

GABRIELE MARIA FORTUNATO

Place and date of birth: Agropoli – Italy, 15/10/1991

Gender: Male

Address: Via F. Corridoni, 75 – 56125 Pisa – Italy

E-mail: gabriele.fortunato@unipi.it

Scopus identifier: 57204466274

ORCID code: 0000-0002-0260-4014

WORKING EXPERIENCE

Jan 2023 - present **Assistant professor (RTDA)**, Dept. of Information Engineering, University of Pisa

Jun 2022 – Dec 2022 **Research Grant**, Research Centre “E. Piaggio”, University of Pisa

Dec 2021 – May 2022 **Research Fellowship**, Department of Information Engineering, University of Pisa

ACADEMIC STUDIES

Nov 2018 – Oct 2021 **PhD in Information Engineering** obtained at University of Pisa on 5th May 2022 with the PhD thesis “Robotic platform for in situ bioprinting” - **Evaluation:** Ottimo cum laude

Jul 24th 2018 **Master’s degree in Biomedical Engineering** – Industrial Curriculum, University of Pisa – Department of Information Engineering - **Final degree mark:** 109/110

Apr 24th 2015 **Bachelor’s degree in Biomedical Engineering** - Industrial Curriculum, University of Pisa – Department of Information Engineering - **Final degree mark:** 100/110

PROFESSIONAL QUALIFICATION

Professional qualification of engineer achieved in Pisa on February 19th 2019

SCIENTIFIC POSITIONS

Mar 2023 - present Guest editor in the special issue “New Insights into the Development of In Situ Bioprinting for Tissue Engineering”. Journal “MDPI, Bioengineering” (IF 5.046).

Mar 2023 - present Review Editor on the Editorial Board of Biological Modeling and Simulation (specialty section of Frontiers in Molecular Biosciences e Frontiers in Applied Mathematics and Statistics).

Sep 2022 - present Review Editor on the Editorial Board of Biofabrication (specialty section of Frontiers in Bioengineering and Biotechnology).

25th-28th Sep 2022 Member of the Scientific Advisory Committee at the International Conference on Biofabrication 2022, Montecatini Terme, Italy

TEACHING ACTIVITY

Feb 2023 - present

- Prostheses (6 CFU) - *Bachelor Degree in Biomedical Engineering, University of Pisa*
- Bioengineering principles (6 CFU) - *Bachelor Degree in Biomedical Engineering, University of Pisa*

PERSONAL SKILLS

Spoken languages Italian (mother tongue); English (C1); French (basic knowledge)

Research interests Biofabrication technologies; Bioprinting; Robotic-based additive manufacturing; Combination of micro- and nano- fabrication technologies; Design of bioreactors; Electro-mechanical prototyping; Design and development of medical devices

Team member in Scientific grants

- European Project Manunet “KERAPACK: A novel integrated approach for the reduction, recycling and reuse of poultry feathers by keratins based packaging manufacturing”.
- European Project M-ERA.net “BIOMEMBRANE: Bioengineered in vitro model of retinal pigmented epithelium of human eye”
- International cooperation project “IMAGO – Conjunct work group Italy-Mexico on the Biofabrication for the development of a multimaterial and multiscale bioprinting system for the development of muscular tissue 3D in vitro models.
- H2020 Project GIOTTO (Active aGeIng and Osteoporosis: The next challenge for smart nanobiOmaterials and 3D technologies GA814410)
- Project PRIN2017 “Vision: Development and Promotion of the Levulinic acid and Carboxylate platforms by the formulation of novel and advanced PHA-based biomaterials and their exploitation for 3D printed green-electronics applications.
- Project PRA 2020-2021, mOSAic: Open Source as key enabling approach for Artificial Intelligence in healthcare.

AWARDS

30th June 2023	Best Doctoral Thesis Award in the field of 'Civil Engineering and Architecture, Industrial and Information Engineering' from the University of Pisa
15th September 2022	GNB Awards 2022: PhD thesis award “Dipartimento di Ingegneria Industriale e dell'Informazione” from University of Pavia
16th September 2022	XL Scuola annuale di bioingegneria, Bressanone - Italy: Best project award: LIViM: lung in vitro model
11th September 2019	GNB Awards 2019: Master thesis award “Laboratorio di Modelli, Segnali e Controllo di Sistemi Biologici” from University of Padova
15th December 2017	1 st Place UBORA First Design School “Reducing child mortality”, Nairobi, Kenya. Project: “Phototherapy device to treat the infant jaundice”.

RELEVANT PUBLICATIONS

Journal articles

- **Fortunato, G.M.**, Sigismondi, S., Nicoletta, M., Condino, S., Montemurro, N., Vozzi, G., Ferrari, V., De Maria, C. (2023). *Analysis of the Robotic-Based In Situ Bioprinting Workflow for the Regeneration of Damaged Tissues through a Case Study*. *Bioengineering*, 10, 560.
- **Fortunato, G. M.**, Nicoletta, M., Batoni, E., Vozzi, G., & De Maria, C. (2023). *A fully automatic non-planar slicing algorithm for the additive manufacturing of complex geometries*. *Additive Manufacturing*, 69, 103541.
- **Fortunato, G. M.**, Bonatti, A. F., Batoni, E., Macaluso R., Vozzi, G., De Maria, C. (2022). *Motion compensation system for robotic based in situ bioprinting to balance patient physiological movements*. *Bioprinting*, e00248
- **Fortunato, G. M.**, Batoni, E., Bonatti, A. F., Vozzi, G., De Maria, C. (2022). *Surface reconstruction and tissue recognition for robotic-based in situ bioprinting*. *Bioprinting*, e00195
- **Fortunato, G. M.**, Rossi, G., Bonatti, A. F., De Acutis, A., Buenrostro, C. M., Vozzi, G., & De Maria, C. (2021). *Robotic platform and path planning algorithm for in situ bioprinting*. *Bioprinting*, e00139
- Agarwal, T., **Fortunato, G. M.**, Hann, S. Y., Ayan, B., Vajanthri, K. Y., Presutti, D., Cui, H., Chan, A. H. P., Costantini, M., Onesto, V., Di Natale, C., Huang, N. F., Makvandi, P., Shabani, M., Maiti, T. K., Zhang, L. J., De Maria, C. (2021). *Recent Advances in Bioprinting Technologies for Engineering Cardiac Tissue*. *Materials Science and Engineering: C*, 112057
- Wu, Y., **Fortunato, G. M.**, Okesola, B. O. Pellerej di Brocchetti, F. L., Suntornnond, R., Connelly, J., De Maria, C., Rodriguez-Cabello, J. C., Vozzi, G., Wang, W., Mata, A. (2021). *An interfacial self-assembling bioink for the manufacturing of capillary-like structures with tuneable and anisotropic permeability*. *Biofabrication*
- Cendrero, A.M., **Fortunato, G.M.**, Munoz-Guijosa, J.M., De Maria, C., Díaz Lantada, A. (2021). *Benefits of Non-Planar Printing Strategies Towards Eco-Efficient 3D Printing*. *Sustainability*, 13(4), 1599
- De Maria, C., **Fortunato, G. M.**, Chiesa, I., Vozzi, G. (2020). *Microfabricated and multilayered PLGA structure for the development of co-cultured in vitro liver models*. *Bioprinting*, e00084
- Chiesa, I., De Maria, C., Lapomarda, A., **Fortunato, G. M.**, Montemurro, F., Di Gesu, R., Tuan, R. S., Vozzi, G., Gottardi, R. (2020). *Endothelial cells support osteogenesis in an in vitro vascularized bone model developed by 3D bioprinting*. *Biofabrication*, 12(2), 025013
- Lapomarda, A., De Acutis, A., Chiesa, I., **Fortunato, G. M.**, Montemurro, F., De Maria, C., Mattioli Belmonte, M., Gottardi, R., Vozzi, G. (2019). *Pectin-GPTMS based biomaterial: toward a sustainable Bioprinting of 3D scaffolds for Tissue Engineering application*. *Biomacromolecules*, 21(2), 319-327
- **Fortunato, G. M.**, Da Ros, F., Bisconti, S., De Acutis, A., Biagini, F., Lapomarda, A., Magliaro, C., De Maria, C., Montemurro, F., Bizzotto, D., Braghetta, P., Vozzi, G. (2019). *“Electrospun structures made of a hydrolyzed keratin-based biomaterial for development of in vitro tissue models”*. *Frontiers in Bioengineering and Biotechnology*, 7, 174.
- Chiesa, I., **Fortunato, G. M.**, Lapomarda, A., Di Pietro, L., Biagini, F., De Acutis, A., Tinè, M. R., De Maria, C., Vozzi, G. (2019). *“Ultrasonic mixing chamber as an effective tool for the biofabrication of fully graded scaffolds for Interface Tissue Engineering”*. *The International journal of artificial organs*, 0391398819852960.
- **Fortunato, G. M.**, De Maria, C., Eglin, D., Serra, T., Vozzi, G. (2018). *“An ink-jet printed electrical stimulation platform for muscle tissue regeneration”*. *Bioprinting*, 11, e00035.