

目 录

计算神经行为学与神经网络

Active Perception.....	3
Attention:Models.....	10
Attractor Network Models	15
Auditory Cortex:Models.....	28
Axonal Pathfinding	34
Bayesian Cortical Models	40
Bayesian Models of Motor Control.....	48
Birdsong Learning.....	55
Brain Scaling Laws.....	68
Brain-Computer Interface.....	74
Circadian Rhythm Models	83
Computational Approaches to Motor Control.....	90
Computational Methods	99
Computational Neuroethology	103
Connectionist Models.....	109
Connectionist Models of Language Processing.....	117
Consciousness:Theoretical and Computational Neuroscience	125
Consciousness:Theories and Models	131
Electrophysiology:EEG and ERP Analysis	137
Emotion:Computational Modeling	141
Executive Function and Higher-Order Cognition:Computational Models.....	146
Gain Modulation	152
Hippocampus:Computational Models.....	158
Hodgkin-Huxley Model.....	164
Homeostasis at Multiple Spatial and Temporal Scales.....	172
Ideal Observer Theory	178
Information Coding.....	185
Learning,Action,Inference and Neuromodulation	193
Memory:Computational Models.....	201
Neural Integrator Models.....	208

Neural Oscillators and Dynamical Systems Models	222
Neuromorphic Systems	231
Neuroplasticity:Computational Approaches	239
Olfactory Coding	249
Population Codes:Theoretic Aspects	257
Retinal Models	264
Self-Organizing Maps	273
Sensorimotor Integration:Models	283
Sleep Oscillations	294
Spike-Timing-Dependent Plasticity Models	302
Spiking Neuron Models	309
Statistical Analysis of Visual Perception	313
Statistical Learning of Language	319
Statistical Tests and Inferences	325
Stomatogastric Ganglion Models	333
Swim Oscillator Networks	344
Synaptic Transmission:Models	349
Synfire Chains	358
Visual Cortical Models of Orientation Tuning	362
Visual Motion Models	369

稳态：概述

Hypothalamic Structure-Function Relationships	381
Magnocellular Neurosecretory System:Organization,Plasticity,Model Peptidergic Neurons	389
Neuron-Glia pH Regulation	400

稳态：能量平衡

Activity-Dependent Metabolism in Glia and Neurons	411
Activity-Dependent Regulation of Glucose Transporter	419
Brain Glucose Metabolism:Age,Alzheimer's Disease,and ApoE Allele Effects	424
Calcium Homeostasis in Glia	435
Energy Homeostasis:Adiposity Signals	442
Energy Homeostasis:Endocannabinoid System	447
Energy Homeostasis:Hypothalamic Development	455
Energy Homeostasis:Paraventricular Nucleus (PVN) System	460
Energy Homeostasis:Visceral Control	467
Exercise:Optimizing Function and Survival at the Cellular Level	473

Gap Junctions:Metabolic Exchanges.....	479
Gastrointestinal Signals:Satiety	487
Gastrointestinal Signals:Stimulation	493
Glial Energy Metabolism:A NMR Spectroscopy Perspective.....	498
Glial Energy Metabolism:Overview	507
Glial Glycogen Metabolism	513
Glycogen Metabolism in CNS White Matter	521
Hormonal Signaling to the Brain for the Control of Feeding/Energy Balance.....	527
Motor Control of Feeding and Drinking	533
Neuroendocrine Control of Energy Balance(Central Circuits/Mechanisms)	540
Neuron-Glia Coupling in Glutathione Metabolism.....	546
Nutrient Sensing:Carbohydrates	551
Nutrient Sensing:Cellular Metabolism.....	559
Nutrition.....	563

稳态: 体液与矿物质平衡

Angiotensin II	571
Atrial Natriuretic Peptide:Fluid/Mineral Balance	578
Blood Pressure:Baroreceptors.....	584
Circumventricular Organs	590
Fluid and Electrolyte Homeostasis:Clinical Disease	596
Neurohypophyseal System.....	605
Osmoregulation	615
Salt Appetite.....	623
Thirst	631

稳态: 食物摄入

Central Gustatory System and Ingestive Behavior	639
Cortical Processing of the Reward Value of Food	644
Exercise:Optimizing Function and Survival at the Cellular Level	651
Food and Water Intake:Regulation	657
Gastrointestinal Tract Role in Neural Control of Metabolism,Food Intake and Body Weight:A Summary	663
Neuropeptides:Food Intake	667

稳态: 体温调节

Autonomic Nervous System:Central Thermoregulatory Control.....	677
Energy Homeostasis:Thermoregulation.....	685