europass Curriculum vitae

PERSONAL INFORMATION

Simona Celi

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Gender Female | Date of birth xx xx xxxx | Nationality Italian

CURRENT PROFESSIONAL POSITION

October 2023 – to date
Director of the Bioengineering Unit
Fondazione Toscana “G. Monasterio” – Massa/Pisa

October 2015 – to date
Director of the BioCardioLab
Fondazione Toscana “G. Monasterio” – Massa

Sept 2023 – to date
Member of the Scientific Technical Committee of "Centro di biomedicina sperimentale” FTGM-CNR-UNIPI-SSSUP

Sept 2022 – to date
Member of the executive board of the Gise Foundation

May 2024
Teacher at Scuola Superiore Sant’Anna for the Master on “Percutaneous interventional treatment of structural heart diseases” VI edition
Title of the course: “3D printing for cardiological application"

PAST PROFESSIONAL EXPERIENCE

Sept 2017 – 2023
Member of the executive board of the Italian Chapter of the European Society of Biomechanics

Sept 2012 – Sept 2023
Adjunct Professor
University of Pisa

MSc course in Biomedical Engineering, University of Pisa, Italy

Courses
- Technologies for Regenerative Medicine.

Jan 2022 – Oct 2023
Dirigente Ingegnere - Researcher
Fondazione Toscana “G. Monasterio” – Massa

Group Leader BioCardioLab

Sept 2015 – Jan 2022
Tech. Cat D - Researcher
Fondazione Toscana “G. Monasterio” – Massa

Group Leader BioCardioLab

Sept 2017 – 2022 **Adjunct Professor**

University of Pisa

MSc course in Biomedical Engineering, University of Pisa, Italy

Courses
- Technologies for Regenerative Medicine (I);
- Technologies for Regenerative Medicine (II).

Sept 2017 – 2018 **Adjunct Professor**

University of Pisa

MSc course in Biomedical Engineering, University of Pisa, Italy

Courses
- Numerical Methods for engineering;
- Methods for principles of diagnosis.

Sept 2017 – 2018 **Teaching Assistant**

University of Pisa

MSc course in Biomedical Engineering, University of Pisa, Italy

Seminar
- Integration between numerical simulation and medical imaging.

Nov 2012 – Dec 2014 **Postdoctoral fellow**

Scuola Superiore Sant'Anna – Pisa, Italy

Dec 2013 – Nov 2014 External consultant European Project RT3S (Real Time Simulation for Safer vascular Stenting)

Medtronic

Dec 2013 – Nov 2014 External consultant European Project RT3S (Real Time Simulation for Safer vascular Stenting)

Ansys, Lyon, France

March 2013 Visiting Researcher

St Jude Medical, Westford (MA)

Sept 2012 – Nov 2012 **Postdoctoral fellow**

Fondazione Toscana "G. Monasterio" – Massa, Italy

Sept 2008 – Sept 2012 **Postdoctoral fellow**

Institute of Clinical Physiology of CNR, Pisa, Italy

Jan 2011 – Dec 2011 Lab Associate

Yale University, Dep. of Bioengineering

2008 – 2010 Research assistant

Dep. of Mech. Nucl. and Prod. Eng., University of Pisa, Italy

Jan 2012 – Dec 2012 **Adjunct Professor**

Medicine and Surgery Faculty of Universitá Cattolica del Sacro Cuore,

BSc course in "Tecniche di Fisiopatologia Cardiocircolatoria e Perfusione Cardiovascolare", Campobasso, Italy

Course
- Bioelectronics and Bioinformatics

Sept 2008 – 2011 **Teaching Assistant**

University of Pisa

MSc course in Biomedical Engineering, University of Pisa, Italy

Courses – Mechanics I, Mechanics II, Biostructures, Biomechanics, Machine Design, Mechanics of Solids: Structural Mechanics, Biomaterials, Biorobotic.

2004 – Sep 2010 **Research assistant**

Faculty of Engineering, University of Pisa, Italy

EDUCATION AND TRAINING

Dec 2007 **PhD in Mechanical Engineering**

Faculty of Engineering, University of Pisa, Pisa, Italy.

Title of the Thesis "Numerical and experimental characterization of biological soft tissues"

Dec 2004 **MSc in Mechanical Engineering - Bioengineering Program**

Faculty of Engineering, University of Pisa, Pisa, Italy

ADDITIONAL INFORMATION

Patents
- "Method of processing optical coherence tomography images", Assignees: Consiglio Nazionale delle Ricerche, Fondazione Toscana Gabriele Monasterio per la Ricerca Medica e di Sanita Pubblica Inventors: S. Celi and S. Berti (WO 2014002067 A3);
- APPARATO PER TOMOGRAFIA OTTICA A COERENZA DI FASE, Assignees: Scuola Superiore Sant'Anna, Consorzio Nazionale Interunivesitario per le Telecomunicazioni – CNIT, Fondazione Toscana Gabriele Monasterio per la Ricerca Medica e di Sanita Pubblica Inventors: Antonio Malacarne, Antonella Bogoni, Paolo Ghelfi, Simona Celi, Mirco Scaffardi (B10/1399);
- Robot for minimal invasive surgery, (PCT/IB2019/054060), Assignees: Scuola Superiore Sant'Anna, Università di Pisa, Consiglio Nazionale delle Ricerche, Fondazione Toscana Gabriele Monasterio per la Ricerca Medica e di Sanita Pubblica Inventors: Izadyar Tamadon, Claudio Quaglia, Selene Tognarelli, Arianna Menciassi, Simona Celi, Pier Andrea Farneti, Sara Condino, Giorgio Soldani, Paola Losi, Vincenzo Ferrari.

Editorial activities

Handling editor for:
- SI "Digital Twin Technology: New Frontiers for Personalized Healthcare", MDPI, Electronics 2023
- SI "New Experimental and Numerical Insights on Cardiovascular Biomechanics through In-vivo and Ex-vivo Methods", Frontiers in Physiology Computational Physiology and Medicine, 2023
- SI "Applications of 3D Printing in Cardiovascular Medicine", Frontiers in Cardiovascular Medicine General Cardiovascular Medicine, 2023
- Frontiers in Physiology, Vascular Physiology
- Frontiers in Cardiovascular Medicine, Structural Interventional Cardiology
- Frontiers in Cardiovascular Medicine, General Cardiovascular Medicine

Participation in committees
- Member of the evaluation committee for the recruitment of researches for the Bioengineering Unit at Fondazione G. Monasterio
- Member of the evaluation committee for the recruitment of the PhD students for the Bioengineering Courses of University of Pisa
- Member of the evaluation committee for the final PhD Defence at: Politecnico of Torino, Ecole de min de Saint Etienne, Università di Tor Vergata, Delft University, Pompeu Fabra University.
- Member of the evaluation committee for the Best Master Thesis award ESB-ITA (2021- to date)
- Member of the evaluation committee for the Best Poster Award ESB-ITA (2023)

Projects Participation

- PI, PROCUREMENT PROCEDURE: 101016496, Horizon 2020, SimCardioTest Project
- PI, PROCUREMENT PROCEDURE: EC-JRC/IPR/2024/LVP/0335
- PI, subcontractor of UPF for SimCardioTest EU project
- Staff member, RESIL-Card EU Project (Fondazione GISE)
- Technical PI for "An integrated pipeline for planning of Percutaneous Left Atrial Appendage Occlusion based on 3D printed and in-silico models (PLACE)" funded by the Italian Ministry of Health grant number RF-2021-12375208
- Technical local PM, for REPAIRE EU Project (Restoring cardiac mechanical function by polymeric artificial muscular tissue, Grant agreement ID: 952166)
- Local PI, WPs leader for EU MC-ITN project Meditate (Medical Digital Twin for Aneurysm prevention and Treatment, Grant agreement ID: 859836)
- PI, project for OCT coronary system investigation on bench test, funded by Abbott
- Local PI, DITAIDD – FF4EUROHPC – EXP. 1006, "Cloud – based hpc platform to to generate a DT of the human airways, paving the way for personalised medicine in customised drug delivery"
- Local PI, COPERNICUS – FF4EUROHPC – EXP. 1006, Cloud – based HPC platform to support systemic-pulmonary shunting procedures
- PI, "fastAAA" project, Italian SuperComputing Resource Allocation – CINECA, ISCRA C
- PI, project with InsilicoTrials for aneurysms prevention, 2022
- PI, project for gait analysis Q-Walk for funded by QucklyPro, 2022
- PI, project with GPI for finite element simulations of orthopaedic and maxillofacial prostheses
- Local PI, WPs leader for Tender 3R EU project
- Technical PM, WPs leader for PENSAMI Project (A Precision mEdiciNe-baSed frAMework to pediatric patients with chronic dIseases, Bando Ricerca Salute 2018 – “Bando pubblico regionale per progetti di ricerca e sviluppo mirati al sostegno ai processi di innovazione clinica e organizzativa del Servizio Sanitario Regionale" (Decreto n.15397 del 26-09-2018))
- Local PI, WPs leader for "MyBreathinghHeart Project" (Bando Ricerca COVID-19 Toscana CUP n. J64G20000380001)
- Local PI, WPs leader for PRECISE Project (Personalised and pREdictive Surgical Simulation for preCIse tumor reSEction, Bando Ricerca Salute 2018 – Bando pubblico regionale per progetti di ricerca e sviluppo mirati al sostegno ai processi di innovazione clinica e organizzativa del Servizio Sanitario Regionale – Regione Toscana)
- Responsible engineering activities at Fondazione Toscana G. Monasterio and WPs leader for the 3D Baby Heart project
- Local PI, WPs leader for the “High-speed 3D-imaging of blood vessels based on optical signal processing (DIVINE)" project
- Local engineering PI and WPs leader for for the Valvetech project, funded by Regione Toscana
- PI engineering activities at Fondazione Toscana G. Monasterio for the ScriPT project
- Sub-contractor (Medtronic and Ansys Consultant) for the European project RT3S (Real Time Simulation for Safer vascular Stenting)
- Consultant Laboratorio Biomateriali IFC-CNR: Biomateriali avanzati e tecniche di fabbricazione 3D per lo sviluppo di nuove valvole cardiache polimeriche (POR CREO FESR 2007-2013. Bando Unico R&S Anno 2012)
- Consultant Laboratorio Biomateriali IFC-CNR: Evaluation of Nitinol mesh reinforced grafts in the carotid by-pass sheep model
- Consultant Realization of bivalirudin eluting Polyurethane-Polydimethylsiloxane small-diameter vascular grafts and pre-clinical study as carotid artery by-pass in sheep animal (Regional Health Research Program 2009)
- Sub-contractor, PRIN project Tecniche innovative "physically based" per la diagnosi dei tumori della mammella: sonoelastografia integrata con determinazione della rigidezza tissutale mediante simulazione numerica e caratterizzazione sperimentale
- Staff member (PhD student), PRIN project Metodologie integrate per la progettazione di dispositivi endovascolari

Project review activities

- ERC Consolidator Grant EU Project 2024;
- Science Foundation Ireland (SFI) Frontiers for the Future for the Future Programme Awards Stream 2024;
- Fondazione del Monte Research project in the territories of Bologna and Ravenna 2023;
- ERC Starting Grant EU Project 2023;

Seminar/Congress/Thematic session organization:

- Co-organiser IDBN 2024 congress, Firenze, Italy
- Co-organiser, BioPrinting Winter School "3D (bio)printing technologies", Pavia 2024
- Organiser Winter School 2023 Big "Data analytics from engineering to clinical"
- Co-organiser Additive manufacturing in healthcare: from 3d printing to bioprinting, Summer School, Como, 5-9 June 2023
- Co-organiser minisimposia "Mathematical and Computational Modelling of the Cardiovascular System", CFC 2023 congress, Cannes
- Co-chair ESB 2024 congress, Edinburgh
  - Computational methods for cardiovascular applications V session
  - Computational methods for cardiovascular applications + cardiovascular imaging III
- Co-chair CMBBE 2023 congress, Paris
  - Biomechanics of cardiovascular system: modelling, simulation and imaging
  - Clinical biomechanics and translational research IV
- Co-chair ESB 2023 congress, Maastricht
  - Patient-specific modelling II: Cardiovascular patient-specific modelling
  - AI / Data-driven modelling in biomechanics IV: Cardiovascular System
- Organiser "ESB-ITA 2022 Congress"
- Co-chair III Convegno Annuale Centro 3R, 30 settembre - 1 ottobre 2021
- Co-chair ESB 2020 congress, Milan
  - Poster session - Tissue Mechanics 1
  - Computational methods for cardiovascular applications
- Co-organiser "ESB-ITA 2019 Congress"
- “Biomechanics for the bedside: a snapshot of recent experimental and modelling trends with clinical impact" for the 8th World Congress of Biomechanics, 2018;
- “3D printing and Biomechanics" for the Italian Digital Biomanufacturing Network – IDBN congress 2018
- Co-chair 2 Congresso IDBN - Italian Digital Biomanufacturing Network, 2018 Pavia

Invited lectures:

- "3D (bio)printing technologies, from segmentation to G-code", BioPrinting Winter School, Pavia 2024
- "Validation of fsi simulations against a compliant aortic phantom in a hybrid mock circulatory loop", CMBBE 2023 congress, Paris
- "3D (bio)printing technologies, from medical imaging to 3d model", BioPrinting Winter School, Como 2023
- Azienda USL Toscana Nord Ovest "Intelligenza artificiale e medicina digitale: riflessioni critiche (Dec 2022)"
- Azienda USL Toscana Nord Ovest "Intelligenza artificiale e medicina digitale: riflessioni critiche (Dec 2021)"
- DECODE Summer School, Politecnico di Milano (July 2022)
- III Convegno Annuale Centro 3R, 30 settembre - 1 ottobre 2021 “In silico models as non-animal methods for biomedical research in cardiovascular diseases: where are we now?”
- Azienda USL Toscana Nord Ovest "Intelligenza Artificiale – modelli, applicazioni presenti e future", (may 2021)
- Soluzioni per Healthcare Industry 4.0, Sales planet di TIM, formazione NEXTIM (April 2021)
- SURGERY 4.0: FROM MINIMAL INVASIVE SURGERY 3.0 TO VIRTUAL RECONSTRUCTION, Advanced live Surgery activities and live frontal lessons from the Robotic Multispecialist Centre of Pisa, 25th-26th November 2020
- "Quantificazione dell’incertezza e analisi di sensibilità stocastica della meccanica e della fluidodinamica in campo cardiovascolare", Frontuq19, 2019
- "Role and perspective of Uncertainty quantification approach: from clinical data to numerical simulation", Mediterranea Cardiac Surgery Symposia, 2019
- "Stampa 3D del cuore", at II level Master “Percutaneous interventional treatment of structural heart diseases”, Scuola Superiore Sant’Anna 2017 and 2018.
- , "In-silico e in-vitro methods for modern medicine", at II level Master in innovation in cardiac surgery: advances in Minimally invasive therapeutics, Scuola Superiore Sant’Anna 2017 and 2018
- 3D Printing and Biomechanics 2° Congresso IDBN - Italian Digital Biomanufacturing Network III Thematic Conference, 2018
- "Biomeccanica e modelli di rischio di rottura degli aneurismi", TIC Training Interventistica Cardiovascolare 2011
- "Uncertainties in a computational FE model", Biomedical Dep.,Yale University, New Haven, CT, USA

Awards
- Best Thesis Award ESB-Ita 2023, "Development and implementation of a combined CFD and mesh morphing technique for the thoracic aorta", student: Francesca Dell'Agnello
- Finalist Best Thesis Award ESB-Ita 2022, "Statistical Shape Analysis of the Thoracic Aorta with supra-aortic vessels: development of a Non Rigid Registration Algorithm and correlation with CFD simulation results", student: Marilena Mazzoli
- First Prize "Best Oral presentation" ESB-Ita 2019, Biaxial and optomechanical characterization of soft tissues: a novel setup and experimental tests, PhD student Emanuele Vignali
- First Prize "Best Poster presentation" ESB-Ita 2019, In-silico assessment of thrombosis risk: a CFD study of left atrial and left atrial appendage, PhD student Katia Capellini
- First Prize "Best Poster presentation" CAE-Conference 2018, Digital twin in healthcare: development of an integrated imaging and finite element model of Cardioband®procedure for the treatment of mitral regurgitation, PhD student Emanuele Gasparotti
- "Best Poster presentation" ESC-Congress 2018, Importance of left atrium fluid dynamics for the planning of LAA closure procedure: an intregated computational fluid dynamics and morphological study, PhD student Benigno Marco Fanni
- Spotlight paper during "Image processing for complex cardiovascular disease session ESC 2012, "An automatic segmentation and 3D reconstruction of OCT images for the evaluation of coronary pathologies"
- Spotlight paper during "Image processing for complex cardiovascular disease session ESC 2012, "Towards regional ILT variation in abdominal aortic aneurysms: integration between experimental data and computational Finite Element Analyses"
- First Prize "How to predict TAA rupture risk", 2nd International Meeting on Aortic Diseases (IMAD), Liegi, Belgium, 2010;
- Finalist "An integrated FEM-OCT approach to investigate the effects of rotational atherectomy on the coronary wall stress", Endocardiac Biomechanics Research Congress, Marseille, France, 2010;
- Selected paper "Probabilistic finite element simulations of elastosonography for breast lesions detection" at IV International Conference on Computational Bioengineering, ICCB, Bertinoro, Italia, 2009;
- Guido Romeo Award, "Endotelializzazione in vitro di protesi vascolari di piccolo diametro: uso della metodica optical coherence tomography per il monitoraggio della crescita cellulare", XXX Congresso GISE 2009;
- European Society of Biomechanics Travel Awards 2008.

Supervising activities
- 70 MsC thesis for University of Pisa, Politecnico di Milano, Università of Parma, Università Tor Vergata di Roma;
- 9 PhD Students for University of Pisa, Politecnico di Milano, Universidad de Valladolid;
- 3 PhD Students, Marie Skłodowska-Curie Actions (MSCA), Innovative Training Networks (ITN): Clinical image processing and Big Data analysis, PhD program of the Department of Enterprise Engineering of the University of Rome Tor Vergata (UTV), Italy; Tissue characterization and endovascular aortic repair in a circulatory mock loop, PhD program of University of Lyon at Mines Saint-Etienne, France; Personalized Ultrasound-based hemodynamics simulations in the diseased abdominal aorta, PhD program of University of Lyon at Mines Saint-Etienne, France.

International Peer review journal activities

European Heart Journal – Imaging Methods and Practice, Transactions on Biomedical Engineering; APL Bioengineering; Annals of Biomedical Engineer; Cardiovascular Engineering and Technology; Journal of Biomechanics; Journal of the Mechanical Behavior of Biomedical Materials; International Journal of Computer Assisted Radiology and Surgery; Journal of Applied Biomaterials Functional Materials; Medical Engineering & Physics; Computers in Biology and Medicine; Plos One; Computer Methods and Programs in Biomedicine; Biomechanics and Modeling in Mechanobiology; Journal of Biomechanics; Computers in Biology and Medicine.

Miscellanea & Press:
- ILMEGAZINE
- The Skill
- Tram dell'innovazione
- Rai 3 svizzera
- Ministero esteri
- agraria
- roscini iqos
- panorama melfi

PUBLICATIONS

ORCID 0000-0002-7832-0122

Google Scholar scholar.google.com/citationshl=it&user=zQmrVXEAAAAJ

Citations 1110 (Scopus); 1483 (Google Scholar)

Papers Author of more than 300 publications on peer reviewed journal, contributions at National and International congresses.

PEER REVIEWED JOURNAL

[1] Francesco Bardi, Emanuele Gasparotti, Emanuele Vignali, Maria Nicole Antonuccio, Eleonora Storto, Stephane AVRIL, and **Simona Celi**. "A Hybrid Mock Circulatory Loop integrated with a LED-PIV system for the investigation of AAA compliant phantoms". In: *Frontiers in Bioengineering and Biotechnology* 12 (), p. 1452278.

[2] K. Capellini, L. Ait-Ali, V. Pak, M. Cantinotti, M. Murzi, E. Vignali, B.M. Fanni, A. Clemente, **S. Celi**, and E. Gasparotti. "Three-dimensional printed models as an effective tool for the management of complex congenital heart disease". In: *Frontiers in Bioengineering and Biotechnology* 12 (2024).

[3] K. Capellini, F. Dell'Agnello, E. Gasparotti, E. Vignali, M. Mazzoli, M.A. Scarpolini, F. Cademartiri, and **S. Celi**. "Towards a digital twin for aorta: An in-silico image-based approach coupling numerical simulations and CT-gated images to assess patients specific aortic hemodynamics". In: *Vascular pharmacology* 155 (2024), p. 107305.

[4] F. Danielli, F. Berti, B.M. Fanni, E. Gasparotti, **S. Celi**, G. Pennati, and L. Petrini. "Left atrial appendage occlusion: On the need of a numerical model to simulate the implant procedure". In: *International Journal for Numerical Methods in Biomedical Engineering* 40.5 (2024).

[5] B.M. Fanni, E. Gasparotti, A. Esposito, F. Danielli, F. Berti, S. Berti, G. Pennati, L. Petrini, and **S. Celi**. "A high-fidelity personalised 3d printed simulator for the left atrial appendage occlusion procedure". In: *Rapid Prototyping Journal* (2024).

[6] S. Garzia, K. Capellini, E. Gasparotti, D. Pizzuto, G. Spinelli, S. Berti, V. Positano, and **S. Celi**. "Three-Dimensional Multi-Modality Registration for Orthopaedics and Cardiovascular Settings: State-of-the-Art and Clinical Applications". In: *Sensors* 24.4 (2024).

[7] E. Gasparotti, B.M. Fanni, E. Del Pia, K. Capellini, F. Danielli, F. Berti, A. Clemente, S. Berti, G. Pennnati, L. Petrini, and **S. Celi**. "Computational Fluid Dynamic Simulation to Evaluate the Device-Related Effects After Left Atrial Appendage Occlusion". In: *Lecture Notes in Computational Vision and Biomechanics* 39 (2024), pp. 205–212.

[8] L. Geronzi, B.M. Fanni, B. De Jong, G. Roest, S. Kenjeres, **S. Celi**, and M.E. Biancolini. "A Parametric 3D Model of Human Airways for Particle Drug Delivery and Deposition". In: *Fluids* 9.1 (2024).

[9] M. Mariani, M. Bonanni, A. D'Agostino, G. Iuliano, A. Gimelli, M.A. Coceani, **S. Celi**, G.M. Sangiorgi, and S. Berti. "Multimodality Imaging Approach for Planning and Guiding Direct Transcatheter Tricuspid Valve Annuloplasty". In: *Journal of the American Society of Echocardiography* 37.4 (2024), pp. 449–465.

[10] M. Mazzoli, M.A. Scarpolini, B.M. Fanni, K. Capellini, A. Monteleone, L. Ait-Ali, and **S. Celi**. "An AI and Statistical Shape Analysis combined framework to extract features in complex cardiovascular structures". In: *Vascular pharmacology* 155 (2024), p. 107331.

[11] A. Meloni, R. Cau, L. Saba, V. Positano, C. De Gori, M. Occhipinti, **S. Celi**, E. Bossone, J. Bertacchi, B. Punzo, C. Mantini, C. Cavaliere, E. Maffei, and F. Cademartiri. "Photon-Counting Computed Tomography Angiography of Carotid Arteries: A Topical Narrative Review with Case Examples". In: *Diagnostics* 14.18 (2024).

[12] A. Meloni, E. Maffei, V. Positano, A. Clemente, C. De Gori, S. Berti, L.L. Grutta, L. Saba, E. Bossone, C. Mantini, C. Cavaliere, B. Punzo, **S. Celi**, and F. Cademartiri. "Technical principles, benefits, challenges, and applications of photon counting computed tomography in coronary imaging: a narrative review". In: *Cardiovascular Diagnosis and Therapy* 14.4 (2024), pp. 698–724.

[13] A. Rizza, V. Castiglione, K. Capellini, C. Palmieri, E. Gasparotti, S. Berti, and **S. Celi**. "Case Report: Role of numerical simulations in the management of acute aortic syndromes". In: *Frontiers in Cardiovascular Medicine* 11 (2024).

[14] J. Singh, K. Capellini, B.M. Fanni, A. Mariotti, M.V. Salvetti, and **S. Celi**. "TOWARDS THE PREDICTION OF PLAQUE ONSET AND GROWTH IN CAROTID ARTERIES". In: *Journal of Theoretical and Applied Mechanics (Poland)* 62.3 (2024), pp. 631–635.

[15] J. Singh, K. Capellini, A. Mariotti, M.V. Salvetti, and **S. Celi**. "Predicting Atherosclerotic Plaque Onset and Growth in Carotid Arteries: A CFD-Driven Approach". In: *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* 14848 LNBI (2024), pp. 163–174.

[16] E. Vignali, E. Gasparotti, L. Miglior, V. Gervasi, L. Simone, D. Haxhiademi, L. Frediani, G. Borelli, S. Berti, and **S. Celi**. "A New Smartphone-Based Method for Remote Health Monitoring: Assessment of Respiratory Kinematics". In: *Electronics (Switzerland)* 13.6 (2024).

[17] M.N. Antonuccio, E. Gasparotti, F. Bardi, A. Monteleone, A. This, L. Rouet, S. Avril, and **S. Celi**. "Fabrication of deformable patient-specific AAA models by material casting techniques". In: *Frontiers in Cardiovascular Medicine* 10 (2023).

[18] F. Bardi, E. Gasparotti, E. Vignali, S. Avril, and **S. Celi**. "A Hybrid Mock Circulatory Loop for Fluid Dynamic Characterization of 3D Anatomical Phantoms". In: *IEEE Transactions on Biomedical Engineering* 70.5 (2023), pp. 1651–1661.

[19] F. Cademartiri, A. Meloni, L. Pistoia, G. Degiorgi, A. Clemente, C. De Gori, V. Positano, **S. Celi**, S. Berti, M. Emdin, D. Panetta, L. Menichetti, B. Punzo, C. Cavaliere, E. Bossone, L. Saba, R. Cau, L.L. Grutta, and E. Maffei. "Dual Source Photon-Counting Computed Tomography—Part II: Clinical Overview of Neurovascular Applications". In: *Journal of Clinical Medicine* 12.11 (2023).

[20] F. Cademartiri, A. Meloni, L. Pistoia, G. Degiorgi, A. Clemente, C.D. Gori, V. Positano, **S. Celi**, S. Berti, M. Emdin, D. Panetta, L. Menichetti, B. Punzo, C. Cavaliere, E. Bossone, L. Saba, R. Cau, L.L. Grutta, and E. Maffei. "Dual-Source Photon-Counting Computed Tomography—Part I: Clinical Overview of Cardiac CT and Coronary CT Angiography Applications". In: *Journal of Clinical Medicine* 12.11 (2023).

[21] K. Calò, K. Capellini, G. De Nisco, V. Mazzi, E. Gasparotti, D. Gallo, **S. Celi**, and U. Morbiducci. "Impact of wall displacements on the large-scale flow coherence in ascending aorta". In: *Journal of Biomechanics* 154 (2023).

[22] M. Cantinotti, P. Marchese, M. Scalese, R. Giordano, E. Franchi, N. Assanta, M. Koestenberger, B.T. Barnes, **S. Celi**, V. Jani, I. Voges, and S. Kutty. "Characterization of Aortic Flow Patterns by High-Frame-Rate Blood Speckle Tracking Echocardiography in Children". In: *Journal of the American Heart Association* 12.8 (2023).

[23] **S. Celi**, E. Gasparotti, K. Capellini, F. Bardi, M.A. Scarpolini, C. Cavaliere, F. Cademartiri, and E. Vignali. "An image-based approach for the estimation of arterial local stiffness in vivo". In: *Frontiers in Bioengineering and Biotechnology* 11 (2023).

[24] A. Di Giglio, M. Laurino, G. Sacco, G. Karanasiou, S. Berti, E. Maiettini, M. Piccinino, V. Stavroulaki, **S. Celi**, N. Boccardo, P. Iovanna, A.P. Bianzino, C. Benvenuti, L. Natale, and G. Bottari. "Large-scale trialing of the B5G technology for eHealth and Emergency domains". In: *2023 IEEE International Conference on E-Health Networking, Application and Services, Healthcom 2023* (2023), pp. 78–83.

[25] B.M. Fanni, M.N. Antonuccio, A. Pizzuto, S. Berti, G. Santoro, and **S. Celi**. "Uncertainty Quantification in the In Vivo Image-Based Estimation of Local Elastic Properties of Vascular Walls". In: *Journal of Cardiovascular Development and Disease* 10.3 (2023).

[26] B.M. Fanni, E. Gasparotti, E. Vignali, C. Capelli, V. Positano, and **S. Celi**. "An integrated in-vitro and in-silico workflow to study the pulmonary bifurcation hemodynamics". In: *Computers and Fluids* 260 (2023).

[27] S. Garzia, M.A. Scarpolini, M. Mazzoli, K. Capellini, A. Monteleone, F. Cademartiri, V. Positano, and **S. Celi**. "Coupling synthetic and real-world data for a deep learning-based segmentation process of 4D flow MRI". In: *Computer Methods and Programs in Biomedicine* 242 (2023).

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Massa, October 16, 2024

Simona Celi