Contributors ix

1 Introduction 1
Steven French and Juha Saatsi

Part I: Philosophy of Science in Context

2 Philosophy of Science and Epistemology 15
Alexander Bird

3 Philosophy of Science and Metaphysics 33
Craig Callender

4 Philosophy of Science and the History of Science 55
Don Howard

Part II: Current Research and Issues

A. General Issues in Philosophy of Science

5 Scientific Realism with a Humean Face 75
Stathis Psillos

6 Causation and the Sciences 96
Ned Hall

7 Scientific Models and Representation 120
Gabriele Contessa

8 Reduction, Multiple Realizability and Levels of Reality 138
Sven Walter and Markus Eronen

9 Explanation 157
Henk W. de Regt

10 Scientific Evidence 179
Malcolm R. Forster

11 Bayesian Confirmation Theory 197
James Hawthorne

B. Philosophy of Particular Sciences

12 Philosophy of Physics 221
Nick Huggett

13 Philosophy of Biology 246
Ingo Brigandt

14 Towards a Mechanistic Philosophy of Neuroscience 268
Carl F. Craver and David M. Kaplan

15 Philosophy of Chemistry 293
Robin Findlay Hendry

16 Philosophy of Mathematics 314
Christopher Pincock

Part III: Past and Future

17 Travelling in New Directions 337
Steven French and Juha Saatsi

18 A Brief Chronology of the Philosophy of Science 359
Peter Vickers

Part IV: Resources

19 Annotated Bibliography 383

20 Research Resources 406

21 A–Z of Key Terms and Concepts 412

Index 439