
Contents

Preface

page vii

1	Organisation of animal behaviour and of brains: feeding in star-nosed moles and courtship in fruit flies	1
2	Signals in nerve cells: reflexes in mammals and insects	21
3	Neuronal mechanisms for releasing behaviour: predator and prey – toad and cockroach	44
4	Neuronal pathways for behaviour: startle behaviours and giant neurons in crayfish and fish	60
5	Eyes and vision: sensory filtering and course control in insects	90
6	Sensory maps: hunting by owls and bats	126
7	Programmes for movement: how nervous systems generate and control rhythmic movements	160
8	Changes in nerve cells and behaviour: learning in bees and rats; swarming in locusts	193
9	Nerve cells and animal signalling: songs of crickets, electric fish and birds	222
	References	262
	Index	280