

# Publications of Peter Monk.

## Thesis

*Some finite element methods for the approximation of the biharmonic equation*, PhD dissertation, Rutgers University, New Jersey, 1983, Advisor: Dr. R.S. Falk.

## Books

1. *Finite Element Methods for Maxwell's Equations*, Oxford University Press, 2003.
2. *The Linear Sampling Method in Inverse Electromagnetic Scattering*, SIAM, 2011 (with F. Cakoni and D. Colton).

## Edited volumes

*Computational Electromagnetics*, Volume 28 of "Lecture Notes in Computational Science and Engineering" Springer (2003) (with C. Carstensen, S. Funken, W. Hackbusch and R.W. Hoppe).

## Book Chapters

*Introduction to Applications of Numerical Analysis in Time Domain Computational Electromagnetism*, in "*Frontiers in Numerical Analysis - Durham 2010*", Volume 85 of "Lecture Notes in Computational Science and Engineering" Springer (2012) (J. Blowey and M. Jensen, Eds).

*Time domain integral equation methods in computational electromagnetism* (with J. Li and D. Weile), in *Computational Electromagnetism Volume 2148* of Lecture Notes in Mathematics, CIME Foundation Subseries, A. Bermúdez de Castro and A. Valli eds, Springer, Heidelberg (2015) pp. 111-190

## Research Papers in Refereed Journals

- [1] A novel method for solving the inverse scattering problem for time-harmonic acoustic waves in the resonance region, *SIAM J. Appl. Math.* **45** (1985), pp. 1039-1053, (with D. Colton).
- [2] A model for signal relay and adaptation in *Dictyostelium discoideum*. Part I. Biological processes and the model network, *Math. Biosci.* **77** (1985), pp. 35-78, (with P.E. Rapp and H.G. Othmer).
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- [7] The numerical solution of the three dimensional inverse scattering problem for time harmonic acoustic waves, *SIAM J. Sci. Stat. Comput.* **8** (1987), pp. 278-291, (with D. Colton).
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- [10] The inverse scattering problem for time harmonic acoustic waves in an inhomogeneous medium, *Q. J. Mech. appl. Math.*, **41** (1988), pp. 97-125, (with D. Colton).
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- [12] An iterative finite element method for approximating the biharmonic equation, *Math. Comp.*, **51** (1988), pp. 451-476.
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- [19] Wave propagation in aggregation fields of the cellular slime mold *Dictyostelium discoideum*, *Proceedings of the Royal Society of London. B. Biological Sciences*, **240** (1990), pp. 555-589, (with H.G. Othmer).
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