ANDREA ANDOLFI

DATE OF BIRTH: 04/08/1993

DRIVING LICENCE: B

EDUCATION

Nov 2020 – Ongoing

Ph.D. in Bioengineering
Dept. of Computer Science, Bioengineering, Robotics and Systems Engineering (DIBRIS) – Università degli studi di Genova

My doctoral project is focused on Neural Tissue Engineering.

Oct 2019 – Mar 2020

Microsoft Artificial Intelligence Academy (MAIA)
Digital Tree srl in collaboration with Università degli studi di Genova

I graduated with merit in the master sponsored by Microsoft in collaboration with the Università degli Studi di Genova, obtaining the qualification of Data Scientist.
The course deepened the knowledge of the modules of Big Data, Machine Learning, and Artificial Intelligence, with references to Microsoft technologies of the Azure platform. The knowledge of each module was verified through an examination at the Università degli Studi di Genova.

Oct 2016 – Jul 2019

Master's Degree in Bioengineering
Neuroengineering and bio-ICT curriculum – Università degli studi di Genova

Vote: 110/110 *summa cum laude, First class honors (1st), 4.0 GPA*
Thesis: "Design, development and characterization of a photosensitive scaffold for neural activity modulation in three-dimensional cell cultures"

Oct 2012 – Oct 2016*

Batchelor's Degree in Biomedical Engineering
Università degli studi di Cagliari

Thesis: "Parylene: features and biomedical applications"
** part-time enrolment for the first year and full-time in the rest. The university has therefore recognized and certified the achievement of the degree within the period of study (3 years).*

2007 – 2012

High School Graduation
Liceo scientifico "Europa Unita", Porto Torres – Scientific curriculum

VISITING STUDENT

Jun 2018 – Dec 2018

I did my master's thesis at the Neural Engineering Laboratory (NEL) at the Korea Advanced Institute of Science and Technology (**KAIST**), supervised by Professor Yoonkey Nam.

Apr 2022 – Dec 2022

I was a Ph.D. visiting student at the Zhang Lab, Brigham and Women's Hospital, **Harvard Medical School**, supervised by Dr. Yu Shrike Zang.

LANGUAGES

Italian Mother-tongue

English B2 level

PUBLICATION RECORD

Journal papers:

- **Andolfi, A.**, H. Jang, S. Martinoia, Y. Nam, *Thermoplasmonic Scaffold Design for the Modulation of Neural Activity in Three-Dimensional Neuronal Cultures, Biochip J. (2022).* https://doi.org/10.1007/s13206-022-00082-z.
- **A. Andolfi**, P. Arnaldi, D. Di Lisa, S. Pepe, M. Frega, A. Fassio, A. Lagazzo, S. Martinoia, L. Pastorino*, A Micropatterned Thermoplasmonic Substrate for Neuromodulation of In Vitro Neuronal Networks, Acta Biomaterialia (2022)* https://doi.org/10.1016/j.actbio.2022.12.036.
- D. Di Lisa, L. Muzzi, A. Lagazzo, **A. Andolfi**, S. Martinoia, L. Pastorino, *Long-term in vitro culture of 3D brain-on-a-chip model, Biofabrication (under review)*

Conference papers:

- **A. Andolfi**, P. Arnaldi, D. Di Lisa, M. Frega, S. Martinoia, L. Pastorino (2023). Photosensitive pattern to control geometry and activity of a neural network. *GNB congress 2023*, Padova, Italy.
- **A. Andolfi**, D. Di Lisa, G. Uras, S. Grasselli, S. L. Del Pozo, S. Martinoia, A. HV Schapira, L. Pastorino (2023). In vitro functional characterization of iNeurons Parkinson phenotype. *3R congress 2023*, Milano, Italy.
- **A. Andolfi**, D. Di Lisa, G. Uras, S. Grasselli, S. L. Del Pozo, S. Martinoia, A. HV Schapira, L. Pastorino (2023). Electrophysiological characterization of L444P GBA mutation Parkinson phenotype. *SFN congress 2023*, Washington D.C., USA.
- **A. Andolfi**, D. Di Lisa, P. Arnaldi, A. Lagazzo, S. Pepe, M. Frega, A. Fassio, S. Martinoia, L. Pastorino (2022). Electrophysiological recording of a patterned neuronal network realized with ink-jet printing technique. *MEA Meeting 2022*, Tubingen, Germany.
- **Andolfi, A.**, Arnaldi, P., Di Lisa, D., Martinoia, S., & Pastorino, L. (2021). Ink-jet printed chitosan precise patterning for engineered 2D neuronal networks. *Biomedical Science and Engineering*, *4*(s1). https://doi.org/10.4081/bse.2021.148
- S.Martinoia, **A. Andolfi**, L. Muzzi, M. Pisano, A. Spanu and R. Raiteri, "Neuro-electronic devices and nanotools and nanotools to interact with neuronal networks," 2020 IEEE International Electron Devices Meeting (IEDM), 2020, pp. 14.1.1-14.1.4, doi:10.1109/IEDM13553.2020.9372044.
- Jang, H., **Andolfi, A.**, Martinoia, S., Nam, Y., *Photothermal neural activity modulation in three-dimensional culture with gold nanorods-attached-microbeads,* Korean Biochip Society Annual Meeting, May 16 2019. (https://api.semanticscholar.org/CorpusID:228530175)

Book chapters:

- D. Di Lisa, **A. Andolfi**, A. Lagazzo, L. Pastorino, Interactions at the solid/liquid interface in hydrogels for 3D in vitro human tissue models, in: Reference Module in Chemistry, Molecular Sciences and Chemical Engineering, Elsevier, 2023. https://doi.org/10.1016/B978-0-323-85669-0.00116-1.
- Biofabrication: an integrated bioengineering approach for the automated fabrication of biological structures for clinical and research applications. Chapter 14: " Brain-on-a-chip: engineered neuronal populations and microtransducer arrays". Editor: V. Chiono, Faré Silvia, P. Netti. Pàtron editore, EAN:9788855535281, ISBN:8855535285, 2021

AWARDS

- The article titled “Thermoplasmonic Scaffold Design for the Modulation of Neural Activity in Three-Dimensional Neuronal Cultures” was selected for the cover of the Biochip journal (Volume 16, issue 4, December 2022).

TEACHING ACTIVITY

- Teaching support in ”Laboratorio di Biomateriali”, Biomedical Engineering course, Università degli studi di Genova. (CFU = 3, 2022-2023) – 30 hours.

WORK EXPERIENCES

Apr 2020 – October 2020	**Associate Data Engineer** *Softjam S.p.A.*
Jul 2019 – Sep 2019	**Software Test Engineer** *Alten Italy – Esaote S.p.A.*

I authorize the treatment of the contained personal data in this CV.