

Stefania Marconi

Curriculum Vitae

1 Current Activities

- *01 June 2022 – currently:* **Assistant Professor** - RTD-B at Dept. of Civil Engineering and Architecture of University of Pavia, Italy.
- **Scientific Affiliation** to Fondazione IRCCS Policlinico San Matteo, Pavia, Italy (Piattaforma Università- Policlinico).
- **Supervisor of the research and clinical activities of the "3D4Med" 3D Printing Clinical Laboratory** (www.3d4med.eu), Fondazione IRCCS Policlinico San Matteo, Pavia and Department of Civil Engineering and Architecture, University of Pavia, Pavia.

The laboratory carries out research and clinical application of additive manufacturing technologies, through the production of models for surgical planning and training. The activity started in October 2018, the date of the formal opening of the laboratory.

Supervised activities: analysis of medical images and virtual reconstruction of patient-specific anatomy or CAD design of supporting devices and instruments, selection of materials suitable for production according to the clinical purpose (planning or training), production using additive manufacturing technologies.

- **Co-supervisor of the "Protolab" 3D Printing Laboratory** (www.unipv.it/3d/our-services/protolab/), Department of Civil Engineering and Architecture, University of Pavia, Pavia.

The laboratory carries out research activities on additive manufacturing technologies and materials. It also performs consulting and production activities for third parties, by means of additive manufacturing technologies.

Supervised activities: CAD design or re-engineering of components produced with subtractive techniques or injection molding to be produced with additive manufacturing techniques, selection of the most suitable materials according to operational constraints, production using additive manufacturing techniques - with focus on biomedical components – and mechanical characterization of 3D printed materials.

2 Studies and career

Academic position

- *16 January 2019 – 31 May 2022: Assistant Professor* - RTD-A at Dept. of Civil Engineering and Architecture of University of Pavia, Italy.
- *01 July 2018 – 15/01/2019: Research Fellow* at Fondazione IRCCS Policlinico San Matteo, Pavia, Italy. Research title: Scientific advisor: Prof. Andrea Pietrabissa.
- *05 June 2014 – 31/05/2018: Post-doc Fellow* at Dept. of Civil Engineering and Architecture of University of Pavia, Italy. Scientific advisor: Prof. F. Auricchio.

Studies

- *04 June 2015: Philosophiæ Doctor in Experimental Surgery and Microsurgery*, University of Pavia, Italy.
Thesis: “3D printed patient specific models: application to laparoscopic and robotic abdominal surgery”.
Advisor: Prof. A. Pietrabissa.
- *01 November 2011 – 30 April 2015: PhD student in Experimental Surgery and Microsurgery*, University of Pavia, Italy (XXVII cycle).
- *15 September 2011: Master Degree in Biomedical Engineering* at University of Pavia, Italy, with the grade of **110/110 cum laude**.
Thesis: “Ricostruzione 3D virtuale e fisica del pancreas con discriminazione semiautomatica tra parenchima sano e tessuto tumorale”.
Advisors: Prof. Ferdinando Auricchio, Prof. Andrea Pietrabissa.
- *15 September 2009: Bachelor Degree in Biomedical Engineering* at University of Pavia, Italy, with the grade of **110/110 cum laude**.
Thesis: “Messa in opera di sistema wireless per la registrazione dei movimenti oculari”.
Advisor: Prof. Stefano Ramat.

Awards

- *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.
- *November 2014: Best Project Work Award* within the project “INNO-TAL Talenti per l’innovazione globale e la professionalizzazione”, Bando Fondazione Cariplo.

Certifications

- *December 2011: Italian engineering professional license.*

3 Scientific Activity

Identifiers

- Scopus Author Identifier: 56715414400
- ORCID: 0000-0003-4608-6180
- Web of Science ResearcherID: K-4079-2018

Metrics

- Documents: 105 (67 articles, 17 conference papers, 6 reviews, 2 editorial, 3 letters, 7 book chapter, 1 note, 2 erratum)
- Citations: 1560 from 1329 documents
- H-index: 20

Source: Scopus (31/08/2024)

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, “Temporal Bone Holder”, Italian Patent Office n. 102015000041482, 3 August 2015.

Appointments

- **Co-Chair of the Safety and Sustainability Task Force of EAES** (European Association of Endoscopic Surgery) and board member of the Sustainability in Surgical Practice group (joint action between EAES and SAGES), in charge from June 2022 to the present time.
- **Elected Member of the Technology Committee of EAES** (European Association of Endoscopic Surgery), in charge from June 2018 to June 2022.
- **Advisor for the writing of the “Italian Guidelines for the Use of Additive Manufacturing Technologies in Healthcare”**, Technical Area, Centro Studi AIIC (Associazione Italiana Ingegneri Clinici), First Edition, 2021

Editorial and Review Activity

- *October 2019*: Guest Editor for the Special Issue "3D printing for biomedical applications" published on "The International Journal of Artificial Organs" (Volume 42, Issue 10)
- Review activity for the following journals:
 - Review Editor per Frontiers in Bioengineering and Biotechnology - Journal Impact Factor 2019: 3.644;
 - Annals of Translational Medicine - Journal Impact Factor 2019: 3.875;
 - BMJ Simulation & Technology Enhanced Learning - Journal Impact Factor 2019: 0.698;
 - Journal of 3D Printing in Medicine;

- Journal of Healthcare Engineering - Journal Impact Factor 2019: 1.803;
- Multimodal Technologies and Interaction - Journal Impact Factor 2019: 1.98;
- SAGE Open – Medical Case Reports - Journal Impact Factor 2019: 0.715;
- Scientific Reports - Journal Impact Factor 2019: 3.998;
- Surgical Endoscopy and Other Interventional Techniques - Journal Impact Factor 2019: 3.149;
- The Journal of Cardiovascular Surgery - Journal Impact Factor 2019: 1.415;

Journal articles

1. Pasini, C., Inverardi, N., Battini, D., ...Auricchio, F., Pandini, Article Experimental investigation and modeling of the temperature memory effect in a 4D-printed auxetic structure S. *Smart Materials and Structures*, 2022, 31(9), 095021
1. Canzi P, Luzzi S, Carlotto E, Simoncelli A, Brondino N, **Marconi S**, Magnetto M, Lucifero Giotta A, Avato I, Manfrin M, Preda L, Benazzo M, “Customized Cochlear Implant Positioning in a Patient With a Low- Grade Glioma: Towards the Best MRI Artifact Management”, *M.Otology and Neurotology*, 2022, 43(6): E628–E634, doi: 10.1097/MAO.0000000000003532
2. Robertson, D., Sterke, F., van Weteringen, W., ...Sánchez-Margallo, F., Horeman, T. Characterisation of trocar associated gas leaks during laparoscopic surgery *Surgical Endoscopy*, 2022, 36(6), pp. 4542–4551
3. Pietrabissa A, Pugliese L, Filardo M, **Marconi S**, Muzzi A, Peri A, “My OR goes green: Surgery and sustainability | Mi sala de operaciones se vuelve verde: cirugía y sostenibilidad”, *Cirugia Espanola*, 2022, 100(6): 317–319, doi: 10.1016/j.ciresp.2021.07.002
4. Bonacorsi F, Capelli S, Locatelli F, Todeschini M, Marconi S, Vitali A, Lanzarone E, “Communication and Decision Support Tool for an In-Hospital 3D Printing Service”, *Studies in Health Technology and Informatics*, 2022, 293: 52–58, doi: 10.3233/
5. Dorati R, Chiesa E, Riva F, Modena T, **Marconi S**, Auricchio F, Genta I, Conti B, “Design and optimization of 3D-bioprinted scaffold framework based on a new natural polymeric bioink”, *Journal of Pharmacy and Pharmacology*, 2021, 74(1):57-66, doi:10.1093/jpp/rgab116.
6. Ramella, A., Migliavacca, F., Rodriguez Matas, J.F., ...Trimarchi, S., Luraghi, G. Validation and Verification of High-Fidelity Simulations of Thoracic Stent-Graft Implantation *Annals of Biomedical Engineering*, 2022
7. Jorea, A., Ravelli, D., Romarowski, R.M., ...Auricchio, F., Fagnoni, M. Photocatalyzed Functionalization of Alkenoic Acids in 3D-Printed Reactors *ChemSusChem*, 2022
8. **Marconi S**, Negrello E, Mauri V, Alaimo G, Auricchio F, “Towards Surgical Training Phantoms Obtained by Additive Manufacturing: Mechanical Characterization of Abdominal and Pelvic Organs. A Literature Review”, *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, 2022, 24: 279–298, doi: 10.1007/978-3-030-92339-6_12
9. Piekarz, I., Sorocki, J., Delmonte, N., ...Auricchio, F., Bozzi, M., "Wideband Microstrip to 3-D-Printed Air-Filled Waveguide Transition Using a Radiation Probe," in *IEEE Microwave and Wireless Components Letters*, doi: 10.1109/LMWC.2022.3173407.
10. Scribante A, Gallo S, Pascadopoli M, Canzi P, **Marconi S**, Montasser MA, Bressani D, Gandini P, Sfondrini MF, “Properties of CAD/CAM 3D Printing Dental Materials and Their Clinical

Applications in Orthodontics: Where Are We Now?”, *Applied Sciences*, 2022, 12(2):551, doi:10.3390/app12020551.

11. Mandurino-Mirizzi A, Arzuffi L, Negrello E, Crimi G, Ferlini M, Marinoni B, Repetto A, Mauri V, **Marconi S**, Ferrario M, Oltrona Visconti L, “Right coronary artery atresia in an athlete presenting with cardiac arrest: a case report. *Coronary Artery Disease*”, 2021, 33(1): 64–65, doi: 10.1097/MCA.0000000000001092.
12. Peri A, **Marconi S**, Gallo V, Mauri V, Negrello E, Abelli M, Ticozzelli E, Caserini O, Pugliese L, Auricchio F, Pietrabissa A, “Three-D-printed simulator for kidney transplantation”, *Surgical Endoscopy*, 2021, 36(1):844-851, doi:10.1007/s00464-021-08788-1.
13. Sorocki J, Piekarz I, Samulak A, Delmonte N, Silvestri L, **Marconi S**, Alaimo G, Auricchio F, Bozzi M, “Additively Fabricated Air-Filled Waveguide Integrated With Printed Circuit Board Using a Through-Patch Transition”. *IEEE Microwave and Wireless Components Letters*, 2021, 31(11):1207-1210, doi:10.1109/lmwc.2021.3112567.
14. Scocoza F, Sakaj M, Auricchio F, **Marconi S**, Riello P, Ferrari C, Cansolino L, Catenacci L, Sorrenti M, Scatto M, Conti M, “Shape fidelity and sterility assessment of 3D printed polycaprolactone and hydroxyapatite scaffolds”, *Journal of Polymer Research*, 2021, 28(9):327, doi: 10.1007/s10965-021-02675-y.
15. **Marconi S**, Mauri V, Negrello E, Ghiara M, Peri A, Pugliese L, Auricchio F, Benazzo F, Pietrabissa A, “The experience of a clinical 3D printing laboratory: current and future perspectives”, *Minerva Orthopedics*, 2021, 72(4). doi:10.23736/s2784-8469.20.04033-3.
16. Carraturo M, Alaimo G, **Marconi S**, Negrello E, Sgambitterra E, Maletta C, Reali A, Auricchio F, “Experimental and Numerical Evaluation of Mechanical Properties of 3D-Printed Stainless Steel 316L Lattice Structures”, *Journal of Materials Engineering and Performance*, 2021, 30: 5247–5251, doi: 10.1007/s11665-021-05737-w.
17. Rocco GM, Delmonte N, Schreurs D, **Marconi S**, Auricchio F, Bozzi M, “3D-printed pumpkin-shaped cavity resonator to determine the complex permittivity of liquids”, *Microwave and Optical Technology Letters*, 2021, 63(4):1061-1066, doi: 10.1002/mop.32708
18. Allegrini D, Montesano G, **Marconi S**, Rosso N, Ometto G, Raimondi R, Auricchio F, Tsoutsanis P, Semeraro F, Cacciatori M, Crabb DP, Romano MR, “A novel quantitative analysis method for idiopathic epiretinal membrane”, *PLoS ONE*, 2021, 16(3):e0247192, doi: 10.1371/journal.pone.0247192.
19. Lopez-Oliver E, Tomassoni C, Silvestri L, Bozzi M, Perregrini L, **Marconi S**, Alaimo G, Auricchio F, “3-D-Printed Compact Bandpass Filters Based on Conical Posts (2021) *IEEE Transactions on Microwave Theory and Techniques*, 2021, 69(1):616-628, art. no. 9257416, doi: 10.1109/TMTT.2020.3035168.
20. Arezzo A, Francis N, Mintz Y, Adamina M, Antoniou SA, Bouvy N, Copescu C, de Manzini N, Di Lorenzo N, Morales-Conde S, Müller-Stich BP, Nickel F, Popa D, Tait D, Thomas C, Nimmo S, Paraskevis D, Pietrabissa A, Eck M, Letić E, Preda SD, Tsai A, Malanowska E, Lesko D, Majewski W, Baldari L, Morelli L, Shamiyeh A, Faria G, Carrano FM, Mysliwiec P, Ahlberg G, Cassinotti E, Delibegović S, Martinek L, Yiannakopoulou E, Gorter-Stam M, Gorter-Stam M, Hanna G, Fuchs H, Bjelovic M, Markar S, Yan PW, Chiu, Ecom BW, Kim Y-, Ponz CB, Schijven M, Boni L, Carus T, Theodoropoulos G, Forgione A, Milone M, Petz WLR, Andrejevic P, Ignjatovic D, Arulampalam T, Campbell K, Chand M, Coleman M, Kontovounisios C, Sagiv C, Ficuciello F, **Marconi S**, Mascagni P, Nakajima K, Margallo FMS, Horeman T, Mylonas G, Valdastrì P, The EAES Group of Experts for Recovery Amid COVID-19 Pandemic, “EAES recommendations for recovery plan in minimally

- invasive surgery amid COVID-19 pandemic”, *Surgical Endoscopy*, 2021;35(1), doi:10.1007/s00464-020-08131-0.
21. De Grazia F, **Marconi S**, Bardone M, Mauro A, Alaimo G, Auricchio F, Pietrabissa A, Di Sabatino A, “Use of 3D printer for face mask production to protect endoscopy unit personnel in contact with high-risk patients during COVID-19 pandemic”, *Note, Endoscopy*, 2020, 52(12):1146-1147, doi: 10.1055/a-1206-0937.
 22. Garcia-Martinez H, Avila-Navarro E, Torregrosa-Penalva G, Delmonte N, Silvestri L, **Marconi S**, Alaimo G, Auricchio F, Bozzi M, “Design and fabrication of a band-pass filter with ebg single-ridge waveguide using additive manufacturing techniques”, *IEEE Transactions on Microwave Theory and Techniques*, 2020, 68(10): 4361-4368, art. no. 9141336, doi: 10.1109/TMTT.2020.3006836.
 23. Canzi P, Avato I, **Marconi S**, Del Maestro M, Lucifero AG, Magnetto M, Carlotto E, Auricchio F, Luzzi S, Benazzo M, “A 3d printed custom-made mask model for frameless neuronavigation during retrosigmoid craniotomy. A preclinical cadaveric feasibility study”, *Annali Italiani di Chirurgia*, 2020, 91(5): 526-533, doi:
 24. Marone EM, Rinaldi LF, Conti M, **Marconi S**, Auricchio F, Pietrabissa A, Basile G, “Three-Dimensional Printed Models Can Help Settle Malpractice Litigation Over Surgical Interventions”, *Letter to the Editor, Annals of Vascular Surgery*, 2020, 65:e292-e294, doi:10.1016/j.avsg.2020.01.001.
 25. Rocco GM, Bozzi M, Schreurs D, Perregrini L, **Marconi S**, Alaimo G, Auricchio F, “3-D Printed Microfluidic Sensor in SIW Technology for Liquids' Characterization”, *IEEE Transactions on Microwave Theory and Techniques*, 2020, 68(3):1175-1184, doi:10.1109/TMTT.2019.2953580.
 26. Totaro P, **Marconi S**, Morganti S, Corsico AG, Pelenghi S, Auricchio F, “Multidisciplinary preoperative simulations to optimize surgical outcomes in a challenging case of the complete double aortic arch in the adult”, *Journal of Cardiac Surgery*, 2020, 35(3):716-720, doi: 10.1111/jocs.14448.
 27. Canzi P, Capaccio P, **Marconi S**, Conte G, Preda L, Avato I, Aprile F, Gaffuri M, Occhini A, Pignataro L, Auricchio F, Benazzo M, “Feasibility of 3D printed salivary duct models for sialendoscopic skills training: preliminary report”, *European Archives of Oto-Rhino-Laryngology*, 2020, 277(3):909-915, doi:10.1007/s00405-019-05763-4.
 28. Clerici F, Ferro N, **Marconi S**, Micheletti S, Negrello E, Perotto S, “Anisotropic adapted meshes for image segmentation: Application to three-dimensional medical data”, *SIAM Journal on Imaging Sciences*, 2020, 13(4):2189-2212, doi:10.1137/20M1348303.
 29. Canzi P, Avato, I, **Marconi S**, Del Maestro M, Lucifero AG, Magnetto M, Carlotto E, Auricchio F, Luzzi S, Benazzo M, “A 3D printed custom-made mask model for frameless neuronavigation during retrosigmoid craniotomy. A preclinical cadaveric feasibility study”, *Annali italiani di chirurgia*, 2020, 91:526-533.
 30. Pandini S, Inverardi N, Scalet G, Battini D, Bignotti F, **Marconi S**, Auricchio F, “Shape memory response and hierarchical motion capabilities of 4D printed auxetic structures”, *Mechanics Research Communications*, 2020, 103:103463, doi:10.1016/j.mechrescom.2019.103463.
 31. Inverardi N, Pandini S, Bignotti F, Scalet G, **Marconi S**, Auricchio F, “Sequential Motion of 4D Printed Photopolymers with Broad Glass Transition”, *Macromolecular Materials and Engineering*, 2020, 305(1):1900370, doi:10.1002/mame.201900370.
 32. Pietrabissa A, **Marconi S**, Negrello E, Mauri V, Peri A, Pugliese L, Marone EM, Auricchio F, “An overview on 3D printing for abdominal surgery”, *Review, Surgical Endoscopy*, 2020, 34(1), doi:10.1007/s00464-019-07155-5.

33. Conti M, **Marconi S**, Muscogiuri G, Guglielmo M, Baggiano A, Italiano G, Mancini ME, Auricchio F, Andreini D, Rabbat MG, Guaricci AI, Fassini G, Gasperetti 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*, 2019, 13(6):336-339, doi:10.1016/j.jcct.2018.10.024.
34. Conti M, **Marconi S**, “Three-dimensional printing for biomedical applications”, Editorial, *International Journal of Artificial Organs*, 2019, 42:(10): 537-538, doi:10.1177/0391398819860846.
35. **Marconi S**, Negrello E, Mauri V, Pugliese L, Peri A, Argenti F, Auricchio F, Pietrabissa A, “Toward the improvement of 3D-printed vessels’ anatomical models for robotic surgery training”, *International Journal of Artificial Organs*, 2019, 42(10):558-565, doi:10.1177/0391398819852957.
36. Fantini V, Bordoni M, Scocozza F, Conti M, Scarian E, Carelli S, Di Giulio AM, **Marconi S**, Pansarasa O, Auricchio F, Cereda C, “Bioink Composition and Printing Parameters for 3D Modeling Neural Tissue”, *Cells*, 2019, 8(8), doi:10.3390/cells8080830.
37. Conti M, Vandenberghe S, **Marconi S**, Ferrari E, Romarowski RM, Morganti S, Auricchio F, Demertzis S, “Reversed Auxiliary Flow to Reduce Embolism Risk During TAVI: A Computational Simulation and Experimental Study”, *Cardiovascular Engineering and Technology*, 2019, 10(1):124-135, doi:10.1007/s13239-018-00386-y.
38. 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*, 2019, 55: 309.e13-309.e19, doi:10.1016/j.avsg.2018.07.057.
39. Spinelli D, **Marconi S**, Caruso R, Conti M, Benedetto F, De Beaufort HW, Auricchio F, Trimarchi S, “3D printing of aortic models as a teaching tool for improving understanding of aortic disease”, *Journal of Cardiovascular Surgery*, 2019, 60(5):582-588, doi:10.23736/S0021-9509.19.10841-5.
40. Espin-Lopez PF, Pasian M, Alaimo G, **Marconi S**, Auricchio F, Heinanen V, Jarvelainen J, “3-D Printed Antenna for Snowpack Monitoring”, *IEEE Antennas and Wireless Propagation Letters*, 2018, 17(11):2109-2113, doi:10.1109/LAWP.2018.2870550.
41. 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, 59(5):699-706, doi:10.23736/S0021-9509.18.10324-7.
42. Pugliese L, **Marconi S**, Negrello E, Mauri V, Peri A, Gallo V, Auricchio F, Pietrabissa A, “The clinical use of 3D printing in surgery”, Review, *Updates in Surgery*, 2018, 70(3):381-388, doi:10.1007/s13304-018-0586-5.
43. **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”, *Medical Engineering and Physics*, 2018, 59:21-29, doi:10.1016/j.medengphy.2018.04.022.
44. Canzi P, Magnetto 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”, Review, *Acta Otorhinolaryngologica Italica*, 2018, 38(4):286-303, doi:10.14639/0392-100X-1984.
45. Canzi P, **Marconi S**, Manfrin M, Magnetto 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*, 2018, 38(3):251-256, doi:10.14639/0392-100X-1625.
46. 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, 59(2):291-293, doi: 10.23736/S0021-9509.17.10199-0.
 47. Ceffa NG, Bouzin M, D'Alfonso L, Sironi L, Marquezin CA, Auricchio F, **Marconi S**, Chirico G, Collini M, “Spatiotemporal Image Correlation Analysis for 3D Flow Field Mapping in Microfluidic Devices”, *Analytical Chemistry*, 2018, 90(3):2277-2284, doi:10.1021/acs.analchem.7b04641.
 48. 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, 736-747, doi:10.17265/1934-7359/2017.08.002.
 49. 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, 146:60-71, doi: 10.1016/j.biomaterials.2017.08.006.
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 51. 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, 8(10): 4438-4453, doi:10.1364/BOE.8.004438.
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 53. Massoni E, Silvestri L, Alaimo G, **Marconi S**, Bozzi M, Perregrini L, Auricchio F, “3-D printed substrate integrated slab waveguide for single-mode bandwidth enhancement”, *IEEE Microwave and Wireless Components Letters*, 2017, 27(6): 536-538, doi: 10.1109/LMWC.2017.2701323.
 54. 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 multilayer patch for esophagus reconstruction”, *Macromolecular Bioscience*, 2017, 17(6), doi: 10.1002/mabi.201600426.
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 56. 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, 113: 371-380, doi: 10.1016/j.compositesb.2017.01.019.
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 58. **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, 68(3):273-278, doi: 10.1007/s13304-016-0394-8.
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 61. 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, 2016, 30(1): 366-371, doi: 10.1007/s00464-015-4185-y.
 62. 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, 6(4):253-264.
 63. 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, 43(4):386-394, doi: 10.1016/j.combiomed.2013.01.006.

Books

1. Auricchio F, Boatti E, Conti M, **Marconi S**, “SMA biomedical applications” in Concilio A, Antonucci V, Auricchio F, Lecce L, Sacco E, “Shape Memory Alloy Engineering for Aerospace, Structural, and Biomedical Applications”, Butterworth-Heinemann, Second Edition, 2021, pp. 627-658
2. Auricchio F, Conti M, **Marconi S**, Morganti S, Scocozza F, “SMA cardiovascular applications and computer-based design” in Concilio A, Antonucci V, Auricchio F, Lecce L, Sacco E, “Shape Memory Alloy Engineering for Aerospace, Structural, and Biomedical Applications”, Butterworth-Heinemann, Second Edition, 2021, pp. 659-685
3. Lanzarone E, **Marconi S**, Conti M, Auricchio F, Fassi I, Modica F, Pagano C, Pourabdollahian G, “Hospital factory for manufacturing customised, patient-specific 3D anatomic-functional models and prostheses”, in “Factories of the Future: The Italian Flagship Initiative”, 2019, pp. 233-254, doi: 10.1007/978-3-319-94358-9_11
4. **Marconi S**, Conti M, Auricchio F, “3D printing technologies and solutions”, in Marone EM, Argentero A, “3D printing in complex vascular disease”, Minerva Medica, 2018
5. **Marconi S**, Conti M, Auricchio F, “3D printing materials”, in Marone EM, Argentero A, “3D printing in complex vascular disease”, Minerva Medica, 2018
6. Marone EM, Rinaldi LF, **Marconi S**, Conti M, Auricchio F, Argentero A, “3D printing technologies in complex vascular diseases”, in Marone EM, Argentero A, “3D printing in complex vascular disease”, Minerva Medica, 2018
7. Pugliese L, **Marconi S**, Peri A, Botti M, Auricchio F, Pietrabissa A, “Value of 3D printing in the management of visceral aneurysms” in Marone EM, Argentero A, “3D printing in complex vascular disease”, Minerva Medica, 2018
8. 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.

9. Auricchio F, **Marconi S**, Alaimo G, Chapter "Materiali per la stampa 3D, possibilità attuali e prospettive future" in "Stampa 3D", Filodritto, 2015 Nov.

International conference proceedings

1. Lopez-Oliver E, Tomassoni C, Silvestri L, Bozzi M, Perregrini L, **Marconi S**, Alaimo G, Auricchio F, "3-D printed bandpass filter using conical posts interlaced vertically", 2020 IEEE MTT-S International Microwave Symposium Digest, art. no. 9223965, pp. 580-582, doi: 10.1109/IMS30576.2020.9223965.
2. Tomassoni C, Silvestri L, Delmonte N, Bozzi M, Perregrini L, **Marconi S**, Alaimo G, Auricchio F, "Different strategies for the additive manufacturing of slotted slant ridge filtering doublet", 2019 IEEE MTT-S International Microwave and RF Conference, IMARC 2019, 2019, art. no. 9118774. doi: 10.1109/IMaRC45935.2019.9118774.
3. Tomassoni C, Silvestri L, Delmonte N, Bozzi M, Perregrini L, **Marconi S**, Alaimo G, Auricchio F, "A New Class of Doublet Based on Slotted Slant Ridge in Additive Manufacturing Technology", IMWS-AMP 2019 - 2019 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications, 2019, art. no. 8880093, pp. 10-12, doi:10.1109/IMWS-AMP.2019.8880093.
4. Rocco GM, Bozzi M, **Marconi S**, Alaimo G, Auricchio F, Schreurs D, "3D-Printed Microfluidic Sensor in Substrate Integrated Waveguide Technology", 2018 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications, IMWS-AMP 2018, 2018, art. no. 8457168, doi:10.1109/IMWS-AMP.2018.8457168.
5. Inverardi N, Pandini S, Bignotti F, Scalet G, **Marconi S**, Auricchio F, "Temperature-memory effect in 3D printed photopolymers with broad glass transition", AIP Conference Proceedings, 2018, art. no. 020146, doi:10.1063/1.5046008.
6. Massoni E, Espín-López PF, Pasian M, Bozzi M, Perregrini L, **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 2017, 2018, pp. 1-3, doi:10.1109/IMWS-AMP.2017.8247370.
7. Massoni E, Guareschi M, Bozzi M, Perregrini L, 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 2017, 2018, pp. 1-3, doi:10.1109/IMWS-AMP.2017.8247417.
8. **Marconi S**, Alaimo G, Mauri V, Torre M, Auricchio F, "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 2017, 2018, pp. 1-3, doi:10.1109/IMWS-AMP.2017.8247414.
9. Di Meo S, Massoni E, Silvestri L, Obbad J, Pasian M, Dondi D, 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 2017, January 2018, pp. 1-3, doi:10.1109/IMWS-AMP.2017.8247371.

10. 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”, European Microwave Week 2017: "A Prime Year for a Prime Event", EuMW 2017 - Conference Proceedings; 47th European Microwave Conference, EuMC 2017, January 2017, pp. 504-507, doi:10.23919/EuMC.2017.8230900.
11. 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.
12. 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.
13. **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.
14. **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. Alaimo G, Auricchio F, Giberti H, **Marconi S**, Morganti S, “Additive Manufacturing for a Low-Cost Biaxial Testing Machine”, AIMETA 2017 XXIII Conference, The Italian Association of Theoretical and Applied Mechanics, 4-7 September 2017, Salerno, 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.

4 Teaching activity

Academic Courses

1. *Academic Year 2020-2021 - today:* Professor for “Prototyping of Biomedical and Industrial Devices” (6 ECTS) – previously “Laboratory of Biomechanics” – Master’s Degree in Bioengineering (2nd year), ING-IND/34 Industrial Bioengineering, University of Pavia.
2. *Academic Year 2019/2020 - today:* Professor for “Virtual Modeling and Additive Manufacturing” (3 ECTS), Bachelor’s Degree in Industrial Engineering - Mechanics (3rd year), Master’s Degree in Civil Engineering (2nd year), Master’s Degree in Bioengineering (2nd year), credits for Medicine and Surgery, Building Engineering and Architecture and for the Order of Engineers of Pavia, ING-IND/34 Industrial Bioengineering, University of Pavia.
3. *Academic Year 2019/2020 - today:* Professor for “Biomechanics and Simulation of Biomedical Devices” (6 ECTS), Bachelor’s Degree in Bioengineering (2nd year), ING-IND/34 Industrial Bioengineering, University of Pavia.
4. *Academic Year 2019/2020:* Professor for “Laboratory of Biomechanics” (6 ECTS), Master’s Degree in Bioengineering (2nd year), ING-IND/34 Industrial Bioengineering, University of Pavia.
5. *Academic Year 2017/2018 – 2018/2019:* Professor for “Laboratory of Biomechanics” (3 ECTS), Master’s Degree in Bioengineering (2nd year), ING-IND/34 Industrial Bioengineering, University of Pavia.
6. *Academic Year 2015/2016 – 2018/2019:* Course management and teaching for “Virtual Modeling and Additive Manufacturing” (3 ECTS), Bachelor’s Degree in Industrial Engineering - Mechanics (3rd year), Master’s Degree in Civil Engineering (2nd year), Master’s Degree in Bioengineering (2nd year), credits for Medicine and Surgery, Building Engineering and Architecture and for the Order of Engineers of Pavia, ING-IND/34 Industrial Bioengineering, University of Pavia.

Academic Seminars

1. *May 2021 – Workshop:* “Applications of AM technologies to the surgical planning and training”, within the project “Central Europe Initiative”: “Optimization and usage of 3D technology in medicine and health care - learn on experience”, University of Zenica, Bosnia-Erzegovina
2. *May 2021 - Workshop:* “Patient specific anatomical models production by means of AM technologies: image elaboration techniques”, within the project “Central Europe Initiative”: “Optimization and usage of 3D technology in medicine and health care - learn on experience”, University of Zenica, Bosnia-Erzegovina
3. *Academic year 2018/2019, 2019/2020, 2020/2021, 2021/2022 – Academic seminar for the Erasmus Mundus Joint Master Degrees NANOMED, Coordinator: Prof. Carla M. Caramella, Department of Drug Sciences, University of Pavia*
4. *Academic year 2018/2019, 2019/2020, 2020/2021– Academic seminars for the Bachelor’s and Master’s Degree in Biomedical Engineering, University of Bergamo*
5. *Academic year 2019/2020, 2020/2021 – Academic seminar for the Medicine and Surgery Course (Harvey Course – English program), University of Pavia*

6. *Academic year 2017/2018, 2018/2019* – Academic seminar within the cycle “Stem Cells: from Biology to the Applications in Regenerative Medicine”, for the Medicine and Surgery Course (Golgi Course – Italian program), University of Pavia

Thesis Supervision at University of Pavia

PhD Students

1. Academic years 2018-2021 - "ProTechTion: Industrial decision-making on complex Production Technologies supported by simulaTion-based engineering", Marie Skłodowska-Curie Innovative Training Networks, European Joint Doctorate. Project: "Design and manufacturing of 3D-printed structural component (ESR #8)".
Primary academic institution: Università degli Studi di Pavia, Industrial institution: 3NTR, Secondary academic institution: Université Libre de Bruxelles.
PhD Student: Varun Murugan
Supervisors at University of Pavia: Prof. Ferdinando Auricchio, Prof. Stefania Marconi, Prof. Gianluca Alaimo

Engineering – Master Thesis

1. “Compliance of 3D printed vascular models for surgical training: set up design and experimental evaluation”, Nicole Rita Rinaldi, Master’s Degree in Bioengineering, Academic Year 2020-2021. Supervisors: Prof. Stefania Marconi, Co-Supervisor: Dr. Francesca Dedola.
2. “Rimodellamento osseo in seguito ad intervento di artroplastica d’anca: simulazione attraverso analisi agli elementi finiti e approccio alla validazione”, Paolo Damiano Ermetici, Master’s Degree in Bioengineering, Academic Year 2019-2020. Supervisors: Prof. Stefania Marconi, Prof. Gianluca Alaimo.
3. “Sviluppo di un concept design di protesi d’anca patient specific per la riduzione dello *stress shielding*”, Francesca Rotini, Master’s Degree in Bioengineering, Academic Year 2019-2020. Supervisors: Prof. Stefania Marconi, Prof. Gianluca Alaimo.
4. “Sviluppo di un tamponante retinico basato su polimeri a memoria di forma”, Priscilla Errico, Master’s Degree in Bioengineering, Academic Year 2019-2020. Supervisors: Prof. Stefania Marconi, Co-Supervisors: Prof. Giulia Scalet, Prof. Ferdinando Auricchio.
5. “Valutazione delle performance di sutura di materiali stampati in 3D per lo sviluppo di phantom di simulazione chirurgica: sviluppo del set-up e confronto con tessuto animale”, Martina Golosio, Master’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi, Co-Supervisors: Prof. Gianluca Alaimo, Eng. Valeria Mauri.
6. “Descrizione delle proprietà costitutive viscoelastiche di materiali stampati 3d tramite il modello di maxwell generalizzato: calibrazione dei parametri e validazione”, Alberto Gualtieri, Master’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi, Co-Supervisor: Prof. Gianluca Alaimo.
7. “Sviluppo di design di protesi d’anca per la prevenzione del riassorbimento osseo: modellazione geometrica e simulazione”, Alice Salvadeo, Master’s Degree in Bioengineering, Academic Year 2018-2019. Supervisor: Prof. Stefania Marconi, Co-Supervisor: Prof. Gianluca Alaimo.
8. “4D printed photo-responsive actuators: experimental tests and finite element simulations -Attuatori fotoresponsivi realizzati tramite stampa 4D: analisi sperimentali e simulazioni agli elementi finiti.”, Chiara De Donno, Master’s Degree in Electric Engineering, Academic Year 2018-2019.

Supervisors: Prof. Giulia Scalet, Prof. Stefania Marconi. Co-Supervisors: Prof. Ferdinando Auricchio, Dr. Andrea Camposeo.

9. “Numerical simulation of bone remodeling based on patient specific 3D models derived from CT images”, Stefano Merli, Master’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisors: Eng. Stefania Marconi, Eng. Gianluca Alaimo.
10. “Customizzazione di una stampante 3D FDM per l’erogazione di alginato di sodio per bioink”, Franca Scocozza, Master’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
11. “Identification strategy for Pancreatic Ductal Adenocarcinoma 3D reconstruction from Multi Detector Computed Tomography images”, Erika Negrello, Master’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
12. “Stampa 3D di modelli vascolari patient-specific per pianificazione e training pre-operatorio”, Alessandra Ganzu, Master’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
13. “3D Printing manufacturing of bioabsorbable and biodegradable patches for esophageal tissue regeneration”, Valeria Mauri, Master’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi, Prof. Bice Conti.

Engineering – Bachelor Thesis

1. “Utilizzo del PEEK per la produzione di componenti impiantabili tramite la stampa 3D”, Anna Benaglia, Bachelor’s Degree in Bioengineering, Academic Year 2020-2021. Supervisor: Prof. Stefania Marconi.
2. “Progetto, produzione e valutazione qualitativa di modelli di osso temporale stampati con tecnologie 3D per il training chirurgico”, Emanuele Quiri, Bachelor’s Degree in Bioengineering, Academic Year 2020-2021. Supervisor: Prof. Stefania Marconi.
3. “Caratterizzazione meccanica della risposta del tessuto osseo alla fresatura.”, Alessandra Pernigotti, Bachelor’s Degree in Bioengineering, Academic Year 2020-2021. Supervisor: Prof. Stefania Marconi.
4. “Metodologie di caratterizzazione meccanica del tessuto vascolare”, Sara Bergamaschi, Bachelor’s Degree in Bioengineering, Academic Year 2020-2021. Supervisor: Prof. Stefania Marconi, Co-Supervisor: Eng. Valeria Mauri.
5. “Proprietà meccaniche degli organi addominali e tecniche di caratterizzazione”, Mostafa Mohamed, Bachelor’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi, Co-Supervisor: Eng. Erika Negrello.
6. “Proprietà termiche dei tessuti oculari: analisi della letteratura”, Silvia Beltrami, Bachelor’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi.
7. “Simulazione degli effetti termici indotti dal trattamento con laser micropulsato della corioretinopatia sierosa centrale”, Barbara Elvira Ventura, Bachelor’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi, Co-Supervisor: Dr. Alberto Cattenone.
8. “La stampa 3D per la produzione di corsetti ortopedici: analisi del flusso di lavoro e confronto con la

- produzione convenzionale”, Mara Brizzi, Bachelor’s Degree in Bioengineering, Academic Year 2019-2020. Supervisor: Prof. Stefania Marconi, Co- Supervisors: Eng. Valeria Mauri, Eng. Erika Negrello.
9. “Valutazione della variabilità dello spessore dell'osso temporale per l'impianto di protesi acustiche: analisi preliminare”, Vittoria Del Bello, Bachelor’s Degree in Bioengineering, Academic Year 2018-2019. Supervisor: Prof. Stefania Marconi.
 10. “Prototipazione di vasi addominali per studi in vitro: riproduzione delle proprietà meccaniche”, Edoardo Grotta, Bachelor’s Degree in Bioengineering, Academic Year 2018-2019. Supervisor: Prof. Stefania Marconi, Co- Supervisor: Eng. Erika Negrello.
 11. “Generazione di modelli stampabili in 3D a supporto della chirurgia otologica”, Jessica Areniello, Bachelor’s Degree in Bioengineering, Academic Year 2018-2019. Supervisor: Prof. Stefania Marconi.
 12. “Componenti in P.L.A. stampati 3d: miglioramento della temperatura di esercizio”, Lorenzo Bertoni, Bachelor’s Degree in Mechanical Engineering, Academic Year 2018-2019. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Prof. Stefania Marconi, Prof. Gianluca Alaimo.
 13. “Componenti in P.L.A. stampati 3d: metodologie di caratterizzazione meccanica”, Giovanni Santino, Bachelor’s Degree in Mechanical Engineering, Academic Year 2018-2019. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Prof. Stefania Marconi, Prof. Gianluca Alaimo.
 14. “Caratterizzazione meccanica a trazione di Acido Polilattico additivato con graphene e stampato in 3D con tecnologia FDM”, Michele Torre, Bachelor’s Degree in Civil Environmental Engineering, Academic Year 2016-2017. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Prof. Stefania Marconi, Prof. Gianluca Alaimo.
 15. “Generazione di una mappa di spessori di osso temporale patient-specific”, Greta Grillo, Bachelor’s Degree in Bioengineering, Academic Year 2015-2016. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
 16. “Studio della curva di apprendimento nell’utilizzo della console chirurgica Da Vinci®: analisi della variabilità R-R”, Carolina Testa, Bachelor’s Degree in Bioengineering, Academic Year 2014-2015. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi.
 17. “Stampa 3D di un bioreattore per modello in vitro di midollo osseo”, Marta Gaviraghi, Bachelor’s Degree in Bioengineering, Academic Year 2014-2015. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
 18. “Stampanti 3D stereolitografiche. Valutazione del panorama tecnologico”, Fabio Dadda, Bachelor’s Degree in Bioengineering, Academic Year 2014-2015. Supervisor: Prof. Michele Conti, Co-Supervisor: Eng. Stefania Marconi.
 19. “Post-processing di G-Code per stampanti 3D: letteratura ed implementazione”, Andreea Elena Buftea, Bachelor Degree in Bioengineering, Academic Year 2014-2015. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisors: Eng. Stefania Marconi, Eng. Gianluca Alaimo.
 20. “Caratterizzazione meccanica di materiali per stampa 3D con tecnologia FDM”, Stefano Dainotti, Bachelor Degree in Civil Environmental Engineering, Academic Year 2013-2014. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi.
 21. “Progettazione e prototipazione di stampi per distretti vascolari in silicone” Stefano Merli, Bachelor Degree in Bioengineering, Academic Year 2012-2013. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi.

22. “Progetto di un flap intinale di dissezione aortica per simulazione in vitro”, Giuseppe Ruvolo, Bachelor Degree in Bioengineering, Academic Year 2012-2013. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi.
23. “Analisi dei parametri di utilizzo della console chirurgica Da Vinci® tramite elaborazione di segnali video”, Erika Negrello, Bachelor Degree in Bioengineering, Academic Year 2012-2013. Supervisor: Prof. Ferdinando Auricchio, Co-Supervisor: Eng. Stefania Marconi.

Medicine and Surgery - Master Thesis

1. “Studio di validazione dell’utilità dei modelli anatomici 3D-printed di tumore renale per la comprensione dell’anatomia pre-operatoria e analisi volumetrica”, Martina Nebbia, Master Degree in Medicine and Surgery, Academic Year 2015-2016. Supervisor: Prof. Andrea Pietrabissa, Co-Supervisor: Eng. Stefania Marconi.
2. “Studio di validazione dei modelli anatomici 3D-printed per la comprensione dell’anatomia chirurgica pre-operatoria”, Marta Botti, Master Degree in Medicine and Surgery, Academic Year 2014-2015. Supervisor: Prof. Andrea Pietrabissa, Co-Supervisor: Eng. Stefania Marconi.
3. “Learning curve of novices in robotic surgery: an experimental model for basic skills training with DaVinci Surgical System”, Santi Di Pietro, Master Degree in Medicine and Surgery – Harvey Course, Academic Year 2014-2015. Supervisor: Prof. Andrea Pietrabissa, Co-Supervisor: Eng. Stefania Marconi.

Other activities

Technical Internship – Undergraduate Students

1. *June 2020 - November 2020*: Supervisor for the internship of the course “Tecniche per la realizzazione artigianale di prodotti del made in Italy”, within “Tecniche delle lavorazioni artigianali in design applicato”, Centro di formazione professionale “Scuola Cova”. Trainee: Leonardo Montaldo.
2. *July 2020 - November 2020*: Supervisor for the internship of the course “Tecnico Superiore per l’automazione ed i sistemi meccatronici”, indirizzo “Industriale”, Fondazione “Istituto Tecnico Superiore Lombardo per le Nuove tecnologie Meccaniche e Meccatroniche”. Trainee: Stefano Seriola.

5 Research Projects

Unit Coordinator

International Projects

1. *Mar 2021 – currently*: Unit Coordinator for “Central Europe Initiative”: “Optimization and usage of 3D technology in medicine and health care - learn on experience”, University of Zenica, Bosnia-Erzegovina.
Project Coordinator: University of Zenica (Bosnia-Erzegovina); Project partner: University of East Sarajevo (Bosnia-Erzegovina), Politecnico di Torino (Italy), University of Pavia (Italy).

National Projects

2. Ricerca Corrente, 3D-Hybrid Engineered Tubular Bioscaffold for Esophageal Tissue Regeneration: from in vitro to in vivo validation”. Ricerca Corrente, Fondazione IRCCS Policlinico San Matteo.
Internal Units of Fondazione IRCCS Policlinico San Matteo: Unità di Chirurgia Generale II (Project Coordinator); Unità di Nefrologia; Unità di Radiologia.
External Partner: Dipartimento di Ingegneria Civile e Architettura, University of Pavia.
3. *July 2019 – currently*: “Patient-Specific 3D-Printing-Based Simulation Platform for Live-Donor Robotic Nephrectomy and Transplantation”. Ricerca Corrente, Fondazione IRCCS Policlinico San Matteo.
Internal Units of Fondazione IRCCS Policlinico San Matteo: Unità di Chirurgia Generale II (Project Coordinator); Unità di Nefrologia; Unità di Radiologia.
External Partner: Dipartimento di Ingegneria Civile e Architettura, University of Pavia.

Unit Member

National Projects

1. *Jan 2020 – currently*: “Fluidica Digitale per le Scienze della Vita” - DSF (Digital Smart Fluidics), “Hub Ricerca e Innovazione”. POR FESR 2014-2020 Innovazione e Competitività.
2. *Oct 2016 – 2018*: “STEREO3D: New Materials and Technologies for Stereo lithography 3D printing”, Regione Lombardia and INSTM.
3. *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.
4. *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).
5. *July 2015 – currently*: 3D@UniPV. Virtual Modeling and Additive Manufacturing (3D printing) for Advanced Materials, University of Pavia.
6. *June 2014 – May 2016*: “iCardioCloud – Bringing cardiovascular virtual reality to clinical bedside practice through cloud platform: implementation of a US excellence paradigm into Lombardia SSR”.
7. *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).

6 Dissemination

Invited speaker

1. *26 November 2021*: “New frontiers of 3D printing”, 29th International congress of the European Association of Endoscopic Surgery (EAES), Barcelona, Spain.
2. *26 November 2021*: “The hospital factory: bringing personalised production to the bedside”, 29th International congress of the European Association of Endoscopic Surgery (EAES), Barcelona, Spain.
3. *24 November 2021*: “Towards patient specific simulation for preoperative planning”, 29th International congress of the European Association of Endoscopic Surgery (EAES), Barcelona, Spain.
4. *8 October 2021*: “Additive Manufacturing: technical principles and clinical applications”, XLIV Convegno Nazionale di Aggiornamento Associazione Otorinolaringologi Ospedalieri Italiani (AOOI), Asti, Italy.
5. *16 September 2021*: “The experience of a clinical 3D printing “in-house” laboratory: current and future perspectives”, 29th Annual Meeting of European Orthopaedic Research Society (EORS) Congress, Rome (Italy).
6. *02 September 2021*: “Additive Manufacturing for Surgical Simulation: Material Characterization and Constitutive Modeling”, Simulation for Additive Manufacturing (SIM-Am) Congress, online due to Coronavirus pandemic.
7. *29 January 2021*: “New imaging techniques for staging”, session “Seeing the Invisible and Touching the Untouchable”, Winter Meeting of the International congress of the European Association of Endoscopic Surgery (EAES), online due to Coronavirus pandemic.
8. *12 October 2020*: “3D Tissue Printing: novel developments”, United European Gastroenterology (UEG) Week, online due to Coronavirus pandemic.
9. *23 June 2020*: “3D printing in times of the Corona Pandemic”, 28th International congress of the European Association of Endoscopic Surgery (EAES), online due to Coronavirus pandemic.
10. *24 January 2020*: “Pre-operative simulation for difficult cases”, Winter Meeting of the International congress of the European Association of Endoscopic Surgery (EAES), Kraków, Poland.
11. *14 June 2019*: “Semiautomatic discrimination between healthy and diseased organ tissue”, session “Augmented, virtual reality and 3D printing in the OR” of 27th International congress of the European Association of Endoscopic Surgery (EAES), Sevilla, Spain
12. *13 June 2019*: “Value of 3D printing for the comprehension of surgical anatomy”, session “Surgical Endoscopy festival (selection of most cited topics in Surgical Endoscopy journal)” of 27th International congress of the European Association of Endoscopic Surgery (EAES), Sevilla, Spain
13. *21 March 2019*: “The future of 3D Printing in Medicine”, 30° Congresso Nazionale SPIGC, Genova, Italy.
14. *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.

15. *11 May 2018*: “Tecnologie Additive: la stampa 3D al servizio della medicina”, Convegno Nazionale Associazione Italiana Ingegneri Clinici (AIIC), Roma, Italy.
16. *19 April 2018*: “La stampa 3D al servizio della chirurgia addominale: dalla pianificazione alla simulazione”, Exposanità, Bologna, Italy.
17. *13 September 2017*: “Additive Manufacturing: from prototypes to products”, IEEE Research and Technologies for Society and Industry (RSTI) 3rd International Forum, Modena, Italy.
18. *5 September 2017*: “Value of 3D printing for the comprehension of surgical anatomy”, Siena Vascular and Endovascular Course (SiveC), Siena, Italy.
19. *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.
20. *24 February 2017*: “Materiali per la stampa 3D: utilizzi clinici”, 3D Printing in Complex Aortic Disease, Fondazione Alma Mater Ticinensis, Palazzo Bellisomi-Vistarino, Pavia, Italy.
21. *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.
22. *25 April 2016*: “Plastic materials in 3D printing: surgical planning and clinical application”, Medical Plastic Conference, ChinaPlas 2016, Shanghai, China.
23. *20 May 2015*: “3D printed anatomical models for surgical planning, especially for abdominal surgery”, Medical Plastic Conference, ChinaPlas 2015, Guangzhou, China.

Conference Organization

1. *26 November 2021*: Chair of the Session “Augmented virtual reality and 3D printing”, 29th International congress of the European Association of Endoscopic Surgery (EAES), Barcelona, Spain.
2. *24 November 2021*: Symposium Director “Technology symposium”, 29th International congress of the European Association of Endoscopic Surgery (EAES), Barcelona, Spain.
3. *16 September 2021*: Chair of the Special Symposium “3D printing in orthopedic surgery: present and future”, 29th Annual Meeting of European Orthopaedic Research Society (EORS) Congress, Rome (Italy).
4. *13 June 2019*: Chair of the session “What’s new in robotic surgery and already available on the market?” of 27th International congress of the European Association of Endoscopic Surgery (EAES), Sevilla, Spain
5. *5-7 September 2018*: Co-organizer of “3D Printing and Biomechanics” 2° Congresso IDBN - Italian Digital Biomanufacturing Network, III Thematic Conference European Society of Biomechanics-ITA.
6. *20 September 2017*: Session organizer and Chair of the session “Additive Manufacturing: innovative materials and applications” within International Microwave Workshop Series on Advanced Materials and Processes (IMWS-AMP), Pavia, Italy.

Offered Seminars

1. *12 July 2021*: “Description of viscoelastic behaviour of 3d printed photopolymers through a generalized maxwell model”, 26th Congress of the European Society of Biomechanics, online due to Coronavirus pandemic.
2. *09 September 2020*: “Use of AM technologies to face the Covid-19 emergency: workflow and practical examples”, Additive Manufacturing Meets Medicine 2020, online due to Coronavirus pandemic.
3. *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.
4. *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.
5. *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.
6. *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.
7. *31 March 2017*: “Stampa 3D in chirurgia generale e chirurgia vascolare”, Stampa 3D in medicina: regole, tutele, mercato e formazione, Opificio Golinelli, Bologna, Italy.
8. *24 February 2017*: “Materiali per la stampa 3D: utilizzi clinici”, 3D printing in complex aortic disease, Pavia Italy.
9. *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.
10. *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.
11. *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.
12. *12 April 2016*: “3D printed patient specific models: innovative approach to surgical planning”, Medtec exhibition, Stuttgart, Germany.
13. *7 November 2015*: “3D printed patient specific models: application of 3D printing to surgery”, Meet the Scientist, University Library, Pavia, Italy.
14. *1 October 2015*: “Stampa 3D per la pianificazione chirurgica”, MakeForum, 3D Printing & Additive Manufacturing, Politecnico di Milano, Campus Bovisa, Italy.
15. *18 September 2015*: “3D printed patient specific models: application of 3D printing to surgery”, Italian Institute of Technology (IIT), Genova, Italy.

16. *13 June 2015*: “3D printed scaffolds in dental surgery”, Dentistry update course promoted by ANDI Pavia, Collegio Volta, Pavia, Italy.
17. *5-6 March 2015*: “Chirurgia e stampa 3D: dalla modellazione virtuale al prototipo fisico”, 3DPrintHub exhibition, Milano, Italy.
18. *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.
19. *23 May 2014*: “Chirurgia e stampa 3D: dalla modellazione virtuale al prototipo fisico”, Exposanità exhibition, Bologna, Italy.
20. *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.

7 Post Lauream Courses and Activities

Courses

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

Abroad Periods

1. *Apr 2014*: Karolinska University Hospital – Huddinge, Stochkolm (Sweden). Research activity on pancreatic ductal adeno-carcinoma image analysis, to identify the tumor border applying a fuzzy logic based algorithm and to create a virtual model for operability assesment.
Scientific Advisor: Prof. Marco Del Chiaro

8 Technical Consulting Activity

Research Contracts

1. *28 June 2021 – currently*: Responsible for the execution of the research program between the company ULSS8 Berica Ospedale di San Bortolo, Vicenza, Italy and the Department of Civil Engineering and Architecture, University of Pavia, Pavia, Italy.
Goal of the research program: concept design and mechanical testing of the prototype of an extra-vascular patient-specific stent for renal vein.
Registration number: 2021-UNPVCLE-0099516
2. *01 January 2020 – 20 October 2020*: Responsible for the execution of the research program between the company Accenture S.p.A. and the Department of Civil Engineering and Architecture, University of Pavia, Pavia, Italy.
Goal of the research program: realization of an algorithm capable of evaluating the feasibility of production through additive techniques of products made with other production techniques.
Contract amount: € 10,000.00. Registration number: 54322 of 26/05/2020

Consulting

1. *Azienda Ospedaliero – Universitaria di Ferrara, Arcispedale S. Anna, Ferrara, Italy*: image segmentation and prototyping of a patient-specific anatomy, 2021.
2. *ASST Grande Ospedale Metropolitano Niguarda - S.S.D. Cardiologia Pediatrica Dipartimento Materno Infantile, Milano, Italy*: image segmentation and prototyping of a patient-specific anatomy, 2021.
3. *Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico, Milano, Italy*: image segmentation and prototyping of patient-specific anatomies for didactic purpose, 2021.
4. *SQUADRA LifeSciences Inc, Palo Alto, USA*: CAD, image reconstruction and prototyping of testing devices, 2020-2021.
5. *Thermo Glass Door S.p.A., Travacò Siccomario (PV) Italy*: prototyping activity, 2020-2021.
6. *Affluent Medical, Paris, France*: components prototyping, 2020.
7. *Occlutech Italia S.r.l. - Milano, Italy*: image segmentation and prototyping of a patient-specific anatomy, 2020.
8. *Primalab SA, Milano, Italy*: components prototyping, 2020.
9. *German Aerospace Centre, Germany*: printing profile development and prototyping activity, 2020.
10. *W. L. Gore & Associati S.r.l. and Ospedale Policlinico San Martino, Genova*: image segmentation and prototyping of a patient-specific anatomy, 2019.
11. *Cameron Italy S.r.l. - a Schlumberger company, Italy*: prototyping activity, 2019.
12. *Cube S.r.l., Italy*: prototyping activity of ABS components, 2018/2019.
13. *Sidam S.r.l., Italy*: consulting on the production of a 3D printed patient-specific model of the esophagus and esophageal varices, 2018.

14. *Fu.Tech S.r.l., Italy*: 3D printing of a patient-specific anatomical model and a fluid-dynamic circuit component, 2018.
15. *IRCCS Policlinico San Donato – Gruppo San Donato, Italy*: 3D printing of a deformable patient-specific model of a case of coarctation of the aorta for surgical planning, 2018.
16. *Graftonica S.r.l., Italy*: 3D printing of a skull patient-specific model, 2018.
17. *Julight S.r.l., Italy*: prototyping activity of ABS components, 2017.
18. *Genova Hospital, Italy – Dott. Giovanni Spinella*: 3D printing of aorta models, 2017
19. *Biotronik AG, Switzerland*: consulting on the manufacturing through 3D printing and molding techniques of aortic root models with biological mechanical properties, 2016.
20. *Museo della Scienza e della Tecnica, Pavia, Italy*: 3D printing of a tactile map of the Museum for blind people, 2016.
21. *Cardiocentro Ticino, Lugano, Switzerland - Dott. Stefanos Demertzis*: 3D reconstruction from MDCT images and 3D printing of an aortic arch aneurism, 2016.
22. *Kardia S.r.l., Milano, Italy – Humanitas Gavazzeni, Bergamo, Italy - Dott. Roberto Ferraresi*: 3D reconstruction from MDCT images and 3D printing of a thoracic-abdominal aneurism, 2016.
23. *Istituto Veterinario di Novara – Dott. Edoardo Auriemma*: 3D reconstruction from CT images and 3D printing of a dog skull. Feasibility test for applying 3D printing technology to the veterinarian clinical practice, 2016.
24. *Tenova S.p.A., Castellanza, Italy*: 3D printing of the prototype of a shaving machine, 2016.
25. *Filotalfa - Ciceri de Mondel S.r.l. Unipersonale, Milano, Italy*: testing and mechanical characterization of innovative polymers for FDM printers, 2015-2016.
26. *Versalis S.p.a., Milano, Italy*: 3D printing feasibility study of styrene-based filaments and mechanical characterization of 3D printed specimens, 2016.
27. *BQuadro Congressi – Otolaryngology Division of San Matteo Hospital – Pavia, Italy*: design and manufacturing through 3D printing of supports for the dissection of temporal bones, 2015.
28. *F-Lab, Milano, Italy*: consulting on the manufacturing of seals through 3D printing technologies, 2015.
29. *Rofarma Italia S.r.l., Milano, Italy*: consulting on the use of 3D printing FDM technology for the production of PLLA plaques for fracture restoration in veterinary surgery, 2015.
30. *CVML Lab – University of Pavia, Italy*: prototyping of tactile reproductions of tapestries for blind people for the exhibition “1525-2015. Pavia, la Battaglia, il Futuro.Niente fu come prima” at Castello Visconteo of Pavia, 2015.
31. *Ink S.p.A., Pavia, Italy*: consulting about the use of 3D printing technologies to produce personalized jewels, 2014.
32. *I.R.C.C.S Policlinico San Donato, San Donato MI, Italy*: 3D reconstruction from MDCT images and 3D printing of patient specific anatomies for vascular surgery planning/assessment, 2014.

33. *Thermo Glass Door S.p.A., Travacò Siccomario (PV) Italy: prototyping of window chasses, 2014.*
34. *Captiks S.r.l., Roma, Italy: prototyping of a custom made case for motion tracking devices, 2014*

9 Knowledge and Skills

Language skills

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

Software skills

- *Programming languages*: Matlab (advanced), Labview (advanced), Java (intermediate), C++ (beginner), JSP (intermediate), HTML (intermediate), MySQL/Oracle (intermediate), Assembler (beginner)
- *CAD software*: Inventor (advanced), Solidworks (intermediate), Space Claim – Ansys (intermediate)
- *Medical image analysis software*: ITK-Snap, Mimics, Osirix (advanced in all)
- *Virtual model post-processing software*: Netfabb, 3Matic, Paraview, MeshLab, 3DStudio - 3D Systems, SolidThinking Inspire – Altair (certificate of use) - advanced in all
- *Slicing software*: Slic3r, Kisslicer, Objet Studio - Stratasys, GrabCad - Stratasys, 3DPrint - 3D Systems, HP Build Manager (advanced in all)

Additive Manufacturing skills

Advanced experience in the management of several additive manufacturing technologies, including job preparation, machine running and maintenance procedures:

- *Powder Bed Fusion*: Renishaw AM 400 (licence of use), HP MultiJet Fusion 580 Color (certificate of use)
- *Material Jetting*: Objet 30Pro, Objet 260 Connex 3, J750 Digital Anatomy – Objet-Stratasys (certificate of use)
- *Binder Jetting*: Projet460 Plus – 3DSystems (certificate of use)
- *VAT-Photopolimerization*: Form2 – Formalabs
- *FFF*: MarkForged X7 Industrial, APIUM P220, 3NTR A4v2, 3NTR A4v3, Leapfrog Creatr, Leapfrog Creatr HS

I authorise the use of my personal data in compliance with Legislative Decree 196/03.

Date

Stefania Marconi
