## Contents

1 Cybernetics in the 20th Century .................................................. 1  
   1.1 Wiener’s Cybernetics ................................................. 2  
   1.2 Cybernetics of Cybernetics and Other Types of Cybernetics .... 9  
   1.3 Achievements and Disillusions of Cybernetics ................. 13  

2 Cybernetics, Control Philosophy and Control Methodology ........... 21  
   2.1 Control Philosophy ............................................... 21  
   2.2 Control Methodology .......................................... 24  

3 Laws, Regularities and Principles of Control ............................... 27  


5 Some Trends and Forecasts ................................................... 45  
   5.1 Topic Analysis of Leading Control Conferences .............. 45  
   5.2 Interdisciplinarity ............................................. 49  
   5.3 “Networkism” .................................................... 56  
   5.4 Heterogeneous Models and Hierarchical Modeling .......... 58  
   5.5 Strategic Behavior ........................................... 67  
   5.6 Big Data and Big Control .................................... 73  

Conclusion: Cybernetics 2.0 .................................................... 83  

Appendix A: A List of Basic Terms ........................................... 93  

Appendix B: Topics for Further Self-study ................................. 97  

References ................................................................. 99
Cybernetics
From Past to Future
Novikov, D.A.
2016, XII, 107 p. 59 illus., 12 illus. in color., Hardcover
ISBN: 978-3-319-27396-9