

Improving Human Physiology with Advanced *In Vitro* Tools

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Abstract

Our laboratory specializes in developing advanced tools for improving human physiology. Overall, our lab has 3 main areas of expertise: **1. Advanced *in vitro* models** – we use tissue engineering to create advanced *in vitro* systems that better mimic human physiology (e.g. Organs-on-a-Chip, organoids, iPSC). **2. Integrated electronics** – we develop implantable electronics that enable the restoration of tactile sensation. **3. Biohybrid robots** – we integrate the sensory systems of insects with robotic platforms to enable super-sensitive identification of smell using biological sensors. In this talk, I will give an overview on these topics and how they are integrated in our lab.

Short Biography



Prof. Maoz is a faculty member at the Sagol School of Neuroscience and the Department of Biomedical Engineering at Tel Aviv University. Prof. Maoz did his Ph.D. in nano-optics at the School of Chemistry in Tel Aviv. During his post-doctoral studies, at Harvard University, in Prof. Don Ingber and Kit Parker, he developed Organ-on-a-Chip platforms for studying human relevant physiology.

Prof. Maoz received number of prestigious fellowships, awards and honors, such as the Harvard-Wyss Technology Fellowship, Azrieli Fellowship for Academic Excellence and Leadership, and the ERC grant; recently, he was chosen by “The Marker” as the most promising 40 under 40, and he gave a talk in the first Metaverse TedX.

More information on the MaozLab can be found in:

<https://www.maozlab.com/>