

Stefania Marconi

Curriculum Vitae

1 Personal Data

- *Born* in Broni (Pavia, Italy) on 17 August 1987

2 Academic Appointments

- *July 2018 – currently*: **Research Fellow** at Fondazione Policlinico San Matteo, Pavia, Italy.
Scientific advisor: Prof. A. Pietrabissa.
- *June 2015 – June 2018*: **Post-doc fellow** at Dept. of Civil Engineering and Architecture of University of Pavia, Italy.
Scientific advisor: Prof. F. Auricchio.

2 Education

Graduate studies

- *November 2011 - June 2015*: **Philosophiæ Doctor in Experimental Surgery and Microsurgery**, University of Pavia, Italy (XXVII cycle).
Thesis title: “3D printed patient specific models: application to laparoscopic and robotic abdominal surgery”.
Advisor: Prof. A. Pietrabissa.

Undergraduate studies

- *October 2009 – September 2011*: **Master Degree in Biomedical Engineering** at University of Pavia, Italy, with the grade of **110/110 magna cum laude**.
Thesis title: “Ricostruzione 3D virtuale e fisica del pancreas con discriminazione semiautomatica tra parenchima sano e tessuto tumorale”.
Advisors: Prof. Ferdinando Auricchio, Prof. Andrea Pietrabissa.
- *October 2006 – September 2009*: **Bachelor Degree in Biomedical Engineering** at University of Pavia, Italy, with the grade of **110/110 magna cum laude**.
Thesis title: “Messa in opera di sistema wireless per la registrazione dei movimenti oculari”. Advisor: Prof. Stefano Ramat.

Certifications

- *December 2011*: Italian engineering professional license.

4 Awards and Honors

- **Member of the Technology Committee of EAES** (European Association of Endoscopic Surgery), in charge from 2 June 2018.

- *26 May 2017: **Best bio-model Award (2nd place)***, for the work “A new method for the preoperative planning in Bonebridge implant surgery based on 3D printing technology”. 1° Congresso IDBN (Italian Digital Biomanufacturing Network), Bologna, Italy.
- *23 September 2016: **Galileo Galilei Award***, for a work on innovative diagnostic and/or therapeutic in otology, audiology or vestibology, for the work “Dalla TC alla stampante 3D: un metodo innovativo per la pianificazione chirurgica del Bonebridge”. Authors: Canzi P, Manfrin M, Marconi S, Magnetto M, Aprile F, Carelli C, Quagliari S, Simoncelli A, Auricchio F, Beltrame M, Benazzo M. Otology 3.0, Padova, Italy.
- *29 October 2014: **Best Project Work Award*** within the project “INNO-TAL Talenti per l’innovazione globale e la professionalizzazione”, Bando Fondazione Cariplo.

5 Patents

1. Canzi P, Benazzo M, **Marconi S**, Auricchio F, “Ring cochlear implant introducer”, International Patent Office n. PCT/EP2016/068296, 1 August 2016.
2. Canzi P, Benazzo M, **Marconi S**, Auricchio F, “Dispositivo di fissaggio dell’osso temporale per protesi acustiche impiantabili (Temporal bone holder device for acoustic implantable prostheses)”, Italian Patent Office n. 102015000041482, 3 August 2015.

6 Teaching experience

1. *Academic Year 2017-18, 2018-19: “**Laboratorio di biomeccanica**”* (Laboratory of biomechanics), Dept. of Electrical, Computer and Biomedical Engineering, University of Pavia (ING-IND/34, 3 CFU), for a total of 36 hours of lesson.
2. *12 May 2018: “**3D Printing: tecniche, stato dell’arte e prospettive in sanità**”* course at “18° Convegno Nazionale Associazione Italiana Ingegneri Clinici”, Roma, Italy, for a total of 5 hours of lesson.
3. *Academic Year 2016-17, 2017-18: “**Virtual modeling and additive manufacturing**”* course, held by Prof. F. Auricchio, Faculty of Engineering/Faculty of Medicine of University of Pavia (ICAR/08, 3 CFU), for a total of 7 hours of lesson.
4. *Academic Year 2015/2016: “**Virtual modeling and additive manufacturing**”* course, held by Prof. F. Auricchio, Faculty of Engineering/Faculty of Medicine of University of Pavia (ICAR/08, 3 CFU), for a total of 2 hours of lesson.

7 Research activity

- *Management of the Protolab*: the 3D printing laboratory of the Dept. of Civil Engineer and Architecture is equipped with several technologies, from FDM printers, to binder jetting, material jetting and VAT photo-polymerization printers. Research activities related to the use of 3D printing technologies include the testing of innovative 3D printing materials, the realization of patient-specific anatomical models for pre-operative planning, design and manufacturing of medical instrumentation and laboratory stuff prototyping. The laboratory offers also a prototyping service activity addressed both to research centers and companies.
- *3D@Unipv project proponent*: one of the proponents of the thematic plan “3D@UniPV: Virtual Modeling and Additive Manufacturing (3D printing) for Advanced Materials”

(<http://www.unipv.it/3d/>), one of the five plans selected by the University of Pavia as main strategic lines of research.

- *Elaboration of medical images*: analysis and 3D reconstruction of MDCT and RM datasets, especially of abdominal organs. The activity involves deep competencies in image segmentation, registration and post-processing.
- *Image analysis of pancreatic cancer*: the activity relates specifically to the identification and 3D reconstruction of Pancreatic Ductal AdenoCarcinoma, one of the most common pancreatic tumors, characterized by a poor visibility on medical images. Aim of the activity is the development of innovative approaches to discriminate the tumor tissue from the health one.
- *Study of ergonomics in robotic surgery*: the activity relates to the investigation of the learning curve in the use of the robotic console Da Vinci®. The study includes an evaluation of the posture, the use of console facilities, personal skills and outcome during the practice at the robotic console.

8 Research Projects

- *Oct 2016 – currently*: “STEREO3D: New Materials and Technologies for Stereo lithography 3D printing”, Regione Lombardia and INSTM. Role: Unit Member.
- *Sept 2016 – currently*: “Pancreatic ductal adenocarcinoma (PDAC): development of a new communication platform between radiologists, surgeons and pathologists based on virtual and 3D printed reconstructions of the pancreas and the tumor mass”. Ricerca Finalizzata 2013, Italian Ministry of Health. Role: Unit Member
- *February 2016 – May 2016*: “F@H for 3D plates – Fab@Hospital for bone plate fabrication and patient anatomy reconstruction using rapid prototyping technologies”. Flagship Project “La Fabbrica del Futuro Piattaforma Manifatturiera Nazionale”, CNR (National Research Council). Role: Unit Member.
- *July 2015 – currently*: 3D@UniPV. Virtual Modeling and Additive Manufacturing (3D printing) for Advanced Materials, University of Pavia. Role: Unit Member and one of the Project’s Proponent.
- *January 2014 – July 2015*: “Fab@Hospital, Hospital Factory for Manufacturing Customized, Patient Specific 3D Anatomic-Functional Model and Prostheses.” Flagship Project “La Fabbrica del Futuro Piattaforma Manifatturiera Nazionale”, CNR (National Research Council). Role: Unit Member.

9 Publications

Publication resume – Scopus

- Search criterion: "Marconi, Stefania" (Author ID:56715414400)
- From 2013 to 22/11/2018
- Documents: 32
- Sum of the Times Cited: 108
- Sum of Times Cited without self-citations: 92
- H index: 5

Peer-reviewed papers

1. Conti M, **Marconi S**, Muscogiuri G, Guglielmo M, Baggiano A, Italiano G, Mancini M, Auricchio F, Andreini D, Rabbat MG, Guaricci AI, Fassini G, Gasparetti A, Costa F, Tondo C, Maltagliati A, Pepi M, Pontone G, “Left atrial appendage closure guided by 3D computed tomography printing technology: A case control study”, *Journal of Cardiovascular Computed Tomography*, 2018, Article in Press.
2. Finotello A, **Marconi S**, Pane B, Conti M, Gazzola V, Mambrini S, Auricchio F, Palombo D, Spinella G, “Twelve-year Follow-up Post–Thoracic Endovascular Repair in Type B Aortic Dissection Shown by Three-dimensional Printing”, *Annals of Vascular Surgery*, 2018, Article in Press.
3. Espin-Lopez, PF, Pasian M, Alaimo G, **Marconi S**, Auricchio F, Jarvelainen J, “3-D Printed Antenna for Snowpack Monitoring”, *IEEE Antennas and Wireless Propagation Letters*, 2018 Nov; 17(11): 2109-2113. DOI: 10.1109/LAWP.2018.2870550.
4. Marone EM, Auricchio F, **Marconi S**, Conti M, Rinaldi LF, Pietrabissa A, Argentero A, “Effectiveness of 3D printed models in the treatment of complex aortic diseases”, *Journal of Cardiovascular Surgery*, 2018 Oct; 59(5): 699-706. DOI: 10.23736/S0021-9509.18.10324-7.
5. **Marconi S**, Lanzarone E, van Bogerijen GHW, Conti M, Secchi F, Trimarchi S, Auricchio F, “A compliant aortic model for in vitro simulations: design and manufacturing process”, *Journal of the Medical Engineering & Physics*, 2018 Sep; 59: 21-29. DOI: 10.1016/j.medengphy.2018.04.022.
6. Pugliese L, **Marconi S**, Negrello E, Mauri V, Peri A, Gallo V, Auricchio F, Pietrabissa A, “The Clinical Use of 3D Printing in Surgery”, *Updates in Surgery*, 2018 Sep; 70(3): 381-388. DOI: 10.1007/s13304-018-0586-5
7. Canzi P, Magonetto M, Marconi S, Morbini P, Mauramati S, Aprile F, Avato I, Auricchio F, Benazzo M, “New frontiers and emerging applications of 3D printing in ENT surgery: A systematic review of the literature”, *Acta Otorhinolaryngologica Italica*, 2018 Aug; 38(4): 286-303. DOI: 10.14639/0392-100X-1984.
8. Ceffa NG, Bouzin M, D’Alfonso L, Sironi L, Marquezin CA, Auricchio F, **Marconi S**, Chirirco G, Collini M, “Spatiotemporal image correlation analysis for 3D flow field mapping in microfluidic devices”, *Analytical chemistry*, 2018 Feb; 90 (3): 2277-2284. DOI: 10.1021/acs.analchem.7b04641.
9. Auricchio F, Greco A, Alaimo G, Giacometti V, **Marconi S**, Mauri V, “3D printing technology for buildings’ accessibility: The tactile map for MTE Museum in Pavia”, *Journal of Civil Engineering and Architecture*, 2017 Nov; 736-747, DOI: 10.17265/1934-7359/2017.08.002.
10. Canzi P*, **Marconi S***, Manfrin M, Magonetto M, Carelli C, Simoncelli AM, Fresa D, Beltrame M, Auricchio F, Benazzo M, “From CT scanning to 3D printing technology: a new method for the preoperative planning of a transcutaneous bone-conduction hearing device”, *Acta Otorhinolaryngologica Italica*, 2017 Oct; 37:1-5, DOI: 10.14639/0392-100X-1625.
11. **Marconi S**, Lanzarone E, De Beaufort H, Conti M, Trimarchi S, Auricchio F, “A novel insight into the role of entry tears in type B aortic dissection: pressure measurements in an in vitro model”, *International Journal of Artificial Organs*, 2017 Oct; 40(10): 563-574, DOI: 10.23736/S0021-9509.17.10199-0.
12. Marone EM, Rinaldi LF, **Marconi S**, Conti M, Auricchio F, Pietrabissa A, Argentero A, “A 3D printed patient-specific model to assist decision making in endovascular treatment of thoraco-abdominal aortic aneurysm”, *Letter to the Editor, Journal of Cardiovascular Surgery*, 2018 Apr; 59(2): 291-293. DOI: 10.23736/S0021-9509.17.10199-0.
13. Rigamonti G, Guardamagna M, Bello V, **Marconi S**, Auricchio F, Merlo S, “Flow-through micro-capillary refractive index sensor based on T/R spectral shift monitoring”, *Biomedical Optics Express*, 2017 Sep; 8(10): 4438-4453, DOI:10.1364/BOE.8.004438.
14. Di Buduo CA, Soprano PM, Tozzi L, **Marconi S**, Auricchio F, Kaplan DL, Balduini A, “Modular flow chamber for engineering bone marrow architecture and function”, *Biomaterials*, 2017 Nov; 146:60-71, DOI: 10.1016/j.biomaterials.2017.08.006.

* Equal authors’ contribution

15. Massoni E, Silvestri L, Alaimo G, **Marconi S**, Bozzi M, Perregrini L, Auricchio F, “3D-Printed Substrate Integrated Slab Waveguide for Single-Mode Bandwidth Enhancement”, *IEEE Microwave and Wireless Components Letters*, 2017 Jun; 27(6): 536-538, DOI: 10.1109/LMWC.2017.2701323.
16. Dorati R, De Trizio A, **Marconi S**, Ferrara A, Auricchio F, Genta I, Modena T, Benazzo M, Benazzo A, Volpato G, Conti B, “Design of a bioabsorbable multilayered patch for esophagus tissue engineering”, *Macromolecular Bioscience*, 2017 Jun; 17(6), DOI: 10.1002/mabi.201600426.
17. Nauta FJH, de Beaufort HWL, Conti M, **Marconi S**, Kamman AV, Ferrara A, van Herwaarden JA, Moll FL, Auricchio F, Trimarchi S, “Impact of thoracic endovascular aortic repair on radial strain in an ex vivo porcine model”, *European Journal of Cardio-thoracic Surgery*, 2017 Apr; 51(4): 783-789, DOI: 10.1093/ejcts/ezw393.
18. **Marconi S**, Pugliese L, Botti M, Peri A, Cavazzi E, Latteri S, Auricchio F, Pietrabissa A, “Value of 3D-printing for the comprehension of surgical anatomy”, *Surgical Endoscopy and Other Interventional Techniques*, 2017 Oct; 31(10): 4102-4110, DOI:10.1007/s00464-017-5457-5.
19. Alaimo G, **Marconi S**, Costato L, Auricchio F, “Influence of meso-structure and chemical composition on FDM 3D-printed parts”, *Composites Part B-Engineering*, 2017 Mar; 113: 371-380, DOI: 10.1016/j.compositesb.2017.01.019.
20. **Marconi S**, Pugliese L, Del Chiaro M, Pozzi Mucelli R, Auricchio F, Pietrabissa A, “An innovative strategy for the identification and 3D reconstruction of pancreatic cancer from CT images”, *Updates in Surgery*, 2016 Sep; 68(3):273-278, DOI: 10.1007/s13304-016-0394-8.
21. Auricchio F, **Marconi S**, “3D Printing: Clinical applications in orthopedics and traumatology”, *EFORT Open Reviews*, 2016 May; 1(5):121–127, DOI: 10.1302/2058-5241.1.000012.
22. Nauta FJ, Conti M, **Marconi S**, Kamman AV, Alaimo G, Morganti S, Ferrara A, van Herwaarden JA, Moll FL, Auricchio F, Trimarchi S, “An experimental investigation of the impact of thoracic endovascular aortic repair on longitudinal strain”, *European Journal of Cardio-thoracic Surgery*, 2016 Nov; 50(5):955-961, DOI: 10.1093/ejcts/ezw180.
23. Achilli E, Minguzzi A, Visibile A, Locatelli C, Vertova A, Naldoni A, Rondinini S, Auricchio F, **Marconi S**, Fracchia M and Ghigna P, “3D-printed Photo-Spectroelectrochemical device for in situ and in operando X-Ray Absorption Spectroscopy investigation”, *Journal of Synchrotron Radiation*, 2016 Mar; 23(2):622-628, DOI: 10.1107/S1600577515024480.
24. Pietrabissa A, **Marconi S**, Peri A, Pugliese L, Cavazzi E, Vinci A, Botti M and Auricchio F, “From CT scanning to 3-D printing technology for the preoperative planning in laparoscopic splenectomy”, *Surgical Endoscopy and Other Interventional Techniques*, 2016 Jan; 30(1): 366-371, DOI: 10.1007/s00464-015-4185-y.
25. Yousef MA, Dionigi P, **Marconi S**, Calligaro A, Cornaglia AI, Alfonsi E, Auricchio F, “Successful reconstruction of nerve defects using distraction neurogenesis with a new experimental device”, *Basic and Clinical Neuroscience*, 2015 Oct; 6(4):253-264.
26. Auricchio F, Conti M, **Marconi S**, Reali A, Tolenaar JL, Trimarchi S, “Patient specific aortic endografting simulation: from diagnosis to prediction”, *Computers in Biology and Medicine*, 2013 May; 43(4):386-394, DOI: 10.1016/j.combiomed.2013.01.006.

Submitted papers

1. Spinella G, Pane B, Conti M, Gazzola V, **Marconi S**, Campanile G, Auricchio F, Palombo D, “Preliminary experience with GORE TIGRIS Vascular Stent for the endovascular treatment of the femoral-popliteal artery, Article Submitted to *Journal of Cardiovascular Translational Research*.”

Book Chapters

1. Auricchio F, **Marconi S**, Alaimo G, Chapter “Materiali per la stampa 3D, possibilità attuali e prospettive future” in “Stampa 3D”, Filodritto, 2015 Nov.
2. Cantoni V, Gyoshev S, Karastoyanov D, **Marconi S**, Marino D, Pini M, Stoimenov N, Chapter “Modellazione, rendering e stampa 3D” in Cantoni V, Karastoyanov D, Mosconi M, Setti A, “1525-2015. Pavia, la Battaglia, il Futuro.Niente fu come prima”, Pavia University Press, 2016 May.

International and national conference papers

1. Inverardi N, Pandini S, Bignotti F, Scalet G, **Marconi S**, Auricchio F, “Temperature-memory effect in 3D printed photopolymers with broad glass transition”, 9th International Conference on Times of Polymers and Composites: From Aerospace to Nanotechnology, 17-21 June 2018, Ischia, Naples, Italy.
2. Massoni E, Espin-Lopez PF, Pasian M, Bozzi M, Perregrini L, Alaimo G, **Marconi S**, Auricchio F, “3D-printed Chalk powder for microwave devices: Experimental results for a NRD-guide in Ku-band”, 47th European Microwave Conference (EuMC), 2017. pp: 504-507.
3. Massoni E, Espin-Lopez PF, Pasian M, Bozzi M, Perregrini, **Marconi S**, Alaimo G, Auricchio F, “Additive manufacturing of a chalk powder NRD 3-port junction via binder jetting technology”, 2017 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP), 20-22 Sept. 2017, Pavia, Italy. pp: 1-3.
4. Di Meo S, Massoni E, Silvestri L, Obbad J, Pasian M, Bozzi M, Perregrini L, Alaimo G, **Marconi S**, Auricchio F, “Dielectric characterization of material for 3D-printed breast phantoms up to 50 GHz: Preliminary experimental results”, 2017 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP), 20-22 Sept. 2017, Pavia, Italy. pp: 1-3.
5. Massoni E, Guareschi M, Bozzi M, Perregrini, Tamburini UA, Alaimo G, **Marconi S**, Auricchio F, Tomassoni C, “3D printing and metalization methodology for high dielectric resonator waveguide microwave filters”, 2017 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP), 20-22 Sept. 2017, Pavia, Italy. pp: 1-3.
6. **S Marconi**, G Alaimo, V Mauri, M Torre, F Auricchio, “Impact of graphene reinforcement on mechanical properties of PLA 3D printed materials”, 2017 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP), 20-22 Sept. 2017, Pavia, Italy. pp: 1-3.
7. Alaimo G, Auricchio F, Giberti H, **Marconi S**, Morganti S, “Additive Manufacturing for a Low-Cost Biaxial Testing Machine”, AIMETA 2017 XXIII Conference of the Italian Association of Theoretical and Applied Mechanics, 4-7 September 2017, Salerno, Italy. pp: 684-693.

International conference proceedings

1. Pontone G, Guglielmo M, Guaricci AI, Andreini D, Guglielmo M, Mushtaq S, Conti M, **Marconi S**, Pepi M, Tondo C, Fassini G, “Left atrial appendage closure guided by 3D printed patient-specific models”, *European Heart Journal*, Volume 38, Issue suppl_1, 1 August 2017, ehx493.P5129, doi: 10.1093/eurheartj/ehx493.P5129.
2. Massoni E, Silvestri L, Bozzi M, Perregrini L, Alaimo G, **Marconi S**, Auricchio F, “Characterization of 3D-Printed Dielectric Substrates with Different Infill for Microwave Applications”, 2016 IEEE International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP2016), 20-22 July 2016, Chengdu, China. doi: 10.1109/IMWS-AMP.2016.7588330.
3. Nauta FJ, Conti M, **Marconi S**, Kamman AV, Alaimo G, Morganti S, Ferrara A, van Herwaarden J, Moll FL, Auricchio A, Trimarchi S, “Thoracic Endovascular Repair Decreases Longitudinal Aortic Distensibility: Experimental Study in an Ex-Vivo Porcine Model”, *Journal of the American College of Cardiology*, 2015 Oct; 66(15): B317.
4. **Marconi S**, Pietrabissa A, Auricchio F, Pozzi Mucelli R, Verbeke C, Segersvärd R, Del Chiaro M, “Preliminary validation of 3D reconstruction tool for preoperative planning in pancreatic surgery”, *Pancreatology*, 2014 Jun; 14 (3):S117-S118. doi: 10.1016/j.pan.2014.05.779
5. **Marconi S**, Auricchio F, Pietrabissa A, “3D Virtual and physical pancreas reconstruction discriminating between health and tumor tissue with fuzzy logic”, *International Journal of Computer Assisted Radiology and Surgery*, 2012 Jun; 7 (Suppl 1):S71–S88.

National conference proceedings

1. Conti M, Auricchio F, **Marconi S**, Pietrabissa A, Vercesi L, Micheletti P, Sampaolesi M, Cusella De Angelis MG, “Teaching and learning human Anatomy in the University of Pavia: from models and clinical specimens to prosection on 3D models from our museum collection”, Italian Journal of Anatomy and Embryology, 2017 Oct; 121(1):101, doi: 10.13128/IJAE-21738.
2. Finotello A, Morganti S, **Marconi S**, Romarowski R, Totaro P, Auricchio F, “Double aortic arch: engineering support to decision making process”, Proceedings VII Meeting Italian Chapter of the European Society of Biomechanics (ESB-ITA 2017) 28-29 September 2017, Rome, Italy.
3. Lanzarone E, Conti M, **Marconi S**, De Beaufort HWL, Trimarchi S, Auricchio F, “Alteration of lumped parameters under stent graft in ex vivo porcine aortas”, Proceedings VII Meeting Italian Chapter of the European Society of Biomechanics (ESB-ITA 2017) 28-29 September 2017, Rome, Italy.

Poster presentation at international conferences

1. **Marconi S**, Pietrabissa A, Auricchio F, “3D printing technology for surgical planning models in laparoscopic abdominal surgery”, SAGES 2015, 15-18 April 2015, Nashville, Tennessee.
2. Pugliese L, **Marconi S**, Morganti S, Gallotti A, Vanoli A, Paulli M, Filice C, Calliada F, Auricchio F, Pietrabissa A, “Mechanical properties of human pancreatic tissue in a surgically resected series of patients with pancreatic cancer: in-vitro uniaxial tensile tests to predict the risk of post-operative pancreatic fistula. A prospective study”, International Symposium on Pancreas Cancer 2014, 3-5 July 2014, Verona, Italy.
3. **Marconi S**, Pietrabissa A, Auricchio F, Pozzi Mucelli R, Verbeke C, Segersvärd R, Del Chiaro M, “Preliminary validation of 3D reconstruction tool for preoperative planning in pancreatic surgery”, Combined EPC & IAP Meeting 2014, 24-28 June 2014, Southampton, United Kingdom.
4. **Marconi S**, Auricchio F, Pietrabissa A, “A virtual and physical pancreas 3D model to assess the tumor evolution”, THE FIRST NEMB Venice Workshop on Cancer Nanotechnology, 11-12 October 2012, Venice, Italy.

Poster presentation at national conferences

1. **Marconi S**, Vinci A, Auricchio F, Peri A, Pugliese L, Pietrabissa A, “3D printing of renal anatomy and infrared navigation for robotic live donor kidney procurement”, Stati generali della salute, 8-9 April 2014, Roma, Italy.

10 Scientific activity**Offered Seminars**

1. *11 September 2018*: “Additive Manufacturing and 3D Printing for Medicine: experiences and opportunities”, 4th International Forum on Research and Technologies for Society and Industry (IEEE-RTSI), Palermo, Italy.
2. *14 June 2018*: “3D printing of biomaterials: a new technology for medicine”, Workshop “Ricerca e Nanomedicina”, Pavia, Italy.
3. *8 June 2018*: “Pancreatic cancer identification strategy on CT images based on higher-order statistics”, SIAM Conference on Imaging Science, Bologna, Italy.
4. *31 May 2018*: “Optimization of 3D-printed models for robotic surgery training”, 26th Congress of the EAES (European Association for Endoscopic Surgery), London, Great Britain.

5. *10 May 2018*: “Stampa 3D un nuovo strumento al servizio della medicina”, within the course “Cellule staminali: dalla biologia alle applicazioni in medicina rigenerativa”, Pavia, Italy.
6. *19 April 2018*: “La stampa 3D al servizio della chirurgia addominale: dalla pianificazione alla simulazione”, IDBN congress at Exposanità fair, Bologna, Italy.
7. *20 September 2017*: “Impact of graphene reinforcement on mechanical properties of PLA 3D printed materials”, International Microwave Workshop Series on Advanced Materials and Processes (IMWS-AMP), Pavia, Italy.
8. *13 September 2017*: “Additive Manufacturing: from prototypes to products”, 3th International Forum on Research and Technologies for Society and Industry (IEEE-RTSI), Modena, Italy.
9. *14 June 2017*: “3D printing technology as a planning instrument for renal tumor robotic enucleation”, 25th Congress of the EAES (European Association for Endoscopic Surgery), Frankfurt am Main, Germany.
10. *26 May 2017*: “A new approach for the production of biocompatible patches for esophageal tissue regeneration through FDM 3D printing”, 1^o Congresso IDBN (Italian Digital Biomanufacturing Network), Bologna, Italy.
11. *6 April 2017*: “Stampa 3D di modelli patient-specific per la pianificazione chirurgica”, Biomedicale e tecnologie additive verso la convergenza, organized by Professional Order of Engineers of Milano and AITA (Associazione Italiana Tecnologie Additive), Milano, Italy.
12. *31 March 2017*: “Stampa 3D in chirurgia generale e chirurgia vascolare”, Stampa 3D in medicina: regole, tutele, mercato e formazione, Opificio Golinelli, Bologna, Italy.
13. *24 February 2017*: “Materiali per la stampa 3D: utilizzi clinici”, 3D printing in complex aortic disease, Pavia Italy.
14. *8 February 2017*: “An innovative strategy for the identification and 3D reconstruction of pancreatic cancer from CT images”, INDAM Workshop on Biomedical Imaging, Rome, Italy.
15. *6 June 2016*: “Stampa 3D e chirurgia: back to the future”, Scintille in Lombardia, Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci, Milano, Italy.
16. *19 May 2016*: “La simulazione chirurgica è un imperativo etico. Modelli anatomici per la pianificazione operatoria: esempi applicativi in chirurgia e neurochirurgia”, Exposanità exhibition, Bologna, Italy.
17. *12 April 2016*: “3D printed patient specific models: innovative approach to surgical planning”, Medtec exhibition, Stuttgart, Germany.
18. *7 November 2015*: “3D printed patient specific models: application of 3D printing to surgery”, Meet the Scientist, University Library, Pavia, Italy.
19. *1 October 2015*: “Stampa 3D per la pianificazione chirurgica”, MakeForum, 3D Printing & Additive Manufacturing, Politecnico di Milano, Campus Bovisa, Italy.
20. *18 September 2015*: “3D printed patient specific models: application of 3D printing to surgery”, Italian Institute of Technology (IIT), Genova, Italy.
21. *13 June 2015*: “3D printed scaffolds in dental surgery”, Dentistry update course promoted by ANDI Pavia, Collegio Volta, Pavia, Italy.
22. *5-6 March 2015*: “Chirurgia e stampa 3D: dalla modellazione virtuale al prototipo fisico”, 3DPrintHub exhibition, Milano, Italy.
23. *13 February 2015*: “Stampanti 3D@Unipv: stato dell’arte e direzioni di ricerca”, within the thematic meeting for companies “3D Printers/Computational Mechanics/Innovative Materials: state of art and prospective”, Collegio Cairoli, Pavia, Italy.
24. *23 May 2014*: “Chirurgia e stampa 3D: dalla modellazione virtuale al prototipo fisico”, Exposanità exhibition, Bologna, Italy.
25. *30 June 2012*: “3D virtual and physical pancreas reconstruction discriminating between health and tumor tissue with fuzzy logic”, CARS 2012 - Computer Assisted Radiology and Surgery, Pisa, Italy.

Invited speaker

1. *29 September 2018*: “A virtual model-based communication platform between radiologists, surgeons and pathologists: application to pancreatic ductal adenocarcinoma”, New Technologies in Surgery-

- Surgical Education through Simulation. Congresso dell' American College of Surgeons - Italy Chapter, Pisa, Italy.
2. *11 May 2018*: “Tecnologie additive: la stampa 3D al servizio della medicina” 18° Convegno Nazionale Associazione Italiana Ingegneri Clinici, Roma, Italy.
 3. *5 September 2017*: “Value of 3D printing for the comprehension of surgical anatomy”, Siena Vascular and Endovascular Course (SiveC), Siena, Italy.
 4. *4 May 2017*: “Benchmark compliant models for in-vitro testing and fluid-dynamics studies applied to cerebro-vascular diseases”, 7th Annual (ISNVD) International Society of NeuroVascular Disease Scientific Meeting, Taormina, Italy.
 5. *9 September 2016*: “Stampa in 3D di modelli anatomici: un aiuto per la pianificazione degli interventi in chirurgia”, Seminario sulle Tecnologie di Stampa 3D a Servizio della Medicina e Chirurgia, AORN “A. Cardarelli” Napoli, Napoli, Italy.
 6. *25 April 2016*: “Plastic materials in 3D printing: surgical planning and clinical application”, Medical Plastic Conference, ChinaPlas 2016, Shanghai, China.
 7. *20 May 2015*: “3D printed anatomical models for surgical planning, especially for abdominal surgery”, Medical Plastic Conference, ChinaPlas 2015, Guangzhou, China.

Organization of scientific meetings

1. *5-7 September 2018*: Co-organizer of the conference “3D printing and Biomechanics - 2° Congresso Nazionale IDBN & III Thematic Conference ESB-ITA”, Pavia, Italy.
2. *27-29 June 2018*: Co-chair of the session “3D-printing from mechanical characterization to practical application” within the “First International Conference on Materials, Mimicking, Manufacturing from and for Bio Application” (BioM&M), Milano, Italy.
3. *20 September 2017*: Co- chair of the session “Additive Manufacturing: innovative materials and applications” within the “International Microwave Workshop Series on Advanced Materials and Processes” (IMWS-AMP), Pavia, Italy.

11 Abroad Research Periods

- *April 2013*: Karolinska Institutet, Stockholm, Sweden. Research goal: image elaboration of pancreatic ductal adenocarcinoma Multi-Detector Computed Tomography images for tumor’s borders identification.

12 Post Lauream Attended Courses

- *October-November 2013*: INNO – TAL – Talenti per l’innovazione globale e la professionalizzazione, Bando Fondazione Cariplo – Promuovere la Formazione di Capitale Umano di Eccellenza. IULM, Milano, Italy.
- *July 2-4 2013*: Computational Fluid dynamics, Prof. A. Veneziani (Emory University, Atlanta, USA). University of Pavia, Italy.
- *June 10- 2013*: Partecipazione al corso “Project Management sulla ricerca. Imparare a progettare in Europa”, Servizio Ricerca Università di Pavia. University of Pavia, Italy.
- *July 2-5 2012*: Pratical Computational Hemodynamics: data, simulations, assimilation. Prof. A. Veneziani (Emory University, Atlanta, USA). University of Pavia, Italy.

13 Knowledge and Skills

Language skills

- *Italian*: mother tongue
- *English*: reading and writing (advanced), oral (advanced)

Computer skills

- *Programming languages*: Matlab (advanced), Labview (advanced), Java (intermediate), C++ (beginner), JSP (intermediate), HTML (intermediate), MySQL/Oracle (intermediate), Assembler (beginner)
- *CAD software*: Solidworks (advanced), Autodesk Inventor (advanced)
- *Medical image analysis software*: Osirix, ITK-Snap, Mimics (advanced in all), ImageJ, VMTK (intermediate)
- *Virtual model post-processing software*: Netfabb, 3Matic, Paraview, MeshLab, 3DStudio - 3D Systems (advanced in all)

Additive manufacturing skills

Advanced proficiency in the management of several 3D printing machines, including model post-processing and all the machine maintenance procedures:

- *Selective Laser Melting*: certified user of Renishaw AM 400 SLA machine
- *FDM*: 3NTR A4v2, 3NTR A4v3, Leapfrog Creatr, Leapfrog Creatr HS
- *Binder Jetting*: ProJet460 Plus – 3DSYSTEMS
- *Material Jetting*: Objet 30Pro – Objet-Stratasys, Objet 260 Connex 3 - Objet-Stratasys
- *VAT-Photopolimerization*: Form2 – Formlabs
- *Slicing software*: Slicer, Cura, Kisslicer, MatterControl, Craftware, Objet Studio - Stratasys, 3DPrint - 3D Systems (advanced in all)