



Curriculum vitae

PERSONAL INFORMATION Sara Moccia

WORK EXPERIENCE

Feb 2021 – Present **Assistant Professor (Ricercatrice a Tempo Determinato di Tipo A)**The BioRobotics Institute – Scuola Superiore Sant'Anna
Piazza Martiri della Libertà, 33, Pisa (PI)May 2018 – Jan 2021 **Postdoctoral researcher**Department of Information Engineering – Università Politecnica delle Marche
via Brecce Bianche 12, Ancona (AN), ItalyMay 2018 – Present **Affiliated researcher**Department of Advanced Robotics – Istituto Italiano di Tecnologia
via Morego 30, Genoa (GE), ItalyFeb 2019 – May 2020 **Research fellow**Escola de Engenharia Dept. Electrónica Industrial, Universidade do Minho
Campus de Azurém, 4800-058 Guimaraes, Portugal.

EDUCATION

May 2015 – April 2018 **European PhD cum laude in Bioengineering**Department of Electronics, Information and Bioengineering – Politecnico di Milano
p.zza Leonardo da Vinci 32, Milan (MI), ItalyMay 2015 – April 2018 **European PhD cum laude in Bioengineering**Department of Advanced Robotics – Istituto Italiano di Tecnologia
via Morego 30, Genoa (GE), ItalyOct 2016 – Mar 2017 **Internship as PhD student**Department of Computer-Assisted Medical Interventions - German Cancer Research Center
Im Neuenheimer Feld 581, Heidelberg, GermanySept 2012 – Dec 2014 **Master of Science cum laude in Biomedical Engineering**Department of Electronics, Information and Bioengineering - Politecnico di Milano
p.zza Leonardo da Vinci 32, Milan (MI), ItalySept 2009 – July 2012 **Bachelor of Science in Biomedical Engineering**Department of Electronics, Information and Bioengineering - Politecnico di Milano
p.zza Leonardo da Vinci 32, Milan (MI), Italy

Sept 2004 – July 2009 **Scientific high-school degree cum laude**

Liceo Scientifico Sante Simone
via L. Gallo 19, Conversano (BA), Italy

AWARDS

Sept 2020 **Clinical Needs Translational Award competition of CinC 2020**

The award (1000 €) is designed to encourage participation of multidisciplinary research teams, with emphasis on the potential clinical applicability and impact of the research.

Sept 2018 **Award "Gruppo Nazionale di Bioingegneria & PATRON"**

The award (1200 €) was assigned to the best Italian Bioengineering PhD Thesis (<https://premi.grupponazionalebioingegneria.it/vincitori/premi2018>)

July 2018 **Primaga 2018 - Artificial Intelligence applied to the analysis of medical images and videos**

The award (1500 €) was assigned during the GNB 2018 congress to candidates up to 35 y.o. that were both the first author and presenter of the winning paper. Sponsored by: Linkverse S.r.l.

MENTORED-STUDENT AWARDS

Sept 2018 **Premio 2018 "Laboratorio di Robotica Biomedica e Biomicrosistemi", Università Campus Bio-Medico, Roma**

The award (500 €) for the best Italian Bioengineering MSc Thesis was assigned to Simone Foti (<https://premi.grupponazionalebioingegneria.it/vincitori/premi2018>)

Sept 2017 **Premio 2017 "Istituto di Biorobotica", Sant'Anna, Pisa**

The award (500 €) for the best Italian Bioengineering MSc Thesis was assigned to Francesca Prudente (<https://premi.grupponazionalebioingegneria.it/vincitori/premi2017>)

PHD-COURSE LECTURES

Department of Electronics, Information and Bioengineering - Politecnico di Milano

- Course: *3D tissue segmentation, modelling and deformation: From pre-operative to intra-operative image analysis* (responsible for a 10-hour module) - 2020
- Course: *XXXVIII Annual School of the Gruppo Nazionale di Bioingegneria (GNB)* (responsible for one lecture) - 2019

Department of Mathematics and Computer Science - Università della Calabria

- Course: *Embodiment of Artificial Intelligence* (responsible for a 6-hour module) - 2020

Docente a Contratto – Department of Information Engineering, Università Politecnica delle Marche

- Elementi di Informatica (Corso di Laurea in Ingegneria Biomedica) - A.A. 2020/2021

Coadiutore Didattico – Department of Electronics, Information and Bioengineering, Politecnico di Milano

- Technologies for motor behavior analysis and virtual modeling, Prof. Giancarlo Ferrigno (Corso di Laurea Magistrale in Ingegneria Biomedica) - A.A. 2017/2018

Coadiutore Didattico – Facoltà di Ingegneria, Università Politecnica delle Marche

- Fondamenti di Informatica, Prof. Emanuele Frontoni (Corso di Laurea in Ingegneria Gestionale) - A.A. 2018/2019, 2019-2020
- Programmazione ad Oggetti, Prof. Emanuele Frontoni (Corso di Laurea in Ingegneria Informatica e dell'Automazione) - A.A. 2019/2020
- Calcolatori Elettronici e Reti di Calcolatori, Prof. Adriano Mancini (Corso di Laurea in Ingegneria Informatica e dell'Automazione) - A.A. 2018/2019

SEMINARS

Department of Electronics, Information and Bioengineering – Politecnico di Milano

- Image-processing laboratory, Prof. Enrico G. Caiani (Corso di Laurea Magistrale in Ingegneria Biomedica) - from 2018

Department of Experimental and Clinical Medicine of Magna Graecia University

- Elaborazione di Immagini per la Chirurgia Assistita, Prof. Maria Francesca Spadea (Corso di Laurea Magistrale in Ingegneria Biomedica) - 2020

PHD STUDENT
CO-SUPERVISION

Università Politecnica delle Marche, Politecnico di Milano, Istituto Italiano di Tecnologia

1. Alessandro Casella, **Computer Vision Technologies for Computer-Assisted Fetal Therapies**, PhD course in Biomedical Engineering, XXXV cycle, ongoing
2. Maria Chiara Fiorentino, **Advanced solutions based on deep learning for ultrasound image and video analysis** PhD course in Information Engineering, XXXVI cycle, ongoing
3. Lucia Migliorelli, **SSII- Interactive and Intelligent Sensitive Spaces**, PhD course in Computer, Management and Automation Engineering, XXXV cycle, ongoing

Department of Information Engineering – Università Politecnica delle Marche

1. Greta Vallasciani, **End-to-end semantic joint detection and limb-pose estimation from depth images of preterm infants in NICUs**, Master of Science in Biomedical Engineering, ongoing
2. Eleonora Ceroni, **A deep learning architecture for stenosis detection in coronarography angiography images**, Master of Science in Biomedical Engineering, ongoing
3. Sara Giamberini, **Deep Learning architectures for Indoor Human Activity Recognition from RGB video stream in unlimited and constrained resource settings.**, Master of Science in Computer Engineering, ongoing
4. Morris Capparuccini, **Artificial Intelligence on the Edge: development of an architecture for Indoor Human Activity Recognition from multi-camera video streams**, Master of Science in Computer Engineering, ongoing
5. Federica Turco, **Stenosis detection in X-ray images using deep learning**, Master of Science in Biomedical Engineering, ongoing
6. Francesca Rossini, **Deep learning for limb-pose estimation in preterm infants**, Master of Science in Biomedical Engineering, ongoing
7. Simone Appugliese, **Dense architectures for limb-pose estimation in preterm infants from depth images**, Master of Science in Biomedical Engineering, ongoing
8. Irene Guidotti, **Towards informative frame selection in ultrasound images in rheumatology**, ongoing
9. Simone Appugliese, **Movement analysis in preterm infants from depth sensor**, ongoing
10. Simone Salvoni, **Development of a deep-learning algorithm for autonomy evaluation in children with autism from RGB-D videos**, ongoing
11. Francesca Pia Villani, **Development of an Augmented Reality system based on marker tracking for robotic-assisted minimally invasive spine surgery**, 2020
12. Mariachiara Di Cosmo, **Deep Learning Based 2D-3D Registration System For Augmented Visualization In Image Guided Endovascular Surgery**, 2020
13. Giuseppe Pio Cannata, **Deep Learning and Transfer Learning for behaviour analysis in indoor environment**, 2019
14. Lucia Migliorelli, **A learning-based model for patient-specific monitoring of glucose levels**, 2018

Department of Electronics, Information and Bioengineering – Politecnico di Milano

1. Daniele Quaglione, Francesca Velocci **Scar-tissue detection in CMR cine sequences using machine learning and parametric images**, Master of Science in Biomedical Engineering, 2020
2. Mahshad Khornegah, **Machine and deep learning for activity detection from wearable sensors**, Master of Science in Biomedical Engineering, 2020
3. Chiara Carlini, **Intra-operative vessel segmentation during kidney surgery**, Master of Science in Biomedical Engineering, 2020
4. Ilaria Patrini, **Deep-learning models for informative-frame selection in laryngoscopic videos**, 2020
5. Michela Ruperti, **Early-stage laryngeal-cancer diagnosis through learned-feature extraction and classification**, 2019
6. Emanuele Colleoni, **Deep learning based robotic tool detection and articulation estimation with spatio-temporal layers**, 2019
7. Alessandro Casella, **Inter-foetus membrane segmentation for TTTS-treatment guidance using adversarial networks**, 2019
8. Anna Morelli, **Intra-operative abdominal-tissue registration for augmented reality applications in nephrectomy**, 2018
9. Riccardo Banali, **A deep learning approach for scar segmentation from cardiac magnetic resonance-late Gadolinium enhancement images**, 2018

10. Michele Gazzara, **Convolutional neural network models for axon segmentation in EM images**, 2017
11. Gabriele Omodeo Vanone, **Learning-based classification of informative endoscopic frames with applications in laryngoscopy**, 2017
12. Simone Foti, **Vessel avoidance in open-skull robotic neurosurgery through deep learning and virtual fixtures**, 2017. Winner of PREMIO DI LAUREA, GRUPPO NAZIONALE DI BIOINGEGNERIA, the Italian award for the best Bioengineering thesis.
13. Marco Guarnaschelli, Matteo Savazzi: **Machine learning for tissue classification in laryngeal endoscopic videos**, 2017
14. Francesca Prudente: **Safety enhancement in neurosurgery**, 2017. Winner of PREMIO DI LAUREA, GRUPPO NAZIONALE DI BIOINGEGNERIA, the Italian award for the best Bioengineering thesis.

SCIENTIFIC SERVICE

2020 Guest Editor

- Special Issue on AI (MDPI) - Recognition of Human Emotions Using Machine Learning and Deep Learning Algorithms (https://www.mdpi.com/journal/ai/special_issues/RHEMLDLA)

2018 - ongoing Member of Organizing Committee

- Organizer and co-chair of the IEEE BHI 2021 - Workshop: Artificial Intelligence for Ultrasound Image Processing (2021)
- Organizer and co-chair of the IEEE RO-MAN 2020 - Workshop: Integrating Sensor Fusion and Perception for Human-robot Interaction (2020)
- Member of the scientific committee of the 9th Conference on New Technologies for Computer and Robot Assisted Surgery (from 2018)

2018 - ongoing Member of Program Committee

- International Workshop on Human-Friendly Robotics (2018)

2018 - ongoing Associate Editor

- IEEE International Conference on Robotics and Automation
- IEEE/RSJ International Conference on Intelligent Robots and Systems

INVITED TALKS

June 2019 **Tecnologie assistive, dati multimediali e deep learning**

S. Moccia, *10° Forum Italiano Ambient Assisted Living*

June 2019 **Machine learning in Thoracic Surgery: Experience using DLCO**

S. Moccia, *27th European Conference on General Thoracic Surgery*

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	A2	A2	A2	A2	A2
German	A1	A1	A1	A1	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

Communication skills

- Team work: I actively collaborate with several national and international research groups
- Mediating skills: I work with people with different backgrounds and expertise (such as engineers and clinicians)
- Intercultural skills: I am experienced at working in an international dimension

Computer skills

- Libraries and Framework: OpenCV, scikit-learn, ITK, VTK, TensorFlow, Keras, Image Processing Toolbox Matlab
- Programming Languages: C, C++, Python, Matlab Scripting, R Scripting
- Operating Systems: Ubuntu, Mac OS X, Windows

Driving licence B

PUBLICATIONS

Journal publications:

1. A. Casella, **S. Moccia**, D. Paladini, E. Frontoni, E. De Momi, and L. S. Mattos. "A shapeconstraint adversarial framework with instance-normalized spatio-temporal features for interfetal membrane segmentation". In: Medical Image Analysis (2021), p. 102008.
2. A. Paderno, C. Piazza, F. D. Bon, D. Lancini, S. Tanagli, A. Deganello, G. Peretti, E. D. Momi, I. Patrini, M. Ruperti, L. S. Mattos, and **S. Moccia**. "Deep learning for automatic segmentation of oral and oropharyngeal cancer using Narrow Band Imaging: Preliminary experience in a clinical perspective". In: Frontiers in Oncology (2021).
3. M. C. Fiorentino, **S. Moccia**, M. Capparuccini, S. Giamberini, and E. Frontoni. "A regression framework to head-circumference delineation from US fetal images". In: Computer Methods and Programs in Biomedicine 198 (2021), p. 105771.
4. A. Marzullo, **S. Moccia**, M. Catellani, F. Calimeri, and E. De Momi. "Towards realistic laparoscopic image generation using image-domain translation". In: Computer Methods and Programs in Biomedicine 200 (2021), p. 105834.
5. P. Zaffino, A. Marzullo, **S. Moccia**, F. Calimeri, E. De Momi, B. Bertucci, P. P. Arcuri, and M. F. Spadea. "An Open-Source COVID-19 CT Dataset with Automatic Lung Tissue Classification for Radiomics". In: Bioengineering 8.2 (2021), p. 26.
6. M. Penso, **S. Moccia**, S. Scafuri, G. Muscogiuri, G. Pontone, M. Pepi, and E. G. Ciani. "Automated Left and Right Ventricular Chamber Segmentation in Cardiac Magnetic Resonance Images Using Dense Fully Convolutional Neural Network". In: Computer Methods and Programs in Biomedicine (2021), p. 106059.

7. E. Cipolletta, M. C. Fiorentino, **S. Moccia**, I. Guidotti, W. Grassi, E. Filippucci, and E. Frontoni. "Artificial Intelligence for Ultrasound Informative Image Selection of Metacarpal Head Cartilage. A Pilot Study". In: *Frontiers in Medicine* 8 (2021), p. 88.
8. M. Riva, T. Sciortino, R. Secoli, E. D'Amico, S. Moccia, B. Fernandes, M. Conti Nibali, L. Gay, M. Rossi, E. De Momi, et al. "Glioma biopsies Classification Using Raman Spectroscopy and Machine Learning Models on Fresh Tissue Samples". In: *Cancers* 13.5 (2021), p. 1073.
9. J. F. Lazo, A. Marzullo, **S. Moccia**, M. Catellani, B. Rosa, M. de Mathelin, and E. De Momi. "Using spatial-temporal ensembles of convolutional neural networks for lumen segmentation in ureteroscopy". In: *International Journal of Computer Assisted Radiology and Surgery* (2021), pp. 1–8.
10. M. Salati, L. Migliorelli, **S. Moccia**, M. Andolfi, A. Roncon, G. M. Guiducci, F. Xiumè, M. Tiberi, E. Frontoni, and M. Refai. "A Machine Learning Approach for Postoperative Outcome Prediction: Surgical Data Science Application in a Thoracic Surgery Setting". In: *World Journal of Surgery* (2021), pp. 1–10.
11. **S. Moccia**, L. Migliorelli, V. Carnielli, and E. Frontoni. "Preterm infants' pose estimation with spatio-temporal features". In: *IEEE Transactions on Biomedical Engineering*. doi: 10.1109/TBME.2019.2961448 (2020)
12. P. Zaffino*, **S. Moccia***, E. De Momi, M. F. Spadea. "A Review on Advances in Intra-operative Imaging for Surgery and Therapy: Imagining the Operating Room of the Future." *Annals of Biomedical Engineering*, doi: <https://doi.org/10.1007/s10439-020-02553-6> (2020)
13. A. Casella*, **S. Moccia***, E. Frontoni, D. Paladini, E. De Momi, and L. S. Mattos. "Inter-foetus Membrane Segmentation for TTTS Using Adversarial Networks". In: *Annals of Biomedical Engineering*. doi: 10.1007/s10439-019-02424-9 (2019)
14. L. Antognoli, **S. Moccia**, L. Migliorelli, S. Casaccia, L. Scalise, and E. Frontoni. "Heart-beat Detection by Laser Doppler Vibrometry and Machine Learning". In: *Sensors* 20.18 (2020), p. 5362.
15. L. Migliorelli, **S. Moccia**, R. Pietrini, V. P. Carnielli, and E. Frontoni. "The babyPose dataset". In: *Data in Brief* (2020), p. 106329.
16. I. Patrini, M. Ruperti, **S. Moccia**, L. S. Mattos, E. Frontoni, and E. D. Momi. "Transferlearning for informative-frame selection in laryngoscopic videos through learned features". In: *Medical & Biological Engineering & Computing*, doi: <https://doi.org/10.1007/s11517-020-02127-7> (2020)
17. E. Frontoni, L. Romeo, M. Bernardini, **S. Moccia**, L. Migliorelli, M. Paolanti, A. Ferri, P. Misericordia, A. Mancini, and P. Zingaretti. "A Decision Support System for Diabetes Chronic Care Models Based on General Practitioner Engagement and EHR Data Sharing". In: *IEEE Journal of Translational Engineering in Health and Medicine* 8 (2020), pp. 1–12.
18. M. Cesaretti R. Brustia C. Goumard F. Cauchy N. Pote, F. Dondero, C. Paugam-Burtz, F. Durand, V. Paradis, A. Diaspro, L.S. Mattos, O. Scatton, O. Soubrane, **S. Moccia**. "Use of artificial intelligence as innovative method for liver graft macrosteatosis assessment." *Liver Transplantation*. doi: <https://doi.org/10.1002/lt.25801> (2020)
19. T. Araújo, C. P. Santos, E. De Momi, and **S. Moccia**. "Learned and handcrafted features for early-stage laryngeal SCC diagnosis". In: *Medical & Biological Engineering & Computing*. doi: 10.1007/s11517-019-02051-5 (2019)
20. E. Frontoni, A. Mancini, M. Baldi, M. Paolanti, **S. Moccia**, P. Zingaretti, V. Landro, and P. Misericordia. "Sharing health data among general practitioners: The Nu. Sa. project". In: *International Journal of Medical Informatics*. doi: 10.1016/j.ijmedinf.2019.05.016 (2019)
21. M. Cesaretti, A. Z. Le Bian, **S. Moccia**, A. Iannelli, L. Schiavo, and A. Diaspro. "From deceased to bioengineered graft: New frontiers in liver transplantation". In: *Transplantation Reviews*. doi: 10.1016/j.tre.2018.12.002 (2019)

22. E. Colleoni*, **S. Moccia***, X. Du, E. De Momi, D. Stoyanov. "Deep learning based robotic tool detection and articulation estimation with spatio-temporal layers". In: IEEE Robotics and Automation Letters. doi: 10.1109/LRA.2019.2917163 (2019)
23. **S. Moccia**, R. Banali, C. Martini, G. Muscogiuri, G. Pontone, M. Pepi, E. G. Caiani. "Development and testing of a deep learning-based strategy for scar segmentation on CMR-LGE images". In: Magnetic Resonance Materials in Physics, Biology and Medicine. doi: 10.1007/s10334-018-0718-4 (2019)
24. M. Vidotto, E. De Momi, M. Gazzara, L. S. Mattos, G. Ferrigno, and **S. Moccia**. "FCNN-based axon segmentation for convection-enhanced delivery optimization". In: International Journal for Computer Assisted Radiology and Surgery. doi: 10.1007/s11548-018-01911-z (2019)
25. C. Calamanti, **S. Moccia**, L. Migliorelli, M. Paolanti, and E. Frontoni. "Learning-Based Screening of Endothelial Dysfunction From Photoplethysmographic Signals". In: Electronics. doi: 10.3390/electronics8030271 (2019)
26. **S. Moccia**, S. Foti, A. Routraym, A. Perin, R. Sekula, L. S. Mattos, J. Balzer, W. Fellows Mayle, E. De Momi, and C. Riviere. "Toward Improving Safety in Neurosurgery with an Active Handheld Instrument". In: Annals of Biomedical Engineering. doi: 10.1007/s10439-018-2091-x (2018).
27. **S. Moccia**, L. S. Mattos, N. Poté, F. Dondero, F. Cauchy, A. Sepulveda, O. Soubrane, E. De Momi, A. Diaspro, and M. Cesaretti. "Computer-assisted liver graft steatosis assessment via learning-based texture analysis". In: International Journal for Computer Assisted Radiology and Surgery. doi: 10.1007/s11548-018-1787-6 (2018).
28. V. Penza, A. S. Ciullo, **S. Moccia**, L. S. Mattos, and E. De Momi. "EndoAbS Dataset: Endoscopic Abdominal Stereo Image Dataset for Benchmarking 3D Stereo Reconstruction Algorithms". In: The International Journal of Medical Robotics and Computer Assisted Surgery. doi: 10.1002/rcs.1926 (2018).
29. **S. Moccia**, S. J. Wirkert, H. Kenngott, A. Vemuri, M. Apitz, B. Mayer, E. De Momi, L. S. Mattos, and L. Maier-Hein. "Uncertainty-Aware Organ Classification for Surgical Data Science Applications in Laparoscopy". In: Transactions on Biomedical Engineering. doi: 10.1109/TBME.2018.2813015 (2018)
30. **S. Moccia**, E. De Momi, S. El Hadji, and L. S. Mattos. "Blood vessel segmentation algorithms – Review of methods, datasets and evaluation metrics". In: Computer Methods and Programs in Biomedicine. doi: 10.1016/j.cmpb.2018.02.001 (2018)
31. **S. Moccia**, G. O. Vanone, E. De Momi, A. Laborai, L. Guastini, G. Peretti, and L. S. Mattos. "Learning-based classification of informative laryngoscopic frames". In: Computer Methods and Programs in Biomedicine. doi: 10.1016/j.cmpb.2018.01.030 (2018)
32. **S. Moccia**, E. De Momi, M. Savazzi, M. Guarnaschelli, A. Laborai, L. Guastini, G. Peretti, and L. S. Mattos. "Confident texture-based laryngeal tissue classification for early stage diagnosis support". In: Journal of Medical Imaging. doi: 10.1117/1.JMI.4.3.034502 (2017)

Conference proceedings:

1. A. Casella, **S. Moccia**, C. Carlini, F. Emanuele, E. De Momi, and M. Leonardo. "NephCNN: A deep-learning framework for vessel segmentation in nephrectomy laparoscopic videos". In: International Conference on Pattern Recognition. 2021
2. D. Berardini, L. Migliorelli, **S. Moccia**, M. Naldini, G. De Angelis, and E. Frontoni. "Evaluating the autonomy of children with autism spectrum disorder in washing hands: a deep-learning approach". In: IEEE Workshop on ICT Solutions for eHealth. IEEE. 2021.
3. L. Migliorelli, **S. Moccia**, G. P. Cannata, A. Galli, I. Ercoli, L. Mandolini, V. P. Carnielli, and E. Frontoni. "A 3D CNN for preterm-infants' movement detection in NICUs from depth-streams". In: VII National Congress of Bioengineering. IEEE. 2021.

4. **S. Moccia**, A. Cagnoli, C. Martini, G. Moscogiuri, M. Pepi, E. Frontoni, G. Pontone, E. G. Caiani. "A Novel Approach based on Spatio-temporal Features and Random Forest for Scar Detection using Cine Cardiac Magnetic Resonance Images". In: *Computing in Cardiology*. IEEE. 2020.
5. M. Penso, **S. Moccia**, S. Scafuri, G. Moscogiuri, M. Pepi, E. G. Caiani. "Automated Left and Right Chamber Segmentation in Cardiac MRI Using Dense Fully Convolutional Neural Network". In: *Computing in Cardiology*. IEEE. 2020.
6. M. C. Fiorentino, **S. Moccia**, E. Cipolletta, E. Filippucci, and E. Frontoni. "A Learning Approach for Informative-Frame Selection in US Rheumatology Images". In: *International Conference on Image Analysis and Processing*. Springer. 2019.
7. **S. Moccia**, L. Migliorelli, R. Pietrini, and E. Frontoni. "Preterm infants' limb-pose estimation from depth images using convolutional neural networks". In: *IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology*. IEEE. 2019.
8. S. El Hadji, **S. Moccia**, D. Scorza, M. Rizzi, F. Cardinale, G. Baselli, and E. De Momi. "Brain-Vascular Segmentation for SEEG Planning Via a 3D Fully-Convolutional Neural Network". In: *IEEE International Conference of the Engineering in Medicine and Biology Society*. IEEE. 2019.
9. E. Ambrosini, M. Caielli, M. Milis, C. Loizou, D. Azzolino, S. Damanti, **S. Moccia**, M. Cid, C. Galán de Isla, P. Salamancam N. A. Borghere, and S. Ferrante. "Automatic Speech Analysis to Early Detect Functional Cognitive Decline in Elderly Population". In: *IEEE International Conference of the Engineering in Medicine and Biology Society*. IEEE. 2019.
10. L. Migliorelli, **S. Moccia**, I. Avellino, M. C. Fiorentino, and E. Frontoni. "MyDi application: towards automatic activity annotation of young patients with Type 1 diabetes". In: *IEEE International Symposium on Consumer Technologies*. IEEE. 2019.
11. L. Migliorelli, A. Cenci, M. Bernardini, L. Romeo, **S. Moccia**, and P. Zingaretti. "A cloud-based healthcare infrastructure for neonatal intensive-care units". In: *International Conference on Mechatronic and Embedded Systems and Applications*. IEEE/ASME. 2019.
12. M. Bernardini, A. Ferri, L. Migliorelli, **S. Moccia**, P. Zingaretti, L. Romeo, S. Silvestri, L. Tiano, and A. Mancini. "Augmented Microscopy for DNA Damage Quantification: A Machine Learning Tool for Environmental, Medical and Health Sciences". In: *International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*. Vol. 59292. American Society of Mechanical Engineers. 2019, V009T12A003.
13. **S. Moccia**, R. Banali, C. Martini, G. Moscogiuri, G. Pontone, M. Pepi, and E. G. Caiani. "A FCNN-based approach for scar segmentation from late-gadolinium-enhancement cardiacmagnetic- resonance images". In: *Computing in Cardiology*. IEEE. 2019.
14. S. J. Wirkert, A. S. Vemuri, H. G. Kenngott, **S. Moccia**, M. Götz, B. F. Mayer, K. H. Maier-Hein, D. S. Elson, and L. Maier-Hein. "Physiological Parameter Estimation from Multi-spectral Images Unleashed". In: *International Conference on Medical Image Computing and Computer- Assisted Intervention*. Springer. 2017.
15. D. Scorza, **S. Moccia**, G. De Luca, L. Plaino, F. Cardinale, L. S. Mattos, L. Kabongo, and E. De Momi. "Safe electrode trajectory planning in SEEG via MIP-based vessel segmentation". In: *SPIE Medical Imaging*. International Society for Optics and Photonics. 2017.
16. **S. Moccia**, V. Penza, G. O. Vanone, E. De Momi, and L. S. Mattos. "Automatic workflow for narrow-band laryngeal video stitching". In: *IEEE Annual International Conference of the Engineering in Medicine and Biology Society*. IEEE. 2016.

Book chapters:

1. **S. Moccia**, L. Romeo, E. F. Lucia Migliorelli, and P. Zingaretti. "Supervised CNN strategies for optical image segmentation and classification in interventional medicine". In: *Deep Learners and Deep Learner Descriptors for Medical Applications*. Springer, (2020)
2. V. Penza, **S. Moccia**, E. D. Momi, and L. S. Mattos. "Enhanced Vision to Improve Safety in Robotic Surgery (Handbook of Robotic and Image-Guided Surgery)". In: Elsevier, (2020).

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