

ANGELIKI XENAKI

Research Scientist

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EXPERIENCE

Principal Researcher

Foundation for Research and Technology - Hellas

April 2025 – present Greece

- Signal processing, Underwater acoustics, DAS

Scientist (G15)

Centre for Maritime Research and Experimentation, NATO

October 2018 – February 2025 Italy

- Synthetic aperture sonar signal processing, Machine learning

Research Scientist

GN Hearing A/S

April 2016 – April 2018 Denmark

- Digital signal processing for hearing devices

Postdoc in Acoustic Technology

Technical University of Denmark (DTU)

November 2015 – March 2016 Denmark

- Sparse methods for sound source localization

EDUCATION

PhD in Mathematics, Physics and Informatics

Technical University of Denmark (DTU)

2011 – 2015 Denmark

- Department of Applied Mathematics and Computer Science

Research Scholar

Scripps Institution of Oceanography (UCSD)

2012 – 2014 USA

- Marine Physical Laboratory

MSc in Acoustics Engineering

Technical University of Denmark (DTU)

2008 – 2010 Denmark

- Department of Electrical Engineering

Diploma in Electrical Engineering and Computer Science

National Technical University of Athens (NTUA)

2001 – 2007 Greece

- Equivalent to a MSc degree (300 ECTS)

PROFILE

- Scientist with main research interest in acoustics, array signal processing and machine learning
- Additional solid background in electrical engineering and computer science
- Professional advance characterized by diligence and excellence in international environment
- Innovative, results-orientated and highly dynamic with proven ability to accomplish research assignments
- Teaching experience and interpersonal skills assuring confidence in communicating a subject and working well with individuals and in a team

ACHIEVEMENTS

Early career scientist award

Maritime Science and Technology Experts Committee, STO, NATO

October 2019 La Spezia, Italy

Best student paper award

3rd International Workshop on Compressed Sensing Theory and its Applications to Radar, Sonar and Remote Sensing

June 2015 Pisa, Italy

Young scientist award

1st International conference and exhibition on Underwater Acoustics

June 2013 Corfu, Greece

SKILLS

Python Matlab R LaTeX
MS Office

LANGUAGES

Greek (native speaker) ●●●●●●
English (Cambridge Proficiency) ●●●●●●
Italian ●●●●●●
Danish (PD3) ●●●●●●

PUBLICATIONS

Scientific writing, reviewing and editing

📅 2010–2026

- Author and co-author of more than 50 scientific manuscripts including journal papers, papers in conference proceedings, diploma theses and patents with more than 1800 citations; source Google Scholar.
- Reviewer for the IEEE Transactions on Signal Processing, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), the Journal of the Acoustical Society of America (JASA), IEEE Journal of Oceanic Engineering, and npj Acoustics.
- Associate Editor for the Journal of Acoustical Society of America
- Member of the IEEE Signal Processing Society Synthetic Aperture Technical Working Group (SA-TWG) [2021-2023], Sensor Array and Multichannel Technical Committee (SAM-TC) [2024-2026], Vice Chair of Synthetic Aperture Sonar Working Group (SASC) [2023 - 2025]

📄 Selected Journal Articles

- **Xenaki, A.**, Gerstoft, P., Williams, E., and Abadi, S. (2025). “Overview of distributed acoustic sensing: Theory and ocean applications”. In: *The Journal of the Acoustical Society of America* 158 (1).
- Vouras, P., Mishra, K. V., Artusio-Glimpse, A., Pinilla, S., **Xenaki, A.**, Griffith, D. W., and Egiazarian, K. (2023). “An overview of advances in signal processing techniques for classical and quantum wideband synthetic apertures”. In: *IEEE J. Sel. Top. Signal Process.* 17 (2).
- **Xenaki, A.**, Gips, B., and Pailhas, Y. (2022). “Unsupervised learning of platform motion in synthetic aperture sonar”. In: *The Journal of the Acoustical Society of America* 151.2, pp. 1104–1114.
- **Xenaki, A.** and Pailhas, Y. (2019). “Compressive synthetic aperture sonar imaging with distributed optimization”. In: *The Journal of the Acoustical Society of America* 146.3, pp. 1839–1850.
- **Xenaki, A.**, Bünsow-Boldt, J., and Græsbøll-Christensen, M. (2018). “Sound source localization and speech enhancement with sparse Bayesian learning beamforming”. In: *The Journal of the Acoustical Society of America* 143.6, pp. 3912–3921.
- Fernandez-Grande, E., **Xenaki, A.**, and Gerstoft, P. (2017). “A sparse equivalent source method for near-field acoustic holography”. In: *The Journal of the Acoustical Society of America* 141.1, pp. 532–542.
- Gerstoft, P., Mecklenbräuker, C., **Xenaki, A.**, and Nannuru, S. (2016). “Multisnapshot sparse Bayesian learning for DOA”. in: *IEEE Signal Processing Letters* 23.10, pp. 1469–1473.
- **Xenaki, A.**, Fernandez-Grande, E., and Gerstoft, P. (2016). “Block-sparse beamforming for spatially extended sources in a Bayesian formulation”. In: *The Journal of the Acoustical Society of America* 140.3, pp. 1828–1838.
- **Xenaki, A.** and Gerstoft, P. (2015). “Grid-free compressive beamforming”. In: *The Journal of the Acoustical Society of America* 137.4, pp. 1923–1935.
- **Xenaki, A.**, Gerstoft, P., and Mosegaard, K. (2014). “Compressive beamforming”. In: *The Journal of the Acoustical Society of America* 136.1, pp. 260–271.
- **Xenaki, A.**, Jacobsen, F., and Fernandez-Grande, E. (2012). “Improving the resolution of three-dimensional acoustic imaging with planar phased arrays”. In: *Journal of sound and vibration* 331.8, pp. 1939–1950.

EXPERIMENTS

Testing of Prototype Sonar

📅 September 2023 📍 Elba, Italy

- At sea experiment on board of research vessel Leonardo

Calibration of Prototype Sonar

📅 July 2023 📍 La Spezia, Italy

- Calibration experiment at sea

REP(MUS)

📅 September 2022 📍 Sesimbra, Portugal

- Robotic Experimentation and Prototyping using Maritime Uncrewed Systems

Testing of Prototype Sonar

📅 July 2020 📍 La Spezia, Italy

- At sea experiment on board of research vessel Leonardo

Testing of Prototype Sonar

📅 January 2020 📍 La Spezia, Italy

- Coastal experiment at shallow waters

Testing of Prototype Sonar

📅 June 2019 📍 La Spezia, Italy

- Coastal experiment at shallow waters

Calibration of Prototype Sonar

📅 April 2019 📍 La Spezia, Italy

- Calibration experiment in tank

Testing of Multi-microphone Hearing Device

📅 June 2016 📍 Ballerup, Denmark

- Real-time demo