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# Marine Physical Laboratory

## Inversion of Geophysical Parameters in Shallow Water

**William A. Kuperman**

Supported by the  
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Final Report

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University of California, San Diego  
Scripps Institution of Oceanography

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## *Abstract*

A joint effort with SACLANTCEN concerning inversion of geophysical parameters in shallow water regions was undertaken. Data from previous experiments were analyzed and techniques for inverting the data was modified and employed. The data acquisition system and computing facilities at SACLANTCEN were used in this effort. Nonlinear inversion techniques employing simulated annealing was also used.

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## *Research Summary*

Data from the SACLANTCEN experiments have been analyzed using the folcalizaton tehcnique of Collins and Kuperman. This yielded estimates of the geophysical parameters. The results were published below.:

*Publications*

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“Experimental confirmation of focalization,” A. Kristensen, A. Caiti, F. Ingenito, M. D. Max, J. M. Berkson, M. D. Collins L. T. Fialkowski, N. C. Makris, B. E. McDonald, J. S. Perkins, W. A. Kuperman. IIN: Full Field Inversion in Ocean and Seismic acoustics (Editors: O. Diachok P. Gerstoff, A. Caiti, H. Schmidt), Kluwer Academic Publishers, PP. 153-156, Dordrecht, Holland (1995)

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