- Preface p. xi
- Section 1 Doppler Anemonmetry
- Chapter 1 Comparison of Injector Sprays for Gasoline Direct-injection Engines J Allen and J Heath and G Pitcher and G Hargrave and G Wigley p. 1
- Chapter 2 Application of Laser Doppler Anemometry and Infrared Thermograph Methods for Measurements of Fluid Flow in a Small Transonic Channel R Dizene and E Dorignac and R Leblanc and J M Charbonnier p. 13
- Chapter 3 An Experimental Investigation of the Flow Produced in a Rectangular Container by a Rotating Disc using LDA V G Meledin and I V Naumov and V A Pavlov p. 25
- Chapter 4 The Design, Development, and Preliminary Results from a High-speed,
 Optically Accessed, Single-cylinder Engine G Pitcher and P Williams and J Allen and G
 Wigley p. 37
- Section 2 Laser Speckle and Holography
- Chapter 5 The Reflected Spectrum of Complex Multi-layered Inhomogeneous Highly Scattering Medium I V Meglinsky and S J Matcher p. 45
- Chapter 6 Digital Speckle Photography Applied to in Vivo Blood Micro-circulation Monitoring N Fomin and C Fuentes and J-B Saulnier and J-L Tuhault p. 59
- Chapter 7 Development of Full-volume Digital Holography for Particle Measurement S Murata and N Yasuda p. 69
- Chapter 8 A Particle Imaging and Analysis System for Underwater Holograms J J
 Nebrensky and G Craig and G L Foresti and S Gentili and P R Hobson and H Nareid and G G Pieroni and J Watson p. 79
- Section 3 Fluorescence, Phospherence, and Liquid Crystals
- Chapter 9 The Application of LIF to Study the Dispersion of a Surface Film due to Wave Breaking using a Two-camera System T Schlicke and A D Arnott and J M Buick and C A Greated and N H Thomas p. 93
- Chapter 10 Thermographic Phosphor Thermometry--Recent Developments for Applications in Gas Turbines J P Feist and A L Heyes and K L Choy and J R Nicholls p. 103
- Chapter 11 Improved Liquid Crystal Thermography by using True-colour Image Processing Technology M Wierzbowski and M Ciofalo and J Stasiek p. 125
- Chapter 12 Development of an Optical Measuring Technique for the Study of Acoustical Phenomena J M Buick and J A Cosgrove and D M Campbell and C A Greated p. 133
- Chapter 13 A Study of the Flow Structure in the Near-wall Region of a Complex-shaped Channel using Liquid Crystals G M Zharkova and V N Kovrizhina and V M Khachaturyan p. 143
- Section 4 PIV
- Chapter 14 Spatio-temporal Reconstruction of the Unsteady Wake of Axisymmetric Bluff Bodies via Time-recording DPIV C Brucker p. 151
- Chapter 15 The Measurement of the Velocity Field around a Ship Hull Model in a
 Towing Tank using PIV Method J Dekowski and M Kocik and J Podlinski and J
 Wasilewski and J Mizeraczyk and L Wilczynski and J Kanar and J Stasiek p. 161
- Chapter 16 Velocity Measurements in Impinging Turbulent Jets using Digital Particle Image Velocimetry M Fairweather and G K Hargrave and T C Williams p. 185

- Chapter 17 Application of Particle Image Velocimetry to Helicopter Vortex Interactions R B Green and C J Doolan p. 197
- Section 5 Multi-phase flow analysis
- Chapter 18 Recognition of Two-phase Flow Patterns with the use of Dynamic Image Analysis R Ulbrich and M Krotkiewicz and N Szmolke and S Anweiler and M Masiukiewicz and D Zajac p. 207
- Chapter 19 Gas/Liquid Mixing: Simultaneous PIV Measurements of Two Phases Mixing Together; High-pressure Spray Application T Boedec and S Simoens p. 219
- Chapter 20 Flame Visualization Enhancement by Image Processing W B Ng and K Y Cheung and Y Zhang p. 231
- Chapter 21 Optical Diagnostics--Automatic Data Processing and Application in Fundamental Studies and Control Systems V S Abrukov and I V Andreev and P V Deltsov p. 247
- Chapter 22 Application of Physical Modelling to Study Combustion Processes and Flow Patterns in Large-scale Boilers and Furnaces J Baranski and W Blasiak and J Stasiek p. 267
- Chapter 23 Pulsed Laser Particle Image Velocimetry using a Fibre-optic Delivery System S S Coltman and C A Greated p. 279
- Chapter 24 Automated Fringe Analysis for Profilometric Mass-transfer Experiments J J Nebrensky p. 295
- Authors' Index p. 305