CONTENTS

| Notes on Contributors | | vii |
|-----------------------|---|-----|
| 1. | Introduction Stefano Zambelli | 1 |
| 2. | Towards an Algorithmic <i>Revolution</i> in Economic Theory K. Vela Velupillai | 7 |
| 3. | An Algorithmic Information-Theoretic Approach to the Behaviour of Financial Markets Hector Zenil and Jean-Paul Delahaye | 37 |
| 4. | Complexity and Randomness in Mathematics: Philosophical Reflections on the Relevance for Economic Modelling Sundar Sarukkai | 69 |
| 5. | Behavioural Complexity Sami Al-Suwailem | 85 |
| 6. | Bounded Rationality and the Emergence of Simplicity Amidst Complexity Cassey Lee | 111 |
| 7. | Emergent Complexity in Agent-Based Computational Economics Shu-Heng Chen and Shu G. Wang | 131 |
| 8. | Non-Linear Dynamics, Complexity and Randomness: Algorithmic Foundations K. Vela Velupillai | 151 |

| 9. | Stock-Flow Interactions, Disequilibrium Macroeconomics and the Role of Economic Policy Toichiro Asada, Carl Chiarella, Peter Flaschel, Tarik Mouakil, Christian Proaño and Willi Semmler | 173 |
|-------|--|-----|
| 10. | Equilibrium Versus Market Efficiency: Randomness versus Complexity in Finance Markets Joseph L. McCauley | 203 |
| 11. | Flexible Accelerator Economic Systems as Coupled Oscillators Stefano Zambelli | 211 |
| 12. | Shifting Sands: Non-Linearity, Complexity and Randomness in Economics Donald A.R. George | 237 |
| Index | | 241 |