

Stanford



Tommaso Di Ianni

Postdoctoral Research Fellow, Radiology

Bio

BIO

I am a postdoctoral research fellow at Stanford School of Medicine in the Department of Radiology. My primary research focus is in the development of cutting-edge technological innovations for imaging and noninvasive targeted drug delivery based on ultrasound. I strive to implement tools with high potential for clinical translation and aim at producing a substantial impact on the clinical practice.

At the moment, I am working on the systematic and noninvasive manipulation of the nervous system by using focused ultrasound combined with ultrasound-activated drug carriers. In addition, I am implementing functional imaging of brain-wide neuronal activity based on power Doppler ultrasound as a readout of the neuromodulation.

HONORS AND AWARDS

- School of Medicine Dean's Postdoctoral Fellowship, Stanford University (2019)
- New Investigator Award for Basic Science, American Institute of Ultrasound in Medicine (2017)

PROFESSIONAL EDUCATION

- PhD, Technical University of Denmark , Biomedical Engineering (2017)
- MSc, University of Bologna , Electronic Engineering (2014)
- BSc, University of Bologna , Electronic Engineering (2011)

STANFORD ADVISORS

- Raag Airan, Postdoctoral Faculty Sponsor

PATENTS

- Tommaso Di Ianni, Martin Hemmsen, Jørgen Arendt Jensen. "United States Patent US 2018/0059229 A1 Vector Velocity Estimation Using Transverse Oscillation (TO) and Synthetic Aperture Sequential Beamforming (SASB)", BK Medical AS, Mar 1, 2018

Publications

PUBLICATIONS

- **Ultrasound/microbubble-mediated targeted delivery of anticancer microRNA-loaded nanoparticles to deep tissues in pigs.** *Journal of controlled release : official journal of the Controlled Release Society*
Di Ianni, T., Bose, R. J., Sukumar, U. K., Bachawal, S., Wang, H., Telichko, A., Herickhoff, C., Robinson, E., Baker, S., Vilches-Moure, J. G., Felt, S. A., Gambhir, S. S., Paulmurugan, et al
2019

- **Portable Vector Flow Imaging Compared With Spectral Doppler Ultrasonography.** *IEEE transactions on ultrasonics, ferroelectrics, and frequency control*
Di Ianni, T., Hansen, K. L., Villagomez Hoyos, C. A., Moshavegh, R., Nielsen, M. B., Jensen, J. A.
2019; 66 (3): 453–62

- **A Vector Flow Imaging Method for Portable Ultrasound Using Synthetic Aperture Sequential Beamforming** *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*
Di Ianni, T., Villagómez Hoyos, C. A., Ewertsen, C., Kjeldsen, T. K., Mosegaard, J., Nielsen, M. B., Jensen, J. A.
2017; 64 (11): 1655 - 1665

- **System-Level Design of an Integrated Receiver Front End for a Wireless Ultrasound Probe** *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*
Di Ianni, T., Hemmsen, M. C., Muntal, P. L., Jørgensen, I. H., Jensen, J. A.
2016; 63 (11): 1935 - 1946

- **Compressive sensing of full wave field data for structural health monitoring applications** *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*
Di Ianni, T., De Marchi, L., Perelli, A., Marzani, A.
2015; 62 (7): 1373 - 1383

- **Model-based compressive sensing for damage localization in lamb wave inspection** *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*
Perelli, A., Di Ianni, T., Marzani, A., De Marchi, L., Masetti, G.
2013; 60 (10): 2089 - 2097