

Marcello Calisti

Curriculum Vitae et Studiorum

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Education

- 2009–2012 **Phd in BioRobotics**, from *Scuola Superiore Sant'Anna*, Pisa, Italy.
100/100 with Honours
- 2005–2008 **MSc in BioMedical Engineering**, from *University of Florence*, Florence, Italy.
- 2002–2005 **BSc in Mechanical Engineering**, from *University of Perugia*, Perugia, Italy.

Academic and research positions

- 2018–Present **Assitant Professor**, at *Scuola Superiore Sant'Anna*, Pisa, Italy.
- 2018 **Visiting Scholar**, at *Khalifa University*, Abu Dhabi, United Arab Emirates.
- 2013–2017 **Post-doctoral Fellow**, at *Scuola Superiore Sant'Anna*, Pisa, Italy.
- 2009–2012 **PhD Student**, at *Scuola Superiore Sant'Anna*, Pisa, Italy.
- 2008–2009 **Research Assistant**, at *University of Florence*, Florence, Italy.
- 2007 **Master Thesis Internship**, *European Centre for Soft Computing*, Mieres, Spain.

Research activities in international projects

- 2018–Present **Blue Resolution**, In this project the advantages of bioinspired approaches for the design of underwater vehicle will be challenged in real demanding scenarios. A six-leg underwater robot will be developed to monitor and clean the ocean seabed from plastic and microplastics. Traditional underwater design principles will be integrated with bio-inspired conceptual design and control algorithms, to achieve stable locomotion, precise station keeping and accurate sampling by means of an underwater manipulator. For this project, I serve as Principal Investigator coordinating three PhD students and one Research Assistant..
Funded by Arbi Dario S.p.A.

- 2017–2018 **SILVER**, *Seabed-Interaction Legged Vehicle for Exploration and Research*, ambition is to create a new generation of underwater legged robots that will enhance the exploration of the benthonic environment, by providing an underwater robot that safely, precisely, repeatedly, and with a simple user-interface could take high resolution images, move inside underwater structures, collect samples, stand disturbances and monitor continuously a target site. For this project I was awarded of an Early Career Grant by the National Geographic Society, and I was the Principal Investigator coordinating two PhD students and one Research Assistant. Publication relevant to this project are reported in the last entry of this CV and is labelled as (s1, p5).
Funded by the National Geographic Society under the Early Career Grant program
- 2015–2018 **SWARMS**, *Smart and Networking Underwater Robots in Cooperation Meshes*, In this European Project, I am contributing with dissemination, management, and research activities. With respect to reserach, I am working on underwater vision of remotely operated vehicles and autonomous underwater vehicles by means of bioinspired vision algorithms based on polarized vision. A publication relevant to these activities is reported in the last entry of this CV and is labeled as (c15; p3).
Funded by the European Commission in ECSEL framework, under contract 662107, total cost: 17,294,257€, total grant: 6,406,818€, SSSA grant: 85,312€
- 2013–2016 **RoboSoft CA**, In this coordination action I contributed both with dissemination, management, and mechanical design activities. I was responsible for the implementation of the RoboSoft Grand Challenge, I conceived the rules, defined the scenarios and tasks at conceptual level. I designed and assembled the competition fields, and coordinated the logistic of the challenge, including the collection and elaboration of the data. Publication relevant to this activity is reported in (j8).
Funded by the European Commission in the ICT-FET Open Programme, under contract 619319, total cost: 1,064,973€, total grant: 952,960€, SSSA grant: 395,869€
- 2009–2013 **Octopus IP**, In this European Project, I contributed with dissemination, logistic, and research activities. I studied octopus' crawling to extract the fundamental principles of this locomotion, and then I used the biological observations to build a novel underwater robot with soft limbs. This work was carried out in tight collaboration with biologists from the BioRobotics Institute and from the University of Jerusalem. Publications relevant to these activities are reported in the last entry of this CV and are labeled as (j1; j4;c6-c9 and b2) .
Funded by the European Commission in the ICT-FET Programme "Embodied Intelligence", under contract 231608, total cost: 9,745,238€, total grant: 7,600,000€, SSSA grant: 2,000,000€

Research activities in national projects

- 2012–2015 **PoseiDRONE**, In this National Project, I contributed with dissemination, management, and research activities. I was involved in the implementation of the benthic locomotion of an underwater robot, by taking as inspiration particular gaits such as bipedal walking of octopuses and underwater hopping. The work regarded both the design and control of the legged system. Publications relevant to these activities are labeled as (c10-c14;j6-j7;b4-b5).
Funded by Fondazione Livorno, total cost: 200,000€, total grant: 100,000€, SSSA grant: 100,000€.

Other research activities

- 2018–Current **Flagellum-inspired robot**, This project explores the application of soft slender soft propellers (inspired by the motile capabilities of flagella) to develop a novel kind of underwater robots. This project is coordinated by Dr. Federico Renda, from Khalifa University..
- 2016–2017 **MBZIRC**, *Mohamed Bin Zayed International Robotics Challenge*, Tau-theory describes how animals approach fixed or moving targets for tasks such as landing, following a target, stopping to a point, prey catching, and others. I am responsible of implementing tau-theory on UAVs to perform visually-guided autonomous landing on moving vehicles, and object approaching for manipulation purposes. Publication relevant to these activities is labeled as (s2).
- 2009–Present **Vision-based tracking system**, I developed a tridimensional reconstruction algorithm (from images of two cameras in stereo configuration) to estimate the pose and to provide a quantitative comparison among robots and models. My algorithm was used to obtain position and orientation of soft arms, end-effectors and mobile robots. Publications relevant to these activities are labeled as (j2-j3;j5;b3).
- 2008–2009 **Biomedical signal processing**, The research role regarded the analysis of Videokimographic images and of acoustic signals, for the diagnosis of vocal cord disorders and obstructive sleep apnoea syndrome. I worked in collaboration with clinicians and international experts. Publications relevant to these works are labeled as (c1-c5).

Teaching activities

- 2016–2019 **Subject Expert**, *I was appointed as expert, eligible to do examinations and assess students, on "Natural and Artificial Senses" subject*, Bachelor Degree on BioMedical Engineering, Module: Sensorial Systems.
University of Pisa
- A.Y.s **Support to Didactic**, *I won a Support to Didactic position for the vision module of the Biomedical Engineering course on "Natural and Artificial Senses", for an amount of 18 hours (2016) and 18 hours (2017) of frontal lectures (plus additional hours for examinations)*, Bachelor Degree on BioMedical Engineering, Module: Sensorial Systems.
University of Pisa
- A.Y. **Teaching assistant**, *I supported, on a voluntary basis, the Bionic Engineering course on "Human and Animal Model for BioRobotics", held by Prof. Laschi, for an amount of 6 hours of frontal lectures (plus additional hours for examinations and students tutoring)*, Master Degree on Bionics Engineering.
Scuola Superiore Sant'Anna/University of Pisa
- A.Y. **Teaching appointment**, *I was appointed as professor for 8 hours of frontal lectures*, 2015–2016 Digital Life and Smart Living, post-graduate course, TIB: Artificial Vision.
Scuola Superiore Sant'Anna
- A.Y. **Teaching appointment**, *I was appointed as professor for 8 hours of frontal lectures*, 2014–2015 Smart Solutions - Smart Communities (SSSC), post-graduate course, TIB: Artificial Vision.
Scuola Superiore Sant'Anna

2012–2017 **Teaching assistant**, *I supported, on a voluntary basis, the Computer Science course on “Robotic Perception”, held by Prof. Laschi, for an amount of about 40 hours of frontal lectures (plus additional hours for examinations and students tutoring)*, Master Degree on Computer Science.
University of Pisa

Supervision and tutoring activities

- October 2017–Present **Phd student tutoring**, *tutored student:*, Mrudul Chellapurath, Synthetic research theme: “Shape-changing bioinspired shells for control and actuation purposes”. Publications relevant to this activities are reported in the last entry of this CV, and are labeled as (pr6).
Phd, BioRobotics curriculum
- October 2017–Present **Phd student tutoring**, *tutored student:*, Saverio Iacoponi, Synthetic research theme: “Bioinspired robotic compliant legs for advanced locomotion and anchoring purposes”. Publications relevant to this activities are reported in the last entry of this CV, and are labeled as (pr5, pr6).
Phd, BioRobotics curriculum
- October 2016–Present **Phd student tutoring**, *tutored student:*, Giacomo Picardi, Synthetic research theme (provisional): “Bioinspired legged soft robots locomotion”. Publications relevant to this activities are reported in the last entry of this CV, and are labeled as (j9, s1, pr1, pr5, pr6).
Phd, BioRobotics curriculum
- 2016–2017 **Research assistant supervision**, *supervised researcher:*, Gaetano Carbonara, research theme: “Bioinspired underwater vision”.
in the framework of SWARMS - WP4
- 2016–2017 **MSc students supervision**, *supervised students:*, C. Livolsi, V. Ianniciello, I. Pacifico, project title: “Time-to-contact bioinspired landing strategies for UAV”.
Major in: Bionics Engineering
- Sept 2016–Nov 2016 **BSc student tutoring**, *tutored student:*, Cristian Tesconi, thesis title: “Strategie basate sulla visione biologica per il controllo di robot”.
Major in: Biomedical Engineering
- 2015–2016 **MSc students supervision**, *supervised students:*, F. Desogus, G. Marini, C. Moratilla, project title: “Algorithm navigation implemented on AIBO robot”.
Major in: Computer Science
- 2014–2015 **Phd student tutoring**, *tutored student:*, Francesco Corucci, project theme: “Morphosis in underwater legged locomotion”.
Phd, BioRobotics curriculum. Publications relevant to this activities are reported in the last entry of this CV, and are labeled as (a3, j6, c12, c13)
- 2013–2014 **MSc students supervision**, *supervised students:*, A. Caporale, D. Antuzi, project title: “3D reconstruction via Direct Linear Transformation”.
Major in: Computer Science

Participation at international conferences/events

- June, 2017 **Invited Seminar (8hrs)**, Universtat Politecnica de Valencia, “Bioinspired approaches to design and control of soft robots” .
Valencia (Spain)
- August, 2016 **Invited Speaker**, Simulation of Adaptive Behavior, “Soft robotics and adaptive locomotion: What an octopus can teach us” .
Aberystwyth (UK)
- April, 2016 **Invited Speaker**, RoboSoft Summer School, “Soft robotics in underwater legged locomotion: from octopus-inspired solutions to running robots” .
Livorno (Italy)
- May, 2016 **Speaker**, ICRA, “Hopping on uneven terrains with an underwater one-legged robot” .
Stockholm (Sweden)
- May, 2015 **Speaker**, OCEANS, “Underwater running on uneven terrain” .
Genoa (Italy)
- May, 2012 **Speaker**, ICRA, “Design and development of a soft robot with crawling and grasping capabilities” .
Saint Paul (MN, USA)

Editorial activities

I served on a regular basis as referee for the following international conferences: **International Conference on Robotics and Automation, International Conference on Intelligent Robots and Systems, Robotics: Science and Systems**; and for the following international journals: **Robotics and Automation Magazine, Journal of the Royal Society: Interface, IEEE Transaction on Robotics, Bioinspiration and Biomimetics, Soft Robotics, Frontiers in Robotics and AI, Frontiers in Mechanical Engineering, Science Robotics**.

I served as Guest Associate Editor for the international journal: **Frontiers in Robotics and AI**

Dissemination activities

I disseminate research activities to the general public, scientific and industrial communities with *ad hoc* prototypes and presentations in the following events:

- July, 2018 **Blue Resolution/SILVER**, *Giffoni International Film Festival*, Giffoni (Italy).
- April, 2018 **SILVER**, *National Geographic Science Festival*, Rome (Italy).
- January, 2018 **SILVER**, *National Geographic Explorer Festival*, London (UK).
- September, 2017 **SWARMS/SILVER**, *ERL Emergency*, Piombino (Italy).
- September, 2015 **SWARMS/RoboSoft CA**, *euRathlon competition*, Piombino (Italy).
- May, 2014 **PoseiDRONE/RoboSoft CA**, *Wired Next Fest*, Milano (Italy).
- October, 2013 **PoseiDRONE**, *Lucca Comics and Science*, Lucca (Italy).

- September, 2013 **PoseiDRONE**, *SHINE! (Scientists are Humans: Interactive Night of Entertainment!)*, Livorno (Italy).
- May, 2013 **Octopus IP**, *The Times Cheltenham Science Festival*, Cheltenham (UK).
- December, 2011 **Octopus IP**, *Innovation Convention*, Brussels (Belgium).
- May, 2011 **Octopus IP**, *FET Exhibition*, Budapest (Hungary).
- September, 2010 **Octopus IP**, *ICT2010 Exhibition*, Brussels (Belgium).

I released several interviews on the mentioned projects on television broadcasting networks (such as RAI, SkyTg24, etc.) and on radio as well.

Management and organizational activities

- - Principal Investigator of Blue Resolution project
- - Chair of the IEEE RoboSoft 2018 Competition
- - Principal Investigator of SILVER project
- - Management support to deliverables and reports preparation for SWARMs
- - Team leader for research activities on SWARMs – WP4 – *Environment Recognition and Sensing*
- - Chief of logistics and management of the RoboSoft Grand Challenge, under the framework of RoboSoft CA – WP3 – *Consolidation of the RoboSoft community*
- - Logistic support to hands-on activities on RoboSoft Summer Schools, under the framework of RoboSoft CA
- - Responsible for deliverables and reports for PoseiDRONE project
- - Team leader for research activities on Octopus IP – WP17 – *Experimental validation of the robotic octopus*
- - Management support to deliverables and reports preparation for Octopus IP

Fund raising activities

- I conceived and wrote as Principal Investigator Blue Resolution project, funded, (total cost: 200,000€, total grant: 200,000€)
- I conceived and wrote as Principal Investigator a National Geographic Society application for an Early Career Grant *SILVER*, call 2017, funded
- I actively contributed to conceive and write *PoseiDRONE* project, funded, (total cost: 200,000€, total grant: 100,000€)

Languages

Italian	mothertounge
English	Understanding: Listening (C1), Reading (C2) Speaking: Spoken interaction (C1), Spoken production (C1) Writing (C2)
Spanish	Understanding: Listening (A1), Reading (A2)

Speaking: Spoken interaction (A1), Spoken production (A1)
Writing (A1)

Skills and competences

- Technical skills** I am familiar with bioinspired methodologies, and with the methods of extracting fundamental principles from nature to develop novel technological solutions. I have also experience in robot design and construction, which specific knowledge on mechanism design. I studied and compared traditional innovation methods (such as TRIZ, QFD, Decision matrix, etc...) with respect to bioinspired methods. Even if I did not published yet on this topic, I am interested into the generation process of original ideas (and novel designs).
I have knowledge of signal and image analysis, both in the spatial and frequency domains, which I extensively used during the image processing part of my work. I have also knowledge of the Direct Linear Transformation (DLT) for the reconstruction of the 3d coordinates from the 2d positions of markers (or features) on camera images. I implemented my own version of the DLT in Matlab and C++
- Computer skills** I am a proficient user of CAD systems for mechanical design, with consolidate experience on SolidWorks, CREO Parametric and Inventor, and basic knowledge of Design Sparks. I used extensively 3d printing technologies (FDM and resin-based printers), with Stratasys and MarkerBot 3d printers, to develop prototypes and low cost commercial components.
I have good programming skills in Matlab and C++ languages. Most of my dynamical models were developed and solved in Matlab, using standard toolboxes and *ad hoc* prepared functions. I have basic knowledge of Java and Python, and academic knowledge of Fortran 77. I used some of the most known image analysis libraries, such as OpenCV and Cimg. My own features extraction, tracking and reconstruction algorithm was developed in C++ by using the OpenCV library and in Matlab. A post processing tool was also developed in Matlab to aid the shape reconstruction of soft arms. I have practical knowledge of the standard Matlab vision toolbox and also of the vision toolbox developed by Peter Corke
- Social skills and competences** I have an excellent group working attitude, also in multi-cultural and multi-disciplinary teams, obtained working in European projects and in short term scientific missions. I undertook several international collaborations with colleagues from renowned foreign universities such as the Hebrew University of Jerusalem (biologists mainly) and the University of Zurich (computer scientists mainly). These collaborations enabled me to enrich my technical and communication skills, also in multi-disciplinary domains, i.e. among biology, mathematics, computer science and engineering

Awards

- a3 **Best paper award nomination**, category: *Artificial Life, Robotics, and Evolvable Hardware - ALIFE + Generative and Developmental Systems - GDS*, at GECCO 2015, with the paper, *Novelty-based evolutionary design of morphing underwater robots*.
F. Corucci, M. Calisti, H. Hauser, C. Laschi (2015)

- a2 **Gear of Innovation Challenge**, *placement: 4th, award: 1000\$, sponsor: GoEngineer, 3D PrinterWorld and GrabCAD, TOW.*
M. Calisti (2014)
- a1 **Finalist at the 2012 ASME Student Mechanism and Robot Design Competition**, *final placement: 4th, with the project, Kraken project.*
M. Calisti, A. Arienti (2012)

Full list of publication

Journals with peer review: 11

- j11 G. Picardi, **M. Calisti**, and C. Laschi (2017) *Model-based Open Loop Control of a Multigait Legged Underwater Robot* *Mechatronics Under review*
- j10 **M. Calisti**, and C. Laschi (2017) *Morphological and control criteria for self-stable underwater hopping* *Bioinsp. & Biomim.*, DOI: 10.1088/1748-3190/aa90f6
- j9 **M. Calisti**, G. Picardi, and C. Laschi (2017) *Fundamentals of Soft Robots Locomotion* *Journal of the Royal Society Interface*, 14 (130), 20170101
- j8 **M. Calisti**, M. Cianchetti, M. Manti, F. Corucci and C. Laschi (2016) *Contest-driven soft-robotics boost: the RoboSoft Grand Challenge*, *Frontiers in Robotics and AI*, Vol. 3, pp. 55, 10.3389/frobt.2016.00055
- j7 **M. Calisti**, E. Falotico and C. Laschi (2016) *Hopping on uneven terrains with an underwater one-legged robot*, *IEEE Robotics and Automation Letters*, Vol.1 no.1, pp. 461–468, DOI: 10.1109/LRA.2016.2521928
- j6 **M. Calisti**, F. Corucci, A. Arienti and C. Laschi (2015) *Dynamics of underwater legged locomotion: modeling and experiments on an octopus-inspired robot*, *Bioinsp. Biomim.*, 10(4):046012
- j5 M. Giorelli, F. Renda, **M. Calisti**, A. Arienti, G. Ferri and C. Laschi (2015) *Neural Network and Jacobian Method for Solving the Inverse Statics of a Cable-Driven Soft Arm with Non-Constant Curvature*, *IEEE Transaction on Robotics*, 31 (4) Pages. 823–834
- j4 M. Cianchetti, **M. Calisti**, L. Margheri, M. Kuba and C. Laschi (2015) *Bioinspired locomotion and grasping in water: the soft eight-arm OCTOPUS robot* *Bioinsp. Biomim.*, 10, 035003
- j3 M. Giorelli, F. Renda, **M. Calisti**, A. Arienti, G. Ferri and C. Laschi (2015) *Learning the inverse kinetics of an octopus-like manipulator in three-dimensional space* *Bioinsp. Biomim.*, 10(3):035006
- j2 F. Renda, M. Giorelli, **M. Calisti**, M. Cianchetti and C. Laschi (2014) *Dynamic Model of a Multi-Bending Soft Robot Arm Driven by Cables* *IEEE Transaction on Robotics*, Vol.30 no.5, pp. 1109-1122
- j1 **M. Calisti**, M. Giorelli, G. Levy, B. Mazzolai, B. Hochner, C. Laschi and P. Dario (2011) *An octopus-bioinspired solution to movement and manipulation for soft robots* *Bioinsp. Biomim.*, Vol.6 no.3

Conferences and book chapters with peer review: 21

- c16 S. Iacoponi, G. Picardi, M. Chellapurath, **M. Calisti** and C. Laschi (2018) *Underwater Soft Jet Propulsion Based on a Hoberman Mechanism* IEEE RoboSoft Conference, Livorno (Italy)
- c15 **M. Calisti**, G. Carbonara, and C. Laschi (2017) *A rotating polarizing filter approach for image enhancement*, Proceedings of the 2017 MTS/IEEE OCEANS Conference-Aberdeen, pp. 1-4
- b5 **M. Calisti** (2017) *Soft Robotics in Underwater Legged Locomotion: From Octopus-Inspired Solutions to Running Robots*, Springer International Publishing, Ed.s C. Laschi, J. Rossiter, F. Iida, M. Cianchetti and L. Margheri
- c14 **M. Calisti**, and C. Laschi (2016) *From Octopus Vulgaris to underwater hopping robots: bio-inspired path toward design and control of soft robots*, Proceedings of the 19th International Conference on CLAWAR 2016, pp.765-770, DOI: 10.1142/9789813149137_0088
- c13 F. Corucci, **M. Calisti**, H. Hauser and C. Laschi (2015) *Novelty-based evolutionary design of morphing underwater robots*, Proceedings of the 2015 on Genetic and Evolutionary Computation Conference, pp. 145-152
- c12 F. Corucci, **M. Calisti**, H. Hauser and C. Laschi (2015) *Evolutionary discovery of self-stabilized dynamic gaits for a soft underwater legged robot*, International Conference on Advanced Robotics (ICAR), pp.337-344
- c11 **M. Calisti** and C. Laschi (2015) *Underwater running on uneven terrain*, Proceedings of the 2015 MTS/IEEE OCEAN Conference, pp. 1-5
- b4 **M. Calisti**, F. Corucci, A. Arienti and C. Laschi (2014) *Bipedal Walking of an Octopus-Inspired Robot* LECTURE NOTES IN COMPUTER SCIENCE, Vol. 8608, Biomimetic and biohybrid systems, Prescott; Lepora; Mura; Verschure (Eds.), pp. 35-46
- c10 A. Arienti, **M. Calisti**, F. Giorgio-Serchi, C. Laschi (2013) *PoseiDRONE: Design of a soft-bodied ROV with crawling, swimming and manipulation ability* Oceans 2013, San Diego, CA
- b3 M. Giorelli, F. Renda, A. Arienti, **M. Calisti**, M. Cianchetti, G. Ferri and C. Laschi (2012) *Inverse and direct model of a continuum manipulator inspired by the octopus arm* LECTURE NOTES IN COMPUTER SCIENCE, Vol.7375, Biomimetic and biohybrid systems, Prescott; Lepora; Mura; Verschure (Eds.), pp. 347-348
- c9 **M. Calisti**, A. Arienti, F. Renda, G. Levy, B. Mazzolai, B. Hochner, C. Laschi and P. Dario (2012) *Design and development of a soft robot with crawling and grasping capabilities* Proc. IEEE Int. Conf. on Robotics and Automation, St. Paul, Minnesota, pages 4950-4955
- c8 M. Giorelli, F. Renda, **M. Calisti**, A. Arienti, G. Ferri and C. Laschi (2012) *A two dimensional inverse kinetics model of a cable driven manipulator inspired by the octopus arm* Proc. IEEE Int. Conf. on Robotics and Automation, St. Paul, Minnesota, pages 3819-3824
- c7 T. Li, K. Nakajima, **M. Calisti**, C. Laschi and R. Pfeifer (2012) *Octopus-inspired sensorimotor control of a multi-arm soft robot* Proc. IEEE Int. Conf. on Mechatronics and Automation, pages 948-955

- b2 **M. Calisti**, M. Giorelli and C. Laschi (2012) *A locomotion strategy for an octopus-bioinspired robot* LECTURE NOTES IN COMPUTER SCIENCE, Vol.7375, Biomimetic and biohybrid systems, Prescott; Lepora; Mura; Verschure (Eds.), pp. 337–338
- c6 **M. Calisti**, A. Arienti, M. E. Giannaccini, M. Follador, M. Giorelli, M. Cianchetti, B. Mazzolai, C. Laschi and P. Dario (2010) *Study and fabrication of bioinspired octopus arm mockups tested on a multipurpose platform* Proc. IEEE/RAS-EMBS Int. Conf. on Biomedical Robotics and Biomechanics, pages 461–466
- c5 **M. Calisti**, L. Bocchi, C. Manfredi, I. Romagnoli, F. Gigliotti, G. Donzelli (2009) *Automatic detection of snore episodes from full night sound recordings: home and clinical application* Advanced Voice Function Assessment International Workshop, AVFA09
- c4 **M. Calisti**, L. Bocchi, C. Manfredi, I. Romagnoli, F. Gigliotti, G. Donzelli (2009) *Automatic detection of post-apnoeic snore events from home and clinical full night sleep recordings* Int. workshop on models and analysis of vocal emissions for biomedical applications, MAVESA09
- c3 S. Orlandi, L. Bocchi, **M. Calisti**, G. Donzelli and C. Manfredi (2009) *Recovery of oxygen level in newborns* Int. workshop on models and analysis of vocal emissions for biomedical applications, MAVESA09
- b1 L. Ballerini, **M. Calisti**, S. Damas, O. Cordon, J. Santamaria (2008) *Automatic feature extraction from 3D range images of skulls* LECTURE NOTES IN COMPUTER SCIENCE, Computational Forensics, Vol.5158, pages 58–69
- c2 C. Manfredi, L. Bocchi, S. Orlandi, **M. Calisti**, L. Spaccaterra, G. Donzelli (2008) *Non-invasive distress evaluation in preterm newborn infants* International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS08
- c1 C. Manfredi, T. Bruschi, A. Dallai, A. Ferri, P. Tortoli, **M. Calisti** (2008) *Voice quality monitoring: a portable device prototype* International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS08

Patents: 3

- p3 **M. Calisti**, G. Carbonara, and C. Laschi (2017) *Image enhancement through controlled rotating polarizing filter* Patent pending
- p2 **M. Calisti**, A. Arienti, M. Giorelli, B. Mazzolai, C. Laschi and P. Dario (2012) *Robot having soft arms for locomotion and grip purposes* WO Patent 2.012.150.551
- p1 **M. Calisti**, A. Arienti, M. Giorelli, B. Mazzolai, C. Laschi and P. Dario (2011) *Robot ad arti morbidi adibiti a locomozione e presa* Domanda di brevetto no. FI2011A000091, data deposito: 03/05/2011, CCIA di deposito: FIRENZE

Submitted or in preparation: 7

- s1 T. Pardi, R. Limosani, A. Manzi, **M. Calisti**, M. Bonaccorsi, F. Cavallo, and S. Roccella (2017) *The BioRoboticS Team at MBZIRC Challenge: bio-inspired and custom solutions for UAVs and UGVs complex tasks* Journal of Field Robotics Under review
- pr1 G. Picardi, **M. Calisti**, and C. Laschi (2017) *Morphologically Induced Stability on a Single Legged Underwater Hopping Robot* PNAS in preparation

- pr2 **M. Calisti**, T. Turutel, G. Picardi, and C. Laschi (2017) *Energy consumption of pushing-based underwater locomotion* PNAS in preparation
- pr3 **M. Calisti**, G. Carbonara, and C. Laschi (2017) *Underwater image enhancement by selection of polarization angle* Journal of Oceanic Engineering in preparation
- pr4 **M. Calisti**, G. Picardi, and C. Laschi (2017) *Underwater Spring Loaded Inverted Pendulum to describe underwater punting* Journal of the Royal Society Interface Focus in preparation
- pr5 **M. Calisti**, G. Picardi, and C. Laschi (2017) *Seabed-interaction Legged Vehicle for Exploration and Research* Journal of Field Robotics in preparation

Synthetic indexes

H-index Scopus: 12, Scholar: 13

Total Scopus: 532, Scholar: 738
citations

November 28th, 2018

Marcello Calisti