

## **CONTENTS**

Preface	•		vii
Mathematical models in the behavior of the central nervous system By H. D. LANDAHL	*	•	1
Machine models of self-reproduction	•	•	17
Problems of formulation for artificial intelligence  By Marvin L. Minsky		•	35
History and speculation on protein synthesis By Paul C. Zamecnik		•	47
Knotting problems in biology  By M. Delbrück			55
with an appendix entitled "A measure of entanglement" By F. Brock Fuller			
Biochemistry: sterile or virgin for mathematicians? By Arthur B. Pardee			69
Chemical reaction occurring with migration By N. Shapiro	•	•	83
Efficient coding for the desoxyribonucleic channel By S. W. GOLOMB			87
A study of Lerman's model for diffusion and capture of excitons in DN By Walter Goad	JA	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	101
The mathematics of pattern recognition for the electrocardiogram By Max A. Woodbury and Lee D. Cady, Jr.		₹•	105
Medical diagnosis and modern decision making  By Robert S. Ledley and Lee B. Lusted	<b>9</b> ●1	3.€1	117
Some mathematical problems in physiology: statistical ensembles By John A. Jacquez			159

## CONTENTS

Mathematical aspects of adaptive control By Robert Kalaba	<b>●</b> **	•	<b>*</b>	•	•	•	173
Enzymology and kinetics By Irwin W. Sizer			•		•	.*	189
An introduction to intra-cellular information By ALEXANDER RICH	n trar	ısfer					205
On some mathematical problems connected value By Stanislaw Ulam	with p	attern	s of gr	owth	of figu	ıres	215
From chemotherapy to computers to traject By Richard Bellman	tories	240-31 10-55	•	••		•	225
The growth of monodisperse populations internal beta irradiation By Donald F. Petersen					P180		233

