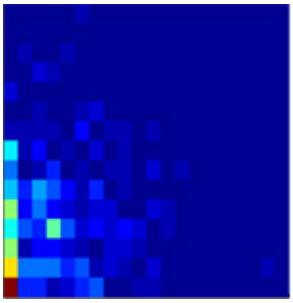
Current Issue

Volume 51 Issue 3: August 3 , 2006
Next Issue: August 17

In This Issue of *Neuron*:

Editor Position at Neuron

Featured Article



Reduction of Information Redundancy in the Ascending Auditory Pathway
Gal Chechik, Michael J. Anderson, Omer Bar-Yosef, Eric D. Young, Naftali Tishby, and Israel Nelken
[Summary] [Full Text] [PDF] [Supplemental Data]

The principles underlying information processing in sensory systems are still largely unknown, but insights can be obtained by measuring the transformations in stimulus representation in successive brain processing stations. Here, Chechik et al. compare information content and stimulus-induced information redundancy in a series of three auditory processing stations, and find that midbrain neurons (inferior colliculus) are highly informative but redundant due to their frequency selectivity. Information redundancy is absent in thalamic and cortical representations, where different neurons convey nearly independent informational attributes. Redundancy reduction of sensory information may be a general organizing principle of neural systems, allowing for a successively easier readout of complex stimuli. The context and significance of this study are discussed in a Preview by Schnupp.

Featured Topic

A selection of recent *Neuron* papers in the area of **Motor Systems**

Do Motoneurons Encode the Noncommutativity of Ocular Rotations?
Fatema F. Ghasia and Dora E. Angelaki

Deletion of *FMR1* in Purkinje Cells Enhances Parallel Fiber LTD, Enlarges Spines, and Attenuates Cerebellar Eyelid Conditioning in Fragile X Syndrome
S.K.E. Koekkoek, K. Yamaguchi, B.A. Milojkovic, B.R. Dortland, T.J.H. Ruigrok, R. Maex, W. De Graaf, A.E. Smit, F. VanderWerf, C.E. Bakker, R. Willemsen, T. Ikeda, S. Kakizawa, K. Onodera, D.L. Nelson, E. Mientjes, M. Joosten, E. De Schutter, B.A. Oostra, M. Ito, and C.I. De Zeeuw

Two Cortical Systems for Reaching in Central and Peripheral Vision
Jérôme Prado, Simon Clavagnier, Hélène Otzenberger, Christian Scheiber, Henry Kennedy, and Marie-Thérèse Perenin

Loss of the Dystonia-Associated Protein TorsinA Selectively Disrupts the Neuronal Nuclear Envelope
Rose E. Goodchild, Connie Eunji Kim, and William T. Dauer

Microsaccades Counteract Visual Fading during Fixation
Susana Martinez-Conde, Stephen L. Macknik, Xoana G. Troncoso, and Thomas A. Dyar

Spontaneous Network Activity in the Embryonic Spinal Cord Regulates AMPAergic and GABAergic Synaptic Strength

Announcements

Neurons and Disease
October 12-13, 2006
Atlanta, GA

For the fourth consecutive year, *Neuron* is happy to organize a satellite meeting just preceding the start of the Society for Neuroscience (SFN) meeting.

For speaker list, meeting program, abstract submission and registration details, please click here

***Anuradha Rao Memorial Travel Award* – Apply Now**
The "Anuradha Rao Memorial Travel Award" of $1000 will be given annually to a graduate student or post-doc to cover expenses for travel to the Society for Neuroscience meeting. The award will be presented at the 2006 Neuron SFN Satellite Meeting in Atlanta. To apply, please submit a short essay (500 words or less) describing your scientific background and career interests, and what you hope to gain from attending the meeting. Applications can be sent to neuron@cell.com. The deadline for applications is August 15.

Manuscript Submission

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Carlos Gonzalez-Islas and Peter Wenner

When the Brain Loses Its Self: Prefrontal Inactivation during Sensorimotor Processing
Ilan I. Goldberg, Michal Harel, and Rafael Malach

Responses of Collicular Fixation Neurons to Gaze Shift Perturbations in Head-Unrestrained Monkey Reveal Gaze Feedback Control
Woo Young Choi and Daniel Guitton

Potentiation of Mossy Fiber EPSCs in the Cerebellar Nuclei by NMDA Receptor Activation followed by Postinhibitory Rebound Current
Jason R. Pugh and Indira M. Raman

Dorsal Premotor Neurons Encode the Relative Position of the Hand, Eye, and Goal during Reach Planning
Bijan Pesaran, Matthew J. Nelson, and Richard A. Andersen

Annotated Table of Contents

View the Annotated Version of the Table of Contents with contextual explanations of the articles in the issue.

Top 20 Articles

These are the Top 20 Papers (by download) for the last 30 days. You can see the summaries if you are registered, or full text and PDFs if you have subscribed.

Cell	**Immunity**	**Neuron**	**Molecular Cell**	**Structure**
Current Biology	**Developmental Cell**	**Cancer Cell**	**Chemistry & Biology**	**Cell Metabolism**

Cell Press