

# Contents

Preface

List of contributors

1. Measurement and reconstruction in electrical impedance tomography  
W. R. Breckon 1
2. Polarisation in electromagnetic inverse problems  
S. R. Cloude 20
3. Size orientation and thickness identification of an ellipsoidal shell  
G. Dassios and K. Kiriaki 38
4. Inverse thermoelastic Rayleigh scattering by a rigid ellipsoid  
G. Dassios, K. Kiriaki and V. Kostopoulos 49
5. Reconstructing from efficiently sampled data in parallel-beam computed tomography  
A. Faridani 68
6. An inverse moving boundary problem for Laplace's equation  
R. F. Millar 103
7. The scattering of velocity fields by an airfoil in compressible flow  
A. B. Parry 127
8. Boundary problems in electrical impedance tomography  
M. K. Pidcock 155

9. Interior and exterior inverse problems for the Helmholtz equation	
B. D. Sleeman	166
10. Plane-wave detection: a nonlinearly ill-posed inverse problem	
W. W. Symes	200
11. Review of recent research into inverse methods at the University of Canterbury	
D. G. H. Tan	221
12. The numerical solution of an inverse scattering problem for time-harmonic acoustic waves	
A. Zinn	242