally-activated artificial muscles based on coiled nylon fishing lines. Cherubini A., Moretti, G, Vertechy R, **Fontana M.** *AIP Advances*, **5**, 2015.
- J8 Parallelogram-shaped dielectric elastomer generators: analytical model and experimental validation, Moretti G., **Fontana M.**, Vertechy R. *Journal of Intelligent Material Systems and Structures*, **26**, 2015.
- J7 Reduced Model And Application Of Inflating Circular Diaphragm Dielectric Elastomer Generators For Wave Energy Harvesting. Vertechy R., Rosati Papini G.P., **Fontana M.** *ASME Journal of Vibration and Acoustics*, **137** (1), 2015
- J6 The Body Extender: A Full-Body Exoskeleton for Transport and Handling of Heavy Loads. **Fontana M.**, Vertechy R., Marcheschi S., Salsedo F., Bergamasco M. *Robotics & Automation Magazine, IEEE*, **21** (4), 2014
- J5 Novel magnetic sensing approach with improved linearity. **Fontana M.**, Salsedo F., Bergamasco M. *Sensors*, **13** (6), 2013.
- J4 Haptic Hand Exoskeleton for Precision Grasp Simulation. **Fontana M.**, Fabio S., Marcheschi S., Bergamasco M. *ASME Journal of Mechanisms and Robotics*, **5** (4), 2013.
- J3 A Three-Axis Force Sensor for Dual Finger Haptic Interfaces. **Fontana M.**, Marcheschi S., Salsedo F., Bergamasco M. *Sensors*, **12** (10), 2012;.
- J2 Intersection support system for powered two-wheeled vehicles: threat assessment based on a receding horizon approach. Biral F., Lot R., Rota S., **Fontana M.**, Huth V. *IEEE Transactions on Intelligent Transportation Systems*, **13** (2), 2012.
- J1 High performance haptic device for force rendering in textile, Bergamasco M., Salsedo F., **Fontana M.**, Tarri F., Avizzano C.A., Frisoli A., Ruffaldi E., Marcheschi S. *Visual Computer*, **23** (4), 2007.

Publications: Conference Proceedings

- C50 Diaphragm Ankle Actuation for Efficient Series Elastic Legged Robot Hopping , Bolignari M., Mo A., **Fontana M.**, Alexander Badri-Sprowitz *IROS* (accepted).
- C49 Finite element modelling of the vibro-acoustic response in dielectric elastomer membranes. Moretti G., Rizzello G., **Fontana M.**, Seelecke S. In *Electroactive Polymer Actuators and Devices (EAPAD) XXIV*, vol. 12042, pp. 102-112. SPIE, 2022.
- C48 Multidirectional hemispherical dielectric elastomer proximity sensor for collision avoidance in human-robot interaction applications. Agostini, L., Monari, E., Caselli, M., **Fontana, M.**, Vertechy, R. (2022, April). In *Electroactive Polymer Actuators and Devices (EAPAD) XXIV* (Vol. 12042, p. 1204202). SPIE.
- C47 Modeling of static reliability assessment in dielectric elastomer transducers subject to electric loads. Agostini, L., Fontana, M., Vertechy, R. (2022). *IFAC-PapersOnLine*, 55(20), 594-599.
- C46 Experimental characterization of a multilayer silicone-based electroactive patch for gripper applications. Caselli, M., Berdozzi, N., Agostini, L., **Fontana, M.**, Fassi, I., Tosatti, L. M., Vertechy, R. (2021, March). In *Electroactive Polymer Actuators and Devices (EAPAD) XXIII* (Vol. 11587, p. 115871S). International Society for Optics and Photonics.
- C45 A multi-domain dynamical model for cone-shaped dielectric elastomer loudspeakers. Moretti, G., Rizzello, G., **Fontana, M.**, Seelecke, S. (2021, March). In *Electroactive Polymer Actuators and Devices (EAPAD) XXIII* (Vol. 11587, p. 115871K). International Society for Optics and Photonics.
- C44 Inkjet printed thin-film electro-adhesive device: manufacturing and characterization, Berdozzia N., Chen Y., Luzia L., Bocchieria G., **Fontana M.**, Fassi I., Molinari L., Tosatti L., Vertechy R., In *Electroactive Polymer Actuators and Devices (EAPAD-2020)*.
- C43 Electrostatic actuator for tactile display based on hydraulically coupled dielectric fluids and soft structures. Sîrbu, I. D., Moretti, G., Dirè, S., Fambri, L., Vertechy, R., Meniglio, D., **Fontana, M.** In *Electroactive Polymer Actuators and Devices (EAPAD-2019) XXI* 10966 109662D.
- C42 Continuum electro-mechanical damage modelling for dielectric elastomer, Agostini L. , Rizzello G., **Fontana M.** , Vertechy R. , Seelecke S. *Electroactive Polymer Actuators and Devices (EAPAD-2019) XXI* 10966, 109660.
- C41 Fatigue life performances of silicone elastomer membranes for dielectric elastomer transducers: preliminary results, Chen Y., Agostini L., Moretti G., Berselli G., **Fontana M.**, Vertechy R. *Electroactive Polymer Actuators and Devices (EAPAD-2019) XXI* 10966, 1096616.
- C40 Design and Experimental Characterisation of a Hydrostatic Transmission for Upper Limb Exoskeletons, Bolignari M., Moretti G., **Fontana M.**, Proceedings of Intelligent Robots and Systems (IROS), 2018 IEEE/RSJ International Conference on.
- C39 Field Experiments on Dielectric Elastomer Generators Integrated on a U-OWC Wave Energy Converter. Arena, F., Daniele, L., Fiamma, V., **Fontana M.**, Malara, G., Moretti, G., Romolo A., Vertechy, R. In *ASME 2018 37th International Conference on Ocean, Offshore and Arctic Engineering* (pp. V010T09A028-V010T09A028). American Society of Mechanical Engineers.
- C38 On The Lifetime Performance Of A Styrenic Rubber Membrane For Dielectric Elastomer Transducers. Chen, Y., L. Agostini, **Fontana M.**, Moretti G., Vertechy R. Proceedings of the ASME 2018 Conference on Smart Materials, Adaptive Structures and Intelligent Systems.
- C37 Analysis of dielectric fluid transducers, Moretti G., Duranti M., Righi M., Vertechy R., **Fontana M.** *Electroactive Polymer Actuators and Devices (EAPAD - 2018) XX* 10594, 105940W.

- C36 Preliminary Test on Automatic Take-Off and Landing of a Multi-Drone Low-Drag Airborne Wind Energy System. Cherubini, A., Szalai, B., Schmehl, R., **Fontana M.**, In conference on Airborne Wind Energy 2017. [**Best Poster Award Finalist**]
- C35 Integration of breakthrough concepts into the OWC spar buoy. Teillant, B., Debruyne, Y., Sarmiento, A., Gomes, R., Gato, L.M.C., **Fontana M.**, Philippe, M. and Combourieu, A. In Progress in Renewable Energies Offshore: Proceedings of the 2nd International Conference on Renewable Energies Offshore (RENEW2016), Lisbon, Portugal, 24-26 October 2016 (p. 351). CRC Press.
- C34 An IMU and RFID-based Navigation System Providing Vibrotactile Feedback for Visually Impaired People. Loconsole C., Dehkordi M.B., Sotgiu E., **Fontana M.**, Bergamasco M., Frisoli A. In International Conference on Human Haptic Sensing and Touch Enabled Computer Applications 2016 (pp. 360-370). Springer International Publishing.
- C33 Experimental testing of Dielectric Elastomer Generators for Wave Energy Converters. Moretti G., Rosati Papini G.P., Vertechy R., **Fontana M.** 12th. European Wave and Tidal Energy Conference Series, EWTEC 2017.
- C32 Hardware in the loop simulation of a dielectric elastomer generator for oscillating water column wave energy converters. Moretti G., Papini Rosati G.P., **Fontana M.**; Vertechy R. in Proceedings of OCEANS 2015 - Genova, 18-21 May 2015.
- C31 Analysis And Design Of An Oscillating Water Column Wave Energy Converter With Dielectric Elastomer Power Take-Off. Moretti G., Papini Rosati G.P., Alves M., Grases M., **Fontana M.**, ASME 2015 34rd International Conference on Ocean, Offshore and Arctic Engineering OMAE2015-42103.
- C30 Techno-economic comparison between air turbines and dielectric elastomer generators as power take off for oscillating water column wave energy converters. Teillant, M.V., Rosati Papini, G.P., Moretti, G., Vertechy, R., **Fontana, M.**, Monkand, K. and Alves, M., 2015, September. In 11th European Wave & Tidal Energy Conference. Nantes, France.
- C29 Electromechanical characterization of a new synthetic rubber membrane for dielectric elastomer transducers. Vertechy R., **Fontana M.**, Proc. SPIE 9056, Electroactive Polymer Actuators and Devices (EAPAD) 2015, (March 9, 2015).
- C28 Experimental characterization of actuators based on coiled polymeric-wire. Moretti G., Cherubini A., Vertechy R., **Fontana M.**, Proc. SPIE 9432, Behavior and Mechanics of Multifunctional Materials and Composites 2015, (March 9, 2015).
- C27 An Experimental Assessment of the Thermo-Elastic Response in Acrylic Elastomers and Natural Rubbers for Application on Electroactive Polymer Transducers. Berselli G., Vertechy R., **Fontana M.**, Pellicciari, M. In ASME 2014 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (pp. V001T03A027-V001T03A027). American Society of Mechanical Engineers.
- C26 Experimental Characterization Of A Circular Diaphragm Dielectric Elastomer Generator. Righi M., Vertechy R. **Fontana M.** In Proceedings of the ASME 2014 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS2014) SMASIS2014-7565, Newport, Rhode Island, USA September 8–10, 2014. [Student Hardware Competition Finalist]
- C25 Modeling Of A Heaving Buoy Wave Energy Converter With Stacked Dielectric Elastomer Generator. Moretti G., **Fontana M.**, Vertechy R. In Proceedings of the ASME 2014 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS2014) SMASIS2014-7565, Newport, Rhode Island, USA September 8–10, 2014.

- C24 Modeling Of An Oscillating Wave Surge Converter With Dielectric Elastomer Power Take-Off. Moretti G., Forehand D., Vertechy R., **Fontana M.**, Ingram, D. ASME 2014 33rd International Conference on Ocean, Offshore and Arctic Engineering 23559 (2014) OMAE2014-23559.
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