

Gastone Ciuti

PhD BioRobotics - MSc, BSc Biomedical Engineering
Assistant Professor of Biomedical Robotics
 Surgical Robotics and Allied Technologies Area
 Computer-Integrated Technologies for Robotic Surgery Laboratory, Head

The BioRobotics Institute
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**PERSONAL INFORMATION**

Date of Birth : 22 November 1983

Citizenship : Italian

Languages Spoken : Italian, English

PRESENT POSITION

Since January 1st, 2014, **Assistant Professor of Biomedical Robotics** at The BioRobotics Institute of Scuola Superiore Sant'Anna, Pisa, Italy (<http://www.bioroboticsinstitute.it/>) - Head of The Computer-Integrated Technologies for Robotic Surgery Laboratory, The Surgical Robotics and Allied Technologies Area. Since January 1st, 2012, **Member** of EKYMED medical device s.p.a., Milano, Italy (<http://www.ekymed.com/>).

KEY FIGURES

1 book chapters

28 papers/contributions in refereed journals and magazines

25 papers/short papers in refereed conferences and workshops

19 National and International conference abstracts

8 Patents

Cultore della materia in Medical Robotics

Number of citations: 508 (Google Scholar) / 329 (Scopus) / 279 (Scopus w/o self-citations)

H-index: 12 (Google Scholar) / 8 (Scopus) / 7 (Scopus w/o self-citations)

SHORT BIO: PROFESSIONAL AND SCIENTIFIC HIGHLIGHTS

Gastone Ciuti received the master's degree (with honours) in Biomedical Engineering from the University of Pisa, Italy, in 2008 with a thesis entitled "Study and development of endoscopic robot with locomotion based on permanent magnetic field", carried on at CRIM (Center for Research in Microengineering) Lab of Scuola Superiore Sant'Anna, Pisa, Italy, and winning the 8th edition of the Master Thesis Price of the National group of Bioengineering at the summer school in Bressanone, Italy in 2008. In the same year he joined the Scuola Superiore Sant'Anna in Pisa as a Ph.D. student and in 2012 he obtained the Ph.D. in Innovative Technologies of Info. & Com. Eng. and Robotics at The BioRobotics Institute of the Scuola Superiore Sant'Anna discussing a thesis entitled "Innovative control platform for robotic microsystems in endoluminal surgery". Gastone Ciuti is currently an **Assistant Professor at The BioRobotics Institute of Scuola Superiore Sant'Anna, Surgical Robotics and Allied Technologies group and head of the Computer-Integrated Technologies for Robotic Surgery laboratory** (from January 1st, 2014). In 2013 he performed an Executive Master in Project Management learning issues significant for the possible definition of National and International research projects. Since 2011 to present Gastone Ciuti performed teaching activity in the course "Medical Robotics" held Prof. Paolo Dario at the University of Pisa and in October 2013 Gastone Ciuti was designed "Cultore della Materia" in Medical Robotics. His current research interests include robot-assisted platforms (*e.g.*, teleoperated magnetic-based robotic platforms) for navigation, localization and tracking of smart and innovative devices for focused and targeted minimally invasive surgery and diagnosis (*e.g.*, in advanced capsule endoscopy and cardiovascular surgery). The research vision of Gastone Ciuti is aimed at encouraging cross-fertilization between different disciplines, creating innovative knowledge substrates from which generating novel technological solutions for focused/guided diagnosis and therapy and enlarging/opening new scenarios of Bioengineering. Gastone Ciuti attended the Waseda-SSSA-KIST Summer School - Fundamentals of Biorobotics, Centro Studi Santa Maria Maddalena, Volterra, Italy in 2008, the School on Medical Robotics and Computer-Integrated Interventional Medicine, ERC CISST, Johns Hopkins University, Baltimore, Maryland, USA in 2009 and the North American Summer School in Surgical Robotics and Simulation, Biorobotics Lab, University of Washington, Seattle, Washington, USA in 2010. Gastone Ciuti was an exchange researcher at FORTH - Institute of Computer Science, Heraklion, Crete, Greece in 2009, at MED Lab, Vanderbilt University, Nashville, Tennessee, USA in 2010 and at The Hamlyn Centre, Imperial College London, London, UK in 2012. The VECTOR project, where Gastone Ciuti was actively involved, won the Best Exhibit Award of the European Commission's conference on Information and Communication Technologies ICT 2010, sponsored by Intel. Gastone Ciuti was awarded with the Best Technology Contribution Award at the 19th International Congress of the European Association of Endoscopic Surgery (EAES) in Turin, Italy with the abstract "Magnetic air capsule robotic system: a novel approach for painless colonoscopy" in 2011 and won the Best Student Poster Award at the 26th International Computer Assisted Radiology and Surgery congress in Pisa, Italy with the poster "Intra-operative monocular 3D reconstruction for image-guided navigation in active capsule endoscopy" in 2012. The abstract "Magnetic air levitation capsule: a novel approach for frictionless colonoscopy" was awarded as one of the seven best original presentations at the EAES Technology Award Session at the 20th International EAES Congress in Brussels in 2012. Gastone Ciuti collaborated and actually collaborates in

several European project: FP7 European Project FUTURA entitled: “Focused Ultrasound Therapy Using Robotic Approaches” (FP7-ICT-Challenge 2 2013), FP7 European Project SUPCAM entitled: “New cost effective and minimally invasive endoscopic device able to investigate the colonic mucosa, ensuring a high level of navigation accuracy and enhanced diagnostic capabilities” (FP7-SME-2012), National Project Micro-VAST – “Microsystems for vascular diagnostics and intervention”(http://www.microvast.it/) and FP6 European Project VECTOR – “Versatile Endoscopic Capsule for gastrointestinal Tumor Recognition and Therapy” (EU/IST-2006-033970) (http://www.vector-project.com/). Gastone Ciuti supervised eight master students; he was the technical mentor of three students (one within a Fulbright Scholarship program) and the technical tutor of a PhD student in Biorobotics at the BioRobotics Institute of SSSA. Gastone Ciuti is co-author of about 30 scientific publications on computer-integrated platforms and innovative devices for medical robotic intervention and treatment and he is also inventor of 6 patents.

EDUCATION

ACADEMIC DEGREES

From November 5st 2008 until April 18th 2012, The BioRobotics Institute, Scuola Superiore Sant’Anna, Pisa, Italy
Ph.D. degree in Innovative Technologies of Info. & Com. Eng. and Robotics curriculum BioRobotics with the final evaluation **100/100 magna cum laude** with a thesis entitled: “Innovative control platform for robotic microsystems in endoluminal surgery”, carried on at the BioRobotics Institute of Scuola Superiore Sant’Anna, Pisa, Italy under the supervision of Prof. Paolo Dario and Prof.ssa Arianna Menciassi.

July 22th, 2008, University of Pisa, Italy

Master Degree in Biomedical Engineering curriculum Biomedical Technology with a final evaluation of **110/110 with Honors (Magna cum laude)** with a thesis entitled: “Study and development of endoscopic robot with locomotion based on permanent magnetic field”, carried on at CRIM (Center for Research in Microengineering) Lab of Scuola Superiore Sant’Anna, Pisa, Italy, under the supervision of Prof. Paolo Dario, Prof.ssa Arianna Menciassi and Prof. Pietro Valdastri.

Contribution of the master thesis: a novel approach to capsular endoscopy that takes advantage of active magnetic locomotion in the gastrointestinal tract by the guide of an anthropomorphic robotic arm. Simulations were performed to select the design parameters allowing an effective and reliable magnetic link between the robot end-effector (endowed with a permanent magnet) and the capsular device (endowed with small permanent magnets). In order to actively monitor the robotic endoluminal system and to efficiently perform diagnostic and surgical medical procedures, a feedback control based on inertial sensing was also implemented. The proposed platform demonstrated to be a reliable solution to move and steer a capsular device in a slightly insufflated gastrointestinal lumen.

April 27th, 2006, University of Pisa, Italy

Undergraduate Degree in Biomedical Engineering curriculum Industrial Engineering with a thesis entitled: “Production and characterization of gellan gum microspheres for the controlled release of protein molecule”, carried on at University of Pisa, Pisa Italy, under the supervision of Prof. Paolo Giusti and Dott. Nicoletta Barbani.

Contribution of the master thesis: a novel method for the preparation of gellan gum microspheres was developed and demonstrated. Biodegradable gellan gum microspheres, containing an initial amount of gelatin as the model protein drug, were prepared using a simple water-in-oil emulsification technique without the solvent evaporation and stabilized by the use of phosphatidylcholine. The effect of several parameters on particle size, drug encapsulation efficiency and drug release at different pH were investigated.

SUMMER AND WINTER SCHOOLS

From August 23rd until August 27th, 2010, Biorobotics Lab, University of Washington, Seattle, Washington, USA
2010 North American Summer School in Surgical Robotics and Simulation, Biorobotics Lab, University of Washington, Seattle, Washington, USA, organized by Prof. Blake Hannaford (http://brl.ee.washington.edu/).

From January 12^{sd} until January 16th, 2009, ERC CISST, Johns Hopkins University, Baltimore, Maryland, USA
School on medical robotics and computer-integrated interventional medicine, ERC CISST, Johns Hopkins University, Baltimore, Maryland, USA, organized by Prof. Russel Taylor (http://www.jhu.edu/).

From August 31st until September 5th, 2008, Centro Studi Santa Maria Maddalena, Volterra, Italy
Waseda-SSSA-KIST Summer School 2008 - Fundamentals of Biorobotics, Centro Studi Santa Maria Maddalena, Volterra, Italy, Organized in the framework of the Global COE of Waseda University "Global Robot Academia by Prof. Paolo Dario, Prof. M. G. Fujie and Prof. M. Kim (http://www.robocasa.net/workshop/2008/?lang=en).

OTHER EDUCATION

From November 2012 until March 2013, QUEC – Quality Evolution Consulting s.r.l., Lucca, Italy

Executive Master in Project Management: 120 hours in 15 meetings. *Learning outcomes:* Ability to select and apply project management processes throughout the project life cycle in order to deliver successful projects, particularly: feasibility study, project appraisal and planning, human resources management, budgeting and control, quality and risk management, stakeholder and procurement management and management of change.

From May 22nd until November 19th, 2011, The Hamlyn Centre, Imperial College London, London, UK

Exchange Researcher at The Hamlyn Centre, Imperial College London, London, UK with a research project on “Intra-operative Monocular 3D Reconstruction for Image-Guided Navigation in Active Locomotion Capsule Endoscopy” under the supervision of Prof. Guang-Zhong Yang (<http://www3.imperial.ac.uk/roboticsurgery>).

From May 11th until June 9th 2010, MED Lab, Vanderbilt University, Nashville, Tennessee, USA.

Exchange Researcher at MED Lab, Vanderbilt University, Nashville, Tennessee, USA with a research project on “Design and development of tetherless insufflation robotic devices for capsule endoscopy” under the supervision of Prof. Robert J. Webster III (<http://research.vuse.vanderbilt.edu/MEDLab/>).

From September 27th until October 4th, 2009, FORTH - Institute of Computer Science, Heraklion, Crete, Greece.

Exchange Researcher at FORTH - Institute of Computer Science, Heraklion, Crete, Greece with a research project on “Integration of an inertial wireless sensor module in a endoscopic capsule with vibratory actuation” under the supervision of Prof. D. P. Tsakiris (<http://www.ics.forth.gr/>).

EMPLOYMENT HISTORY

From January 1st, 2014 – present, The BioRobotics Institute of Scuola Superiore Sant’Anna, Italy

Assistant Professor in Biomedical Robotics at the BioRobotics Institute of Scuola Superiore di Studi Universitari e Perfezionamento Sant’Anna (SSSA). Head of the laboratory Computer-Integrated Technologies for Robotic Surgery Laboratory, The Surgical Robotics and Allied Technologies Area

From November 15th, 2012 – December, 31st, 2013, The BioRobotics Institute of Scuola Superiore Sant’Anna, Italy

Postdoctoral fellow (assegnò di ricerca ING-IND/34) in Bioengineering and BioRobotics at the BioRobotics Institute of Scuola Superiore di Studi Universitari e Perfezionamento Sant’Anna (SSSA), within the project SUPCAM, MERESSINA and MicroVAST. Research topic: “**Studio e sviluppo di sistemi di localizzazione, tracking e movimentazione per chirurgia e terapia endoluminale**”. Advisors: Prof. Paolo Dario e Prof.ssa Arianna Menciassi.

From November 15th, 2011 until November 14th, 2012, The BioRobotics Institute of Scuola Superiore Sant’Anna, Italy

Postdoctoral fellow (assegnò di ricerca ING-IND/34) in Bioengineering and BioRobotics at the BioRobotics Institute of Scuola Superiore di Studi Universitari e Perfezionamento Sant’Anna (SSSA), within the project ARAKNES e MicroVAST. Research topic: “**Studio e sviluppo di sistemi di localizzazione, tracking e movimentazione per chirurgia e terapia endoluminale**”. Advisors: Prof. Paolo Dario and Prof.ssa Arianna Menciassi.

From November 1st, 2008 until November 1st, 2011, The BioRobotics Institute of Scuola Superiore Sant’Anna, Italy

Ph.D. Scholarship, Scuola Superiore di Studi Universitari e Perfezionamento Sant’Anna (SSSA). International Doctoral School in Innovative Technologies of Information & Communication Engineering and Robotics, Curriculum: BioRobotics (XXIV Ph.D. cycle). Research topic: “**Innovative control platform for robotic microsystems in endoluminal surgery**”. Advisor: Prof. Arianna Menciassi.

From September 30th until November 29th, 2008, The CRIM Lab of Scuola Superiore Sant’Anna

Research assistant (contratto di collaborazione coordinata e continuativa ING-IND/34) in Bioengineering and BioRobotics at CRIM Lab of Scuola Superiore di Studi Universitari e Perfezionamento Sant’Anna (SSSA), within the project VECTOR. Research topic: “**Sviluppo di sistemi di controllo magnetici per capsule endoscopiche miniaturizzate**”. Advisor: Prof. Paolo Dario.

AWARDS AND ACHIEVEMENTS

October 15th – 16th, 2015 – the abstract “A tissue-mimicking phantom for in-vitro accuracy evaluation of USgHIFU procedures” by A. Cafarelli, A. Diodato, M. Mura, S. Tognarelli, L. Ricotti, **G. Ciuti** and A. Menciassi won the **Best Oral Presentation Award** (47 abstracts total abstracts) at the FUS Therapy Symposium 2015 in London, UK.

June 6th, 2012 – the poster “Intra-operative monocular 3D reconstruction for image-guided navigation in active capsule endoscopy” by **G. Ciuti**, M. Visentini-Scarzanella, A. Dore, A. Menciassi, P. Dario, G-Z. Yang won the **Best**

Student Poster Award at the 26th International Computer Assisted Radiology and Surgery congress (CARS2012) in Pisa, Italy.

June 22nd, 2012 – the abstract “Magnetic air levitation capsule: a novel approach for frictionless colonoscopy” by **G. Ciuti**, A. Verbeni, R. Melis, P. Dario, A. Arezzo, A. Menciassi was awarded as **one of the seven best original presentations** at the EAES Technology Award Session at the 20th International EAES Congress in Brussels.

June 15-18th, 2011 - the abstract “Magnetic air capsule robotic system: a novel approach for painless colonoscopy” by P. Valdastri, **G. Ciuti**, A. Verbeni, A. Menciassi, P. Dario, A. Arezzo, M. Morino at the 19th International Congress of the European Association of Endoscopic Surgery (EAES) in Turin, Italy, was awarded with the “**Best Technology Contribution**” Award 2011.

September 2010 - The **VECTOR project**, where Gastone Ciuti was actively involved, won the "**Best Exhibit Award**" of the European Commission's conference on Information and Communication Technologies ICT 2010. Out of more than 200 exhibitors, VECTOR received the majority of votes from the visitors of the ICT 2010 conference. This year, the traditional "Best Exhibit Award" is sponsored by Intel.

September 2008 - **Master Thesis Award** for the master thesis entitled: “Study and development of endoscopic robot with locomotion based on permanent magnetic field” at the 8th edition of the Master Thesis Price of the National group of Bioengineering at the summer school in Bressanone, Italy.

RESEARCH ACTIVITIES

SCIENTIFIC INTERESTS

Current research interests of Gastone Ciuti include robot/computer-assisted platforms (*i.e.*, teleoperated magnetic-based robotic platforms) for navigation, localization and tracking of smart and innovative devices for guided, focused and targeted minimally invasive surgery and diagnosis (*e.g.*, in advanced capsule endoscopy and cardiovascular surgery). It also includes monocular 3D reconstruction, augmented reality and vision-based strategies for tracking, monitoring and autonomous navigation of magnetically driven robotic devices in endoluminal medical procedures. The research vision of Gastone Ciuti is aimed at encouraging cross-fertilization between different disciplines, creating innovative knowledge substrates from which generating novel technological solutions for focused/guided diagnosis and therapy and enlarging/opening new scenarios of Bioengineering for computer integrated systems.

PUBLICATIONS ON REFEREED JOURNALS

SUBMITTED PAPERS AND CONTRIBUTIONS

PUBLISHED (OR IN PRESS) PAPERS/CONTRIBUTIONS

1. G. Tortora, F. Mulana, **G. Ciuti**, P. Dario, A. Menciassi: Inductive-Based Wireless Power Recharging System for an Innovative Endoscopic Capsule, *Energies*, 8(9), pp. 10315-10334. **IF 2.072**
2. L. Sliker, **G. Ciuti**, M. Rentschler, A. Menciassi: Magnetically driven medical devices: a review, *Expert Review of Medical Devices*, Article In Press, 2015 Aug 21:1-16. **IF 1.683**
3. G. Rateni, M. Cianchetti, **G. Ciuti**, A. Menciassi, C. Laschi: Design and development of a soft robotic gripper for manipulation in minimally invasive surgery: a proof of concept, *Meccanica (Special Issue: Soft Mechatronics)*, First online: 20 August 2015, pp. 1-9, 2015. **IF 1.949**
4. G. Gerboni, T. Ranzani, A. Diodato, **G. Ciuti**, M. Cianchetti, A. Menciassi: Modular soft mechatronic manipulator for minimally invasive surgery (MIS): overall architecture and development of a fully integrated soft module, *Meccanica (Special Issue: Soft Mechatronics)*, First online: 07 September 2015, pp. 1-14, 2015. **IF 1.949**
5. T. Ranzani, **G. Ciuti**, G. Tortora, A. Arezzo, S. Arolfo, M. Morino, A. Menciassi: A Novel Device for Measuring Forces in Endoluminal Procedures, *International Journal of Advanced Robotic Systems*, 12(116), ISSN 1729-8806, 2015. **IF 0.526**

6. **G. Ciuti**, L. Ricotti, A. Menciassi, P. Dario: MEMS Sensor Technologies for Human Centred Applications in Healthcare, Physical Activities, Safety and Environmental Sensing: A Review on Research Activities in Italy, *Sensors*, 15(3), 6441-6468, 2015. **IF 2.048**
7. **G. Ciuti**, L. Ricotti, A. Menciassi, P. Dario: MEMS Sensor Technologies for Human Centred Applications in Healthcare, Physical Activities, Safety and Environmental Sensing: A Review on Research Activities in Italy, *Sensors*, 15(3), 6441-6468, 2015. **IF 2.048**
8. G. Lucarini, **G. Ciuti**, M. Mura, R. Rizzo, A. Menciassi: Electromagnetic control system for capsule endoscope navigation: a novel concept for magnetic capsule maneuvering and preliminary study, *Journal of Medical and Biological Engineering*, accepted for publication, 35(4), 428-436, 2015. **IF 1.076**
9. G. Lucarini, G. Ciuti, M. Mura, R. Rizzo, A. Menciassi: A new concept for magnetic capsule colonoscopy based on an electromagnetic, *International Journal of Advanced Robotic Systems*, 12(25), ISSN 1729-8806, 2015. **IF 0.526**
10. L. Ricotti, **G. Ciuti**, M. Ghionzoli, A. Messineo, A. Menciassi (2014): Metal/polymer composite Nuss bar for minimally invasive bar removal after Pectus Excavatum treatment: FEM simulations. *International journal for numerical methods in biomedical engineering*, 30(12), 1530-40 (2014). **IF 1.542**
11. S. Betti, **G. Ciuti**, L. Ricotti, M. Ghionzoli, F. Cavallo, A. Messineo, A. Menciassi (2014): A Sensorized Nuss Bar for Patient-Specific Treatment of Pectus Excavatum. *Sensors*, 14(10), 18096-18113. **IF 2.048**
12. L. Sliker, **G. Ciuti**: Flexible and capsule endoscopy for screening, diagnosis and treatment, *Expert Review of Medical Devices*, 1(6):649-66, 2014. **IF 1.683**
13. G. Ciuti, M. Nardi, P. Valdastrì, A. Menciassi, C. B. Fasolo, P. Dario, HuMOVE: A Low-invasive Wearable Monitoring Platform in Sexual Medicine. *Urology*, 84(4), 976-981. **IF 2.132**
14. M. Mura, **G. Ciuti**, V. Ferrari, P. Dario, A. Menciassi: Ultrasound-based tracking strategy for endoluminal devices in cardiovascular surgery, *The International Journal of Medical Robotics and Computer Assisted Surgery*, accepted for publication, Early online, 2014. DOI: 10.1002/rcs.1603. **IF 1.532**
15. L. Gherardini, **G. Ciuti**, S. Tognarelli, C. Cinti: Searching for the perfect wave: the effect of radiofrequency electromagnetic fields on cells. *International journal of molecular sciences* 15.4 (2014): 5366-5387. **IF 2.339**
16. M. Ghionzoli, **G. Ciuti**, L. Ricotti, F. Tocchioni, R. Lo Piccolo, A. Menciassi, A. Messineo: Is a shorter bar an effective solution to avoid bar dislocation in Nuss procedure? *The Annals of thoracic surgery* 97(3), 1022-1027, 2014. **IF 3.454**
17. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. *Digestive and Liver Disease*, vol. 45, no. 8, 657-662, 2013. **IF 3.162**
18. J. L. Gorlewicz, S. Battaglia, B. F. Smith, **G. Ciuti**, J. Gerding, A. Menciassi, K. Obstein, P. Valdastrì, and R. J. Webster III: Wireless Insufflation of the Gastrointestinal Tract. *IEEE Transaction on Biomedical Engineering*, vol. 60, no. 5, 1225-1233, 2012. **IF 2.348**
19. P. Valdastrì, **G. Ciuti**, A. Verbeni, A. Menciassi, P. Dario, A. Arezzo, M. Morino: Magnetic air capsule robotic system: proof of concept of a novel approach for painless colonoscopy. *Surgical Endoscopy*, vol. 26, no. 5, 1238-1246, 2012 - **Winner of the Best Technology Contribution Award at EAES2011. IF 3.427**
20. S. Tognarelli, V. Castelli, **G. Ciuti**, C. Di Natali, E. Sinibaldi, P. Dario, A. Menciassi: Platform for Magnetic Propulsion and Ultrasound Tracking of Endovascular Devices. *Journal of Robotic Surgery*, vol. 6, no. 1, pp. 5-12, 2012.

21. M. Salerno, **G. Ciuti**, G. Lucarini, R. Rizzo, P. Valdastri, A. Menciassi, A. Landi, P. Dario: A discrete-time localization method for capsule endoscopy based on on-board magnetic sensing. *Measurement Science and Technology*, vol. 23, pp. 1-10, 2012. **IF 1.435**
22. **G. Ciuti**, M. Salerno, G. Lucarini, P. Valdastri, A. Arezzo, A. Menciassi, M. Morino, P. Dario: A comparative evaluation of control interfaces for a robotic-aided endoscopic platform. *IEEE Transactions on Robotics*, vol. 28, no. 2, pp. 534-538, 2012. **IF 2.571**
23. **G. Ciuti**, N. Pateromichelakis, M. Sfakiotakis, P. Valdastri, A. Menciassi, D. P. Tsakiris, P. Dario: A wireless module for vibratory motor control and inertial sensing in capsule endoscopy. *Sensors & Actuators: A. Physical (Special Issue: Eurosensors 2011)*, vol. 186, pp. 270-276, 2012. **IF 1.841**
24. **G. Ciuti**, A. Menciassi, P. Dario: Capsule endoscopy: from current achievements to open challenges. *IEEE Reviews in Biomedical Engineering*, vol. 4, pp. 59-72, 2011. IF: 2013 Still Computing.
25. **G. Ciuti**, P. Valdastri, A. Menciassi and P. Dario: Robotic magnetic steering and locomotion of capsule endoscope for diagnostic and surgical endoluminal procedures. *Robotica*, vol. 28, pp. 199-207, 2010. **IF 0.88 (citations 41 from Scopus, 59 from Google Scholar)**.
26. **G. Ciuti**, R. Donlin, P. Valdastri, A. Arezzo, A. Menciassi, M. Morino and P. Dario: Robotic versus manual control in magnetic steering of an endoscopic capsule. *Endoscopy*, vol. 42, pp. 148-152, 2010. **IF 5.735**
27. M. Simi, **G. Ciuti**, S. Tognarelli, P. Valdastri, A. Menciassi, P. Dario: Magnetic link design for a robotic laparoscopic camera. *Journal of Applied Physics*, vol. 107, no. 9, Proceedings of the 11th joint MMM-Intermag Conference, Washington, DC, 2010. **IF 2.210**
28. G. D. Guerra, C. Cristallini, **G. Ciuti**, D. Cufari, N. Barbani: Poly(styrene-alt-maleic anhydride)-cross-polyoxyethylene: a possible use as a drug-release device. Short paper form GIB-SIB 2006 on the *Journal of Applied Biomaterials & Biomechanics 2007*; vol. 5, no. 3, p. 215. **IF 1.542**

PAPERS/SHORT PAPER IN REFEREED CONFERENCES AND WORKSHOPS

1. A. Cafarelli, M. Mura, A. Diodato, A. Schiappacasse, M. Santoro, **G. Ciuti**, A. Menciassi: A computer-assisted robotic platform for Focused Ultrasound Surgery: assessment of high intensity focused ultrasound delivery. Conference Proceeding IEEE Engineering in Medicine and Biology Society (EMBC) 2015, Milano, Italy, August 25th -29th 2015.
2. T. Mazzocchi, A. Diodato, **G. Ciuti**, D. M. De Micheli, A. Menciassi: Smart sensorized polymeric skin for safe robot collision and environmental interaction. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015, Hamburg, Germany, September 28th – October 2nd, 2015.
3. Y. Abu-Kheil, **G. Ciuti**, M. Mura, J. Dias, P. Dario, L. Seneviratne: Vision and inertial-based image mapping for capsule endoscopy. International Conference on Information and Communication Technology Research (ICTRC), pp. 84-87, 2015, Abu Dhabi, United Arab Emirates, May 17th - 19th, 2015.
4. S. Tognarelli, **G. Ciuti**, A. Diodato, A. Cafarelli, M. Mura, A. Menciassi: Robotic platform for high-intensity focused ultrasound surgery under ultrasound monitoring and guidance: the FUTURA platform. 5rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS 2015), Brussels, Belgium, September 2015.
5. S. Tognarelli, **G. Ciuti**, A. Diodato, P. Miloro, A. Verbeni, A. Cafarelli, A. Menciassi: FUTURA: a computer-assisted robotic platform for high-intensity focused ultrasound. 4rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS 2014), Genova, Italy, September 2014.
6. G. Gerboni, T. Ranzani, M. Cianchetti, **G. Ciuti**, A. Menciassi: A new strategy to build a fully modular soft manipulator for MIS. 4rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS 2014), Genova, Italy, September 2014.
7. M. Brancadoro, S. Tognarelli, **G. Ciuti**, A. Peri, A. Pietrabissa, and A. Menciassi: A versatile and adaptable magnetic retraction system for minimally invasive surgery. In Proc. of the 4st National Congress of the Italian Group of Bioengineering (GNB) 2014, Pavia, Italy, June 25-27, 2014, (Poster session – B34).

8. A. Verbeni, **G. Ciuti**, A. Cafarelli, P. Miloro, A. Diodato, S. Tognarelli, A. Menciassi: The FUTURA platform: a new approach merging non-invasive ultrasound therapy with surgical robotics. Conference Proceeding IEEE Engineering in Medicine and Biology Society (EMBC) 2013, Chicago, USA, August 2014 (1-page invited short paper - Minisymposium).
9. G. Lucarini, M. Mura, **G. Ciuti**, and A. Menciassi: The SUPCAM platform: electromagnetic navigation system for active capsule endoscope. Conference Proceeding IEEE Engineering in Medicine and Biology Society (EMBC) 2014, Chicago, USA, August 2014 (1-page short paper - Poster Session).
10. G. Lucarini, A. Tozzi, C. Bruni, A. Vallesi, E. Gaggini, **G. Ciuti**, A. Menciassi: Electromagnetic design for capsule endoscope navigation: a preliminary study. 3rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, Verona, Italy, September 2013.
11. S Tognarelli, P. Miloro, A. Verbeni, M. Mura, A. Cafarelli, **G. Ciuti**, P. Dario, A. Menciassi: Low invasive therapy under robotic guidance in the vascular district: a case study. 3rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, Verona, Italy, September 2013.
12. **G. Ciuti**, S. Tognarelli, A. Verbeni, A. Menciassi, P. Dario: Intraoperative bowel cleansing tool in active locomotion capsule endoscopy. Conference Proceeding IEEE Engineering in Medicine and Biology Society (EMBC) 2013, Osaka, Japan, July 2013.
13. M. Mura, **G. Ciuti**, P. Dario, A. Menciassi: An Ultrasound-based Methodology for Endoluminal Robot Tracking in Cardiovascular Procedures. The Hamlyn Symposium on Medical Robotics 2013, London, UK, June 2013.
14. **G. Ciuti**, M. Visentini-Scarzanella, A. Dore, A. Menciassi, P. Dario, G-Z. Yang: Intra-operative monocular 3D reconstruction for image-guided navigation in active capsule endoscopy. In Proc. of the XVI Annual Conference of the International Society for Computer Aided Surgery (ISCAS) 2012, Pisa, Italy, June 2012, International Journal of Computer Assisted Radiology and Surgery, 2012, Vol. 7, Suppl. 1, pp. S394-S395 - **Winner of the Best Student Poster Award 2012**.
15. **G. Ciuti**, S. Tognarelli, P. Dario, A. Menciassi: Robotic platform for magnetic catheter steering based on US tracking. in Proc. of the XVI Annual Conference of the International Society for Computer Aided Surgery (ISCAS) 2012, Pisa, Italy, June 2012, International Journal of Computer Assisted Radiology and Surgery, 2012, Vol. 7, Suppl. 1, pp. S384-S385.
16. P. Miloro, M. K. Llewellyn, S. Tognarelli, **G. Ciuti**, E. Sinibaldi, P. Dario, A. Menciassi: An innovative platform for treatment of vascular obstructions: system design and preliminary result, The Fourth IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics Roma, Italy. June 24-27, 2012, pp. 731-736.
17. **G. Ciuti**, M. Visentini-Scarzanella, A. Dore, A. Menciassi, P. Dario, G-Z. Yang: Intra-operative monocular 3D reconstruction for image-guided navigation in active locomotion capsule endoscopy, The Fourth IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics Roma, Italy. June 24-27, 2012, pp. 768-774.
18. A. Verbeni, R. Melis, **G. Ciuti**, P. Dario, A. Menciassi, Magnetic levitation air capsule: a novel approach for fiction-less colonoscopy. In Proc. of the 3st National Congress of the Italian Group of Bioengineering (GNB) 2012, Rome, Italy, June 2012.
19. **G. Ciuti**, M. Salerno, G. Lucarini, P. Valdastris, A. Arezzo, A. Menciassi, M. Morino, P. Dario: Comparative evaluation study of control methodologies and user interfaces for a robotic-aided endoscopic platform. In Proc. of the XV Annual Conference of the International Society for Computer Aided Surgery (ISCAS) 2011, Berlin, Germany, June 2011, International Journal of Computer Assisted Radiology and Surgery, 2011, Vol. 6, Suppl. 1, pp. S288-S289.
20. **G. Ciuti**, N. Pateromichelakis, M. Sfakiotakis, P. Valdastris, A. Menciassi, D.P. Tsakiris, P. Dario: A wireless module for vibratory motor control and inertial sensing in capsule endoscopy. Proc. Eurosensors XXV, vol. 25, Athens, Greece, September 4-7, 2011.

21. C. Di Natali, **G. Ciuti**, V. Castelli, S. Tognarelli, E. Sinibaldi, P. Dario, A. Menciassi: Platform for Magnetic Propulsion and Ultrasound Tracking of Endovascular Devices. The Hamlyn Symposium on Medical Robotics 2011, London, UK, June 19-20, 2011, pp. 29-30.
22. M. Simi, **G. Ciuti**, S. Tognarelli, P. Valdastrì, A. Menciassi, P. Dario: Magnetic link design for a robotic laparoscopic camera. 11th Joint-MMM-Intermag Conference 2010, Washington, DC, January 2010.
23. **G. Ciuti**, M. Salerno, G. Lucarini, P. Valdastrì, A. Arezzo, A. Menciassi, M. Morino, P. Dario: Preliminary comparative evaluation of control interfaces for a robotic-aided endoscopic platform. In Proc. of the 2st National Congress of the Italian Group of Bioengineering (GNB) 2010, Turin, Italy, June 2010.
24. J. L. Toennies, **G. Ciuti**, B. F. Smith, A. Menciassi, P. Valdastrì, R. J. Webster III: Toward Tetherless insufflations of the GI tract. Conference Proceeding IEEE Engineering in Medicine and Biology Society (EMBC) 2010, Buenos Aires, Argentina, September 2010, pp. 1946 – 1949.
25. **G. Ciuti**, P. Valdastrì, A. Menciassi, P. Dario: Robotic Steering and Locomotion for Active Capsular Endoscopy. In Proc. of the 1st National Congress of the Italian Group of Bioengineering (GNB) 2008, Pisa, Italy, July 3-5, 2008, p. 711.

CONFERENCE ABSTRACTS

1. A. Cafarelli, A. Diodato, M. Mura, S. Tognarelli, L. Ricotti, **G. Ciuti**, A. Menciassi: A tissue-mimicking phantom for in-vitro accuracy evaluation of USgHIFU procedures, FUS Therapy Symposium, October 15-16 2015, London, UK (abstract). **Best Oral Presentation Award (47 abstracts total abstracts)**.
2. M. Ghionzoli, **G. Ciuti**, L. Ricotti, F. Tocchioni, R. Lo Piccolo, A. Menciassi, A. Messineo: Is a shorter bar the solution to avoid bar dislocation? International Pediatric Endosurgery Group Conference (IPEG 2013), Beijing, China, June 17-22, 2013.
3. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. United European Gastroenterology Week 2012 (UEG Week 2012), Amsterdam, Netherlands, October 20-24, 2012.
4. **G. Ciuti**, A. Verbeni, R. Melis, P. Dario, A. Arezzo, A. Menciassi: Magnetic Air Levitation Capsule: A Novel Approach For Frictionless Colonoscopy. European Association for Endoscopic Surgery (EAES) 2012, Brussels, Belgium, June 2012 - **Awarded as one of the seven best original presentations at EAES2012**.
5. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. 7th Scientific and Annual Meeting of the European Society of Coloproctology 2012 (ESCP 2012), Vienna, Austria, September 26-28, 2012.
6. **G. Ciuti**, G. R. Tortora, A. Menciassi, Bioinspired locomotion for endoscopic capsules. 34th Annual International IEEE EMBS Conference of the IEEE Engineering in Medicine and Biology Society in Hilton, San Diego, California, USA, August 28 - September 1, 2012.
7. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. 18th National Congress of Digestive Diseases, Italian Federation of Societies of Digestive Diseases 2012, Naples, Italy, March 2012, vol. 44, no. 2, p. S58.
8. **G. Ciuti**, M. Salerno, G. Lucarini, M. Verra, M. E. Allaix, P. Valdastrì, A. Arezzo, A. Menciassi, M. Morino, P. Dario: Control user interfaces for a robotic-aid platform for endo and laparoscopic applications: which is the best? Eurasian Colorectal Technologies Association (ECTA) 2011, Turin, Italy, June 2011, vol. 15, p. 233.
9. P. Valdastrì, **G. Ciuti**, A. Verbeni, A. Menciassi, P. Dario, A. Arezzo, M. Morino: Magnetic air capsule robotic system: a novel approach for painless colonoscopy. Eurasian Colorectal Technologies Association (ECTA) 2011, Turin, Italy, June 2011, vol. 15, p. 234.

10. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. Eurasian Colorectal Technologies Association (ECTA) 2011, Turin, Italy, June 2011, vol. 15, p. 233.
11. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. 21st International Conference of Society for Medical Innovation and Technology (SMIT) 2011, Tel Aviv, Israel, September 2011, p. 77.
12. A. Arezzo, A. Menciassi, P. Valdastrì, **G. Ciuti**, G. Lucarini, M. Salerno, C. Di Natali, M. Verra, P. Dario, M. Morino: Experimental assessment of a novel robotically driven endoscopic capsule for colonoscopy: a comparative study. European Surgical Association (ESA) 2011, Helsinki, Finland, May 2011.
13. A. Arezzo, M. Verra, **G. Ciuti**, M.E. Allaix, M. Salerno, G. Lucarini, P. Valdastrì, A. Menciassi, P. Dario, M. Morino. Which man-machine interface for a robotically driven endoscopic capsule for endo and laparoscopic applications? European Association for Endoscopic Surgery (EAES) 2011, Turin, Italy, June 2011.
14. P. Valdastrì, **G. Ciuti**, A. Verbeni, A. Menciassi, P. Dario, A. Arezzo, M. Morino: Magnetic air capsule robotic system: a novel approach for painless colonoscopy. European Association for Endoscopic Surgery (EAES) 2011, Turin, Italy, June 2011 - **Winner of the Best Technology Award contribution at EAES2011.**
15. J. L. Toennies, **G. Ciuti**, B. Smith, P. Valdastrì, A. Menciassi, and R. J. Webster III: Initial Feasibility Studies on Wireless Insufflation of the GI Tract. IEEE International Conference on Robotics and Automation 2010 (ICRA2010) - Workshop on Meso-Scale Robotics for Medical Interventions, Anchorage, Alaska, May 3 - 8, 2010.
16. **G. Ciuti**, P. Valdastrì, A. Menciassi, P. Dario: Piattaforma di controllo innovativa per microsistemi robotici in procedure mediche endoscopiche. NIdays 2009, Milano, Italy, February 2009.
17. A. Menciassi, **G. Ciuti**, P. Valdastrì, A. Arezzo, M. Morino, P. Dario: A novel robotic-aided platform for magnetic capsule endoscopy. In Proc. of the 21st International Conference of Society for Medical Innovation and Technology (SMIT), Sinaia, Romania, October 2009, p. 77.
18. N. Barbani, C. Cristallini, **G. Ciuti**, G. Ciardelli, D. Silvestri, F. Bertoni, A. Bonaretti, P. Giusti: Novel Phospholipidic Emulsifier-Based Method for the Preparation of Gellan Gum Microspheres. International Conference on Advances in Biomaterials for Drug Delivery and Regenerative Medicine, Capri, Italy, June 11-16, 2006.
19. G. D. Guerra, C. Cristallini, **G. Ciuti**, D. Cufari, N. Barbani: Poly(styrene-alt-maleic anhydride)-cross-polyoxyethylene: a possible use as a drug-release device. International Conference on Advances in Biomaterials for Drug Delivery and Regenerative Medicine, Capri, Italy, June 11-16, 2006.

BOOK CHAPTERS

1. A. Menciassi, **G. Ciuti**, C. Cavallotti: Video Capsule Endoscopy - A Comprehensive Guide and Atlas. Springer, 2013 (in publication by Springer).

PATENTS

1. **G. Ciuti**, T. Mazzocchi, A. Diodato, N. Vitiello, A. Menciassi. Rivestimento sensorizzato per l'interazione robotica. Reference number: 102015000055543, submission in Italy.
2. **G. Ciuti**, L. Ricotti, A. Menciassi, M. Ghionzoli, A. Messineo. Sistema per il monitoraggio del carico agente su un impianto protesico. Reference number: PI2013A000089, in collaboration with University of Florence, Florence, Italy.
3. **G. Ciuti**, L. Ricotti, A. Menciassi, M. Ghionzoli, A. Messineo. Apparato per la correzione della patologia del pectus Excavatum. Reference number: PI2013A000090, in collaboration with University of Florence, Florence, Italy

4. **G. Ciuti**, C. Basile Fasolo, A. Menciassi, P. Dario. Apparato indossabile per la diagnosi e la terapia di disfunzioni sessuali. Reference number: FI2013A000061 in collaboration with University of Pisa, Pisa, Italy.
5. P. Valdastri, **G. Ciuti**, A. Menciassi, P. Dario, R. J. Webster III, B. F. Smith, J. Toennies. Insufflation capsule. Reference number: PTC/EP2011/064764 in collaboration with Vanderbilt University, Nashville, Tennessee, USA.
6. P. Valdastri, **G. Ciuti**, A. Menciassi, P. Dario. Magnetically guided robotic device for endoscopic procedures. Reference number: PCT/IB2011/055636.
7. M. Salerno, **G. Ciuti**, F. Mulana, A. Menciassi. Metodo per la localizzazione di dispositivi guidati magneticamente e relativo dispositivo magnetico. Reference number: PI2012A000071.
8. A. Tozzi, **G. Ciuti**, G. Lucarini, M. Mura, C. Quaglia, C. Bruni, A. Bruni. Sistema e capsule per endoscopia. Reference number: MI2014A001717.

SCIENTIFIC COLLABORATION IN INTERNATIONAL AND NATIONAL RESEARCH PROJECTS

August 2015, acceptance of the proposal for the **H2020 European Project EndoVESPA** entitled: “Endoscopic Versatile robotic guidance, diagnosis and therapy of magnetic-driven soft-tethered endoluminal robots” (H2020-ICT-24-2015) – project manager of the proposal, start date: December 1st, 2015 (3 years project).

May 2015, preparation of the proposal for the **H2020 European Project EndoVESPA** entitled: “Endoscopic Versatile robotic guidance, diagnosis and therapy of magnetic-driven soft-tethered endoluminal robots” (H2020-ICT-24-2015).

From November 1st 2013, collaborating at the **FP7 European Project FUTURA** entitled: “Focused Ultrasound Therapy Using Robotic Approaches” (FP7-ICT-Challenge 2 2013).

November 2013, collaborating in writing the proposal for the **FP7 European Project FUTURA** entitled: “Focused Ultrasound Therapy Using Robotic Approaches” (FP7-ICT-Challenge 2 2013).

From October 1st 2012, collaborating at the **FP7 European Project SUPCAM** entitled: “New cost effective and minimally invasive endoscopic device able to investigate the colonic mucosa, ensuring a high level of navigation accuracy and enhanced diagnostic capabilities” (FP7-SME-2012).

November 2011, collaborating in writing the proposal for the **FP7 European Project SUPCAM** entitled: “New cost effective and minimally invasive endoscopic device able to investigate the colonic mucosa, ensuring a high level of navigation accuracy and enhanced diagnostic capabilities” (FP7-SME-2012).

From December 1st 2010, collaborating at the **National Project Micro-VAST** – “Microsystems for vascular diagnostics and intervention”(http://www.microvast.it).

From September 1st 2007 until June 2011, collaborating at the **FP6 European Project VECTOR** – “Versatile Endoscopic Capsule for gastrointestinal Tumor Recognition and Therapy” (EU/IST-2006-033970) (http://www.vector-project.com/).

INVITED LECTURES AND TALKS

September 28th 2015, organization of a **workshop at IROS 2015 on capsule endoscopy** entitled: “Robotic endoscopic capsules for gastrointestinal screening, diagnosis and therapy: achievements and future challenges”, Hamburg, Germany.

September 16th 2013, invited talk” **Surgical robotics and allied technologies: robotic vectors for focused action and therapy**” at 3rd International Conference on Oncological Engineering 2013 - in association with the Leeds NIHR HTC in Colorectal Therapies, Leeds, England (http://www.engineering.leeds.ac.uk).

November 8th 2012, invited talk “**Tecnologie robotiche per chirurgia e terapia minimamente invasive: presente e futuro**” at Fiera Internazionale della Robotica Umanoide e di Servizio 2012, Rho, Italy (http://www.robotica.pro).

June 14th 2012, talk “**Attività svolta dalla Scuola Superiore Sant’Anna nell’ambito del progetto SAVIA**” at the Palazzo della Regione Toscana, Firenze, Italy for the final review meeting of the SAVIA project (Sistema di Alimentazione per Veicoli ad Idrogeno ed Ammoniacca, <http://www.progettosavia.it/>).

October 16th 2011, talk “**Robotic-aided magnetic locomotion platform for capsule endoscopy**” at The Hamlyn Centre, Imperial College London, London, UK (<http://www3.imperial.ac.uk/roboticsurgery>).

June 4th 2010, talk “**Insufflation capsule: design implementation, developed prototypes and experimental evaluation**” at the MED Lab, Vanderbilt University, Nashville, Tennessee, USA (<http://research.vuse.vanderbilt.edu/MEDLab/>)

May 27th 2010, talk “**MACsystem: Magnetic Air Capsule system**” at nBME - Houston Medical School, Houston, Texas, USA (<http://nanomed.uth.tmc.edu/>) in the occasion of an invitation by Prof. Paolo Decuzzi to visit the Department of Nanomedicine and Biomedical Engineering (nBME) from May 26-27th, 2010.

REFeree APPOINTMENTS FOR JOURNALS AND CONFERENCES

1. Editorial member of the International Journal of Advanced Robotic Systems journal, section Medical Robotics.
2. Guest Editor of a Special Issue on Frontiers of Robotic Endoscopy - Journal of Micro-Bio Robotics.
3. Regular service as a peer-reviewer for scientific journal and conferences, such as:
 - IEEE Transactions on Biomedical Engineering (journal)
 - IEEE Transactions on Robotics (journal)
 - IEEE Transactions on Mechatronics (journal)
 - Sensors & Actuators: A. Physical (journal)
 - Measurement Science and Technology (journal)
 - IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechanics (conference)
 - IEEE ICRA IEEE International Conference on Robotics and Automation (conference)

DIDACTIC ACTIVITIES

RESEARCH STUDENTS SUPERVISED

From November 2012, **technical supervision** of Marco Mura, Ph.D. student in Biorobotics at the BioRobotics Institute of SSSA. Title of the 3-years research program: “3D monocular reconstruction and image processing in endoscopic procedures”.

From October 2013 to August 2013, **technical mentor** of Eng. Levin Sliker, Ph.D. student of the University of Colorado, Boulder, Colorado, USA within a Fulbright Scholarship program at the BioRobotics Institute of Scuola Superiore Sant’Anna, and working on a research activity about the development of a innovative low-friction systems and devices for capsule endoscopy.

From November 2012 to September 2013, **tutor of a Master Degree thesis in Biomedical Engineering** at University of Pisa with the title “Design and development of a manipulator based on an electromagnet for the navigation of a magnetic endoscopic capsule” by Elena Gaggini, discussed on September 24th and evaluated with 110/110.

From June 2013 to September 2013, **technical mentor** of Tom Konert, master student of the University of Twente, Enschede, Netherlands, within a Research Internship Project at the BioRobotics Institute of Scuola Superiore Sant’Anna, entitled: “Magnetic Tracking Strategy Based On An Array Of High Sensitivity Anisotropic Magneto-Resistive (AMR) Sensors Compatible With Coil Driven Capsule Endoscopy”.

From September 2012 to June 2013, **tutor of a Master Degree thesis in Biomedical Engineering** at University of Pisa with the title “Progettazione e realizzazione di un dispositivo medico impiantabile sensorizzato per la correzione del Pectus Excavatum” by Stefano Betti, discussed on June 19th and evaluated with 108/110.

From October 2011 to June 2012, **tutor of a Master Degree thesis in Biomedical Engineering** at University of Pisa with the title “Progettazione di sistemi robotici a guida magnetica autonoma per la riduzione delle forze di attrito in procedure endoscopiche” by Riccardo Melis, discussed on June 19th and evaluated with 106/110.

From October 2011 to June 2012, **tutor of a Master Degree thesis in Biomedical Engineering** at University of Pisa with the title “Strategia di locomozione autonoma di dispositivi magnetici endovascolari mediante tracking ad ultrasuoni” by Marco Mura, discussed on June 19th and evaluated with 109/110.

From December 2010 to December 2011, tutor of a Master Degree thesis in Biomedical Engineering at University of Pisa with the title “Sviluppo di un wearable inertial device per il monitoraggio di movimenti corporei applicato all’ambito sessuale e sportivo” by Matteo Nardi, discussed on December 6th, 2011 and evaluated with “magna cum laude”.

From July 2010 to May 2011, **tutor of a Master Degree thesis in Biomedical Engineering at University of Pisa** with the title “Sviluppo di un dispositivo robotico con locomozione magnetica per colonoscopia indolore” by Antonella Verbeni, discussed on May 3rd, 2011 and evaluated with 110/110. **Winner of the 11th edition of the master thesis price of the National group of Bioengineering at the summer school of Bressanone in 2011.**

From March 2010 to December 2010, **tutor of a Master Degree thesis in Biomedical Engineering** at University of Pisa with the title “Piattaforma robotica teleoperata per guida magnetica e controllo a ultrasuoni real-time” by Christian Di Natali, discussed on December 7th, 2010 and evaluated with “magna cum laude”.

From March 1st until June 1st 2009, **technical supervision** of Regina Donlin, master student of the BioRobotics Laboratory (directed by Prof. Blake Hannaford), University of Washington, Seattle, Washington, USA with a research topic about “Robotic control for endoscopic capsule”.

TECHING ACTIVITIES

Teaching activity for the course “**Medical Robotics**” held by Prof. Paolo Dario for the Master Degree in Biomedical Engineering at University of Pisa, **Academic Year 2014-2015**. 2 hours about computer-aided surgery (first module) and 25 hours lessons will be attended next year about computer vision architectures and strategies (in the second module) (theoretical aspects, C++ programming issues and applications). **Total of hours: 27.**

October 2013, Designation of “**Culture della Materia**” in Medical Robotics, University course held by Prof. Paolo Dario at Biomedical Engineering, University of Pisa, Pisa.

Teaching activity for the course “**Medical Robotics**” held by Prof. Paolo Dario for the Master Degree in Biomedical Engineering at University of Pisa, **Academic Year 2013-2014**. 2 hours about computer-aided surgery (first module) and 25 hours lessons will be attended next year about computer vision architectures and strategies (in the second module) (theoretical aspects, C++ programming issues and applications). **Total of hours: 27.**

Teaching activity for the course “**Medical Robotics**” Prof. Paolo Dario for the Master Degree in Biomedical Engineering at University of Pisa, **Academic Year 2012-2013**. 12 hours about computer vision and augmented reality in endoscopic procedures (first module) and 15 hours lessons about inertial sensors, magnetic control strategies for active capsule endoscopy and microcontroller (second module) (theoretical aspects, C++ programming issues and applications). **Total of hours: 27.**

Teaching activity for the course “**Medical Robotics**” Prof. Paolo Dario for the Master Degree in Biomedical Engineering at University of Pisa, **Academic Year 2011-2012**. 5 hours total lessons about inertial sensors (theoretical aspects, C++ programming issues and applications) and magnetic control strategies for active capsule endoscopy. **Total of hours: 5.**

ADDITIONAL PROFESSIONAL INFORMATION AND MEMBERSHIPS

From 2009 until 2010 and for 2012, **Member** of the Institute of Electric and Electronics Engineers (IEEE) and for 2010, **Member** of the Institute of Electric and Electronics Engineers (IEEE) Robotics and Automation Society

April 2008, University of Pisa, Pisa, Italy

Italian license “abilitazione” for the profession of Industrial Engineering, obtained after a written and oral exam (Esame di Stato), held on April 2008. The license was issued by MIUR (Ministero dell’Istruzione, dell’Università e della Ricerca) on June 11th 2013.

From 2002 until July 2008, TEKNOService s.n.c., 151, Via Pietrasantina, Pisa, Italy

Part-time work during the University period performing technical activities (e.g., hardware installation and technical assistance, assistance and technical support during meetings and digital conversion and processing of analogical format films), education activities (e.g., training courses on the use of the personal computer), and commercial activities (e.g.,

E-commerce on Ebay store).

Tutto quanto dichiarato corrisponde a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 e ss. del D.P.R. 445/2000.

**In Fede,
Pisa, 20 October 2015**

Gastone Ciuti

A handwritten signature in black ink, appearing to be 'G. Ciuti', written in a cursive style.