

NPL Selected Publications, 2018-2019

Underwater Acoustics

Selected peer-reviewed publications:

Livina, V., Brouwer, A., Harris, P., Wang, L., Sotirakopoulos, K. and Robinson, S. "Tipping point analysis of ocean acoustic noise", *Nonlin. Processes Geophys.*, **25**, 89–97, 2018.

<https://doi.org/10.5194/npg-25-89-2018>

Hazelwood R.A., Macey P.C., Robinson S.P. and Wang L.S. "Optimal Transmission of Interface Vibration Wavelets—A Simulation of Seabed Seismic Responses", *J. Mar. Sci. Eng.* **6**, 61-79, 2018.

<https://doi:10.3390/jmse6020061>

Biber, A., Çorakçı, A.C., Golick, A., Robinson, S.P., Hayman, G., Ablitt, J., Barrera-Figueroa, S., Buogo, S., Mauro, S., Borsani, F., Curcuruto, S., Linné, M., Sigray, P. and Davidsson, P. "Calibration standards for hydrophones and autonomous underwater recorders for frequencies below 1 kHz: current activities of "UNAC-LOW" project", *ACTA IMEKO*, **7**, (2), 32-38, 2018

DOI: http://dx.doi.org/10.21014/acta_imeko.v7i2.542

Marra, G., Clivati, C., Luckett, R., Tampellini, A., Kronjaeger, J., Wright, L., Mura, A., Levi, F., Robinson, S., Xuereb, A., Baptie, B. and Calonico, D. "Ultra-stable laser interferometry for earthquake detection with terrestrial and submarine optical cables", *Science*, **361**, (6401), 486-490, 2018.

DOI: <http://science.sciencemag.org/content/361/6401/486>

Robinson S. P., Harris P. M., Hayman G., Beamiss G. A.. "Signal-modelling methods applied to the free-field calibration of hydrophones and projectors in laboratory test tanks" *Meas. Sci. Technol.*, **29**, 085001, 2018.

<https://doi.org/10.1088/1361-6501/aac752>

Avison, J., Harris, P., Robinson S., Rodrigues, D., Guglielmone, C., Hof, C., Sadikoglu, E., Chushkov, M., Zelenika, Slobodan Rosenkrantz. Peter Andersson, Håkan Fedtke, Thomas Koch, Christian Medina Martin, N., Ruiz, S. and Shawky H. "Final report: key comparison EURAMET.AUV.A-K5". *NPL Report AC 18*, 2018.

Avison, J., Harris, P., Robinson S., Rodrigues, D., Guglielmone, C., Hof, C., Sadikoglu, E., Chushkov, M., Zelenika, Slobodan Rosenkrantz. Peter Andersson, Håkan Fedtke, Thomas Koch, Christian Medina Martin, N., Ruiz, S. and Shawky H. Final report: key comparison EURAMET.AUV.A-K5. *Metrologia* **56** (1A), 09001, 2019. DOI:

<https://doi.org/10.1088/0026-1394/56/1A/09001>

Harris P, Sotirakopoulos K, Robinson S, Wang, L and Livina, V. Comparison of statistical methods for the evaluation of long term trends in underwater noise measurements. *J. Acoust. Soc. Am.* **145** (1), p 228-242, January 2019. URL: <https://doi.org/10.1121/1.5084040>

Medical Ultrasound

Selected peer-reviewed publications:

Nalesso, S, Bussemaker, MJ, Sear, RP, Hodnett, M and Lee, J. "A review on possible mechanisms of sonocrystallisation in solution", *Ultrasonics Sonochemistry*, **57**, 125-138, 2019.

Turner, P, Hodnett, M, Dorey, R and Carey, JD. "Controlled Sonication as a Route to *in-situ* Graphene Flake Size Control", *Scientific Reports*, **9**, Article number: 8710, 2019.

Nalesso, S, Bussemaker, MJ, Sear, RP, Hodnett, M and Lee, J. "Development of Sodium Chloride Crystal Size during Antisolvent Crystallization under Different Sonication Modes", *Cryst. Growth & Des*, 19(1), 141-149, 2019.

Wear, KA, Baker C and Miloro, P. "Directivity and frequency-dependent effective sensitive element size of needle hydrophones: predictions from four theoretical forms compared with measurements", 65(10), 1781-1788, 2018.

Memoli, M, Baxter, KO, Jones, HG, Mingard, KP and Zeqiri, B. "Acoustofluidic measurements on polymer-coated microbubbles: primary and secondary Bjerknes forces", *Micromachines*, 9(8), Article number 404, 2018.

Rajagopal, R, Sainsbury, T, Treeby, BE, and Cox BT. "Laser generated ultrasound sources using carbon-polymer nanocomposites for high frequency metrology", *J. Acoust. Soc. Am.* 144 (2), 584-597, 2018.

Memoli, G, Fury, CR, Baxter, KO, G lat, PN and Jones, PH, "*Acoustic force measurements on polymer-coated microbubbles in a microfluidic device*". *J. Acoust. Soc. Am.*, 141 (5). 3364-3378, 2017.

Baker, C, Sarno, D, Eckersley, RJ, and Zeqiri, B. "Pulse pileup correction of signals from a pyroelectric sensor for phase-insensitive Ultrasound Computed Tomography", *IEEE Trans. Instrument. Meas.*, 68(10), 3920-3931, 2019.