

# Stanford

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## John Hotson

Professor (Clinical) of Neurology and Neurological Sciences, Emeritus  
Adult Neurology

### Bio

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#### ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Adult Neurology

#### ADMINISTRATIVE APPOINTMENTS

- Chief of Neurology, Santa Clara Valley Medical Center, (1985-2009)

#### HONORS AND AWARDS

- Lysia Fornia Award for Teaching Excellence, Department of Neurology, Stanford University School of Medicine (1991)
- Neurology Clerkship Teaching Award, Department of Neurology, Stanford University School of Medicine (2004-2007, 2009)

#### PROFESSIONAL EDUCATION

- BA, Stanford University , Psychology (1968)
- MD (honors), University of Washington , Medicine (1972)

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

The response and recovery of human visual, eye movement and related cognitive systems after acquired neurological disorders is a main area of interest. Experimental designs combine human brain neurophysiology techniques with psychophysics methods. We currently use transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) as probes to test the postulate that visual perceptual learning alters early visual cortex.

### Publications

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#### PUBLICATIONS

- **Noninvasive peroneal sensory and motor nerve conduction recordings in the rabbit distal hindlimb: feasibility, variability and neuropathy measure.** *PloS one*  
Hotson, J. R.  
2014; 9 (3)
- **Visual perceptual learning is similar across the extrafoveal central visual fields** *RESTORATIVE NEUROLOGY AND NEUROSCIENCE*  
Neary, K., Anand, S., Hotson, J. R.  
2009; 27 (3): 181-188
- **Perceptual learning of line orientation modifies the effects of transcranial magnetic stimulation of visual cortex.** *Experimental Brain Research*

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- Neary, K., Anand, S., Hotson, J. R.  
2005; 162: 23-34
- **Acute vestibular syndrome** *NEW ENGLAND JOURNAL OF MEDICINE*  
Hotson, J. R., Baloh, R. W.  
1998; 339 (10): 680-685
  - **Tracing the timing of human analysis of motion and chromatic signals from occipital to temporo-parieto-occipital cortex: A transcranial magnetic stimulation study** *VISION RESEARCH*  
Anand, S., Olson, J. D., Hotson, J. R.  
1998; 38 (17): 2619-2627
  - **TRANSCRANIAL MAGNETIC STIMULATION OF EXTRASTRIATE CORTEX DEGRADES HUMAN MOTION DIRECTION DISCRIMINATION** *VISION RESEARCH*  
Hotson, J., Braun, D., Herzberg, W., BOMAN, D.  
1994; 34 (16): 2115-2123
  - **Correlation of median forearm conduction velocity with carpal tunnel syndrome severity** *CLINICAL NEUROPHYSIOLOGY*  
Havton, L. A., Hotson, J. R., Kellerth, J.  
2007; 118 (4): 781-785
  - **Perceptual learning of line orientation modifies the effects of transcranial magnetic stimulation of visual cortex** *EXPERIMENTAL BRAIN RESEARCH*  
Neary, K., Anand, S., Hotson, J.  
2005; 162 (1): 23-34
  - **Transcranial magnetic stimulation: Neurophysiological applications and safety** *BRAIN AND COGNITION*  
Anand, S., Hotson, J.  
2002; 50 (3): 366-386
  - **Partial peripheral motor nerve lesions induce changes in the conduction properties of remaining intact motoneurons** *MUSCLE & NERVE*  
Havton, L. A., Hotson, J. R., Kellerth, J. O.  
2001; 24 (5): 662-666
  - **The selectivity and timing of motion processing in human temporo-parieto-occipital and occipital cortex: a transcranial magnetic stimulation study** *NEUROPSYCHOLOGIA*  
Hotson, J. R., Anand, S.  
1999; 37 (2): 169-179
  - **Rapid-rate transcranial magnetic stimulation of human frontal cortex can evoke saccades under facilitating conditions** *ELECTROMYOGRAPHY AND MOTOR CONTROL-ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Li, J., Olson, J., Anand, S., Hotson, J.  
1997; 105 (3): 246-254
  - **Anticipatory smooth eye movements and predictive pursuit after unilateral lesions in human brain** *EXPERIMENTAL BRAIN RESEARCH*  
Braun, D. I., BOMAN, D. K., Hotson, J. R.  
1996; 110 (1): 111-116
  - **Stationary and pursuit visual fixation share similar behavior** *VISION RESEARCH*  
BOMAN, D., Braun, D., Hotson, J.  
1996; 36 (5): 751-763
  - **PROLONGED CONFUSION WITH NOCTURNAL WANDERING ARISING FROM NREM AND REM-SLEEP - A CASE-REPORT** *SLEEP*  
Kushida, C. A., Clerk, A. A., Kirsch, C. M., Hotson, J. R., Guilleminault, C.  
1995; 18 (9): 757-764
  - **TRANSESOPHAGEAL ECHOCARDIOGRAPHIC FINDINGS IN STROKE SUBTYPES** *STROKE*  
Albers, G. W., Comess, K. A., DeRook, F. A., Bracci, P., Atwood, J. E., Bolger, A., Hotson, J.  
1994; 25 (1): 23-28
  - **PREDICTIVE SMOOTH PURSUIT EYE-MOVEMENTS NEAR ABRUPT CHANGES IN MOTION DIRECTION** *VISION RESEARCH*

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- BOMAN, D. K., Hotson, J. R.  
1992; 32 (4): 675-689
- **DIFFERENTIAL-DIAGNOSIS OF CHOREIFORM TARDIVE-DYSKINESIA** *JOURNAL OF NEUROPSYCHIATRY AND CLINICAL NEUROSCIENCES*  
Hyde, T. M., Hotson, J. R., Kleinman, J. E.  
1991; 3 (3): 255-268
  - **MEMORY-CONTINGENT SACCADDES AND THE SUBSTANTIA-NIGRA POSTULATE FOR ESSENTIAL BLEPHAROSPASM** *BRAIN*  
Hotson, J. R., BOMAN, D. R.  
1991; 114: 295-307
  - **MOTION PERCEPTION PROMINENCE ALTERS ANTICIPATORY SLOW EYE-MOVEMENTS** *EXPERIMENTAL BRAIN RESEARCH*  
BOMAN, D. K., Hotson, J. R.  
1989; 74 (3): 555-562
  - **VERTICAL AND HORIZONTAL SACCADDES IN AGING AND DEMENTIA - FAILURE TO INHIBIT ANTICIPATORY SACCADDES** *NEURO-OPTHALMOLOGY*  
Hotson, J. R., STEINKE, G. W.  
1988; 8 (5): 267-273
  - **NEUROLOGIC COMPLICATIONS OF CARDIAC TRANSPLANTATION** *NEUROLOGIC CLINICS*  
Hotson, J. R., Enzmann, D. R.  
1988; 6 (2): 349-365
  - **STIMULUS CONDITIONS THAT ENHANCE ANTICIPATORY SLOW EYE-MOVEMENTS** *VISION RESEARCH*  
BOMAN, D. K., Hotson, J. R.  
1988; 28 (10): 1157-1165
  - **SMOOTH PURSUIT TRAINING AND DISRUPTION - DIRECTIONAL DIFFERENCES AND NYSTAGMUS** *NEURO-OPTHALMOLOGY*  
BOMAN, D. K., Hotson, J. R.  
1987; 7 (4): 185-194
  - **THE SEARCH FOR A PHYSIOLOGICAL MARKER OF MACHADO-JOSEPH DISEASE** *NEUROLOGY*  
Hotson, J. R., LANGSTON, E. B., Louis, A. A., ROSENBERG, R. N.  
1987; 37 (1): 112-116
  - **Smooth pursuit training and disruption: directional differences and nystagmus** *Neuro-Ophthalmology*  
Boman DK, Hotson JR  
1987; 7: 185-194
  - **SACCADE RESPONSES TO DOPAMINE IN HUMAN MPTP-INDUCED PARKINSONISM** *ANNALS OF NEUROLOGY*  
Hotson, J. R., LANGSTON, E. B., Langston, J. W.  
1986; 20 (4): 456-463
  - **REGIONAL COOLING OF HUMAN NERVE AND SLOWED NA<sup>+</sup> INACTIVATION** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Louis, A. A., Hotson, J. R.  
1986; 63 (4): 371-375
  - **CLINICAL DETECTION OF ACUTE VESTIBULOCEREBELLAR DISORDERS** *WESTERN JOURNAL OF MEDICINE*  
Hotson, J. R.  
1984; 140 (6): 910-913
  - **VERTICAL SACCADDES IN HUNTINGTONS-DISEASE AND NON-DEGENERATIVE CHOREOATHETOID DISORDERS** *NEURO-OPTHALMOLOGY*  
Hotson, J. R., Louis, A. A., LANGSTON, E. B., Moreno, J. A.  
1984; 4 (4): 207-217
  - **CONVERGENCE-INITIATED VOLUNTARY FLUTTER - A NORMAL INTRINSIC CAPABILITY IN MAN** *BRAIN RESEARCH*  
Hotson, J. R.

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1984; 294 (2): 299-304

● **HYPERVISCOSITY-INDUCED DEMENTIA** *NEUROLOGY*

Mueller, J., Hotson, J. R., Langston, J. W.

1983; 33 (1): 101-103

● **AMITRIPTYLINE - ANOTHER CAUSE OF INTER-NUCLEAR OPHTHALMOPLÉGIA WITH COMA** *ANNALS OF NEUROLOGY*

Hotson, J. R., SACHDEV, H. S.

1982; 12 (1): 62-62

● **CEREBELLAR CONTROL OF FIXATION EYE-MOVEMENTS** *NEUROLOGY*

Hotson, J. R.

1982; 32 (1): 31-36

● **MODERN NEUROSYPHILIS - A PARTIALLY TREATED CHRONIC MENINGITIS** *WESTERN JOURNAL OF MEDICINE*

Hotson, J. R.

1981; 135 (3): 191-200

● **PENICILLIN-INDUCED AND BARIUM-INDUCED EPILEPTIFORM BURSTING IN HIPPOCAMPAL-NEURONS - ACTIONS ON CA<sup>++</sup> AND K<sup>+</sup> POTENTIALS** *ANNALS OF NEUROLOGY*

Hotson, J. R., Prince, D. A.

1981; 10 (1): 11-17

● **CALCIUM-ACTIVATED HYPERPOLARIZATION FOLLOWS REPETITIVE FIRING IN HIPPOCAMPAL-NEURONS** *JOURNAL OF NEUROPHYSIOLOGY*

Hotson, J. R., Prince, D. A.

1980; 43 (2): 409-419

● **ANOMALOUS INWARD RECTIFICATION IN HIPPOCAMPAL-NEURONS** *JOURNAL OF NEUROPHYSIOLOGY*

Hotson, J. R., Prince, D. A., Schwartzkroin, P. A.

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● **Penicillin- and barium-induced epileptiform bursting in hippocampal neurons: actions on calcium- and potassium-dependent potentials.** *Transactions of the American Neurological Association*

Hotson, J. R., Prince, D. A.

1978; 103: 56-58

● **NEUROLOGICAL COMPLICATIONS OF CARDIAC TRANSPLANTATION** *BRAIN*

Hotson, J. R., Pedley, T. A.

1976; 99 (DEC): 673-694

● **DISULFIRAM-INDUCED ENCEPHALOPATHY** *ARCHIVES OF NEUROLOGY*

Hotson, J. R., Langston, W.

1976; 33 (2): 141-142

● **EXTRACELLULAR POTASSIUM CONCENTRATION CHANGES DURING PROPAGATED SEIZURES IN NEOCORTEX** *EXPERIMENTAL NEUROLOGY*

Hotson, J. R., Sypert, G. W., Ward, A. A.

1973; 38 (1): 20-26