

Daniel K. Wood

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EDUCATION

- PhD Neuroscience** 2009-2013
University of Western Ontario
"Reaching for the light: The prioritization of conspicuous visual stimuli for reflexive target-directed reaching." Thesis advisor: Melyvn A. Goodale
- MSc Neuroscience** 2007-2009
University of Western Ontario
"The effects of ambiguity and trial order on the selection of goal-directed actions." Thesis advisor: Melvyn A. Goodale
- BA Philosophy** 2001-2006
Brigham Young University
"Neuro-existentialism: The existential significance of the material body." Academic advisor: Mark A. Wrathall

EMPLOYMENT

- Postdoctoral Fellow** 2014-Present
Northwestern University
- Neurobiology (Mark Segraves) and Rehabilitation Institute of Chicago (Konrad Kording): Visual, motor, and attention-related processing in frontal eye fields of non-human primates (*macaca mulata*).
 - Neurobiology (J.C. Cang and Mark Segraves) and Physiology/Physical Medicine and Rehabilitation (Lee Miller): The role of the tecto-reticulospinal pathway during reflexive orienting in mice and non-human primates.

PEER-REVIEWED JOURNAL PUBLICATIONS [\[statistics\]](#)

14. *Wood, D.K., *Chouinard, P.A., Major, A.J., and Goodale, M.A. (2016). "The selection of biomechanically viable grasp postures depends on posterior intraparietal sulcus.", *Cortex*, **Accepted**, pp. ??.
13. Gu, C., Wood, D.K., Gribble, P.L., and Corneil, B.D. (2016). "A trial-by-trial window into sensorimotor transformations in the human motor periphery.", *Journal of Neuroscience*, **Accepted**, pp. ??.
12. Ramkumar, P., Lawlor, P.N., Glaser, J.I., Wood, D.K., Phillips, A.N., Segraves, M.A., and Kording, K.P. (2016). "Feature-based attention and spatial selection in frontal eye fields during natural scene search.", *Journal of Neurophysiology*, **In Press**, pp. ??.
11. *Glaser, J.I., *Wood, D.K. (Co-First Author), Lawlor, P.N., Ramkumar, P., Cadigan, S., Phillips, A.N., Kording, K.P., and Segraves, M.A. (2016). "The role

- of expected reward in frontal eye field during natural scene search”, *Journal of Neurophysiology*, **In Press**, pp. ??.
10. Goonetilleke, S.C., Katz, L., Wood, D.K., Gu, C., Huk, A., and Corneil, B.D. (2015). “Cross-species comparison of anticipatory and stimulus-driven neck muscle activity”, *Journal of Neurophysiology*, **114**(2), pp. 902-913.
 9. Wood, D.K., Gu, C., Corneil, B.D., Gribble, P.L., and Goodale, M.A. (2015). “Transient visual responses reset the phase of low-frequency oscillations in the skeletomotor periphery”, *European Journal of Neuroscience*, **42**(3), pp. 1919-1932.
 8. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Ansari, D., Culham, J.C., and Goodale, M.A. (2014). “Counting on the motor system: Rapid action planning reveals the format- and magnitude-dependent extraction of numerical quantity”, *Journal of Vision*, **14**, pp. 1-19.
 7. Milne, J.L., Chapman, C.S., Gallivan, J.P., Wood, D.K., Culham, J.C., and Goodale, M.A. (2013). “Object connectedness influences perceptual comparisons but not the planning or control of rapid reaches to multiple goals”, *Psychological Science*, **24**, pp. 1456-1465.
 6. Wood, D.K., Gallivan, J.P., Chapman, C.S., Milne, J.L., Culham, J.C., and Goodale, M.A. (2011). “Visual salience dominates early visuomotor competition in reaching behavior”, *Journal of Vision*, **11**, pp. 1-11.
 5. Gallivan, J.P., Chapman, C.S., Wood, D.K., Milne, J.L., Culham, J.C., Ansari, D., and Goodale, M.A. (2011). “One to four, and nothing more: Non-conscious parallel object individuation in action”, *Psychological Science*, **22**, pp. 803-811.
 4. Wood, D.K. and Goodale, M.A. (2011). “Selection of wrist posture in conditions of motor ambiguity”, *Exp Brain Res*, **208**, pp. 607-620.
 3. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Culham, J.C., and Goodale, M.A. (2010). “Short-term motor plasticity revealed in a visuomotor decision-making task”, *Behavioral Brain Research*, **214**, pp. 130-134.
 2. Chapman, C.S., Gallivan, J.P., Wood, D.K., Milne, J.L., Culham, J.C., and Goodale, M.A. (2010). “Reaching for the unknown: multiple target encoding and real-time decision-making in a rapid reach task”, *Cognition*, **116**, pp. 168-176.
 1. Gallivan, J.P. and Wood, D.K. (2009). “Simultaneous encoding of potential grasping movements in macaque AIP”, *Journal of Neuroscience*, **29**, pp. 12031-12032.

GRANTS

- National Institutes of Health (NIH) T32, “Cortical and subcortical mechanisms of reflexive orienting”, \$90,000 (Postdoctoral, 6/15 - 5/17).
- Queen Elizabeth II Graduate Scholarship in Science and Technology (QEIGSST), “The neural correlates of motor ambiguity”, \$15,000 (PhD, 09/12 - 4/13).
- Canadian Institute of Health Research (CIHR) CGS Doctoral Research Award, “The effect of stimulus ambiguity on the selection of goal-directed actions”, \$105,000 (PhD, 09/09 - 4/12).
- Canadian Institute of Health Research (CIHR) CGS Master’s Award, “The selection of grip posture while grasping objects at ambiguous orientations is susceptible to priming”, \$17,500 (MSc, 09/08 - 4/09).

INVITED/REFEREED TALKS

6. Advanced Topics in Vision Seminar Series, Northwestern University, 10/15.
5. Gordon Research Conference on Eye Movements, Bentley University, 07/15. One of four postdocs invited to speak at the conference.
4. Advanced Topics in Vision Seminar Series, Northwestern University, 01/15.
3. Seminar at Center for Perceptual Systems, UT Austin, 09/13.
2. Canadian Action and Perception Network (CAPNET) conference, Adèle, Quebec, 09/11.
1. Society for Neuroscience Nanosymposium ("Neural Control of Grasping"), Chicago, IL, 10/09.

SELECTED POSTERS

8. Wood, D.K., Berthiaume, E., Ramkumar, P., Lawlor, P., Glaser, J., Phillips, A., Kording, K., & Segraves, M., 2015, The frontal eye fields read out, but do not construct, a priority map. SfN, Chicago
7. Wood, D.K., Ramkumar, P., Lawlor, P., Glaser, J., Phillips, A., Caddigan, S., Kording, K., & Segraves, M., 2014, Task-relevant features predict gaze behavior but not neural activity in FEF during natural scene search. SfN, Washington, D.C.
6. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2013, The temporal decay of visual salience in a compelled response task. Gordon Research Conference on Eye Movements, Stonehill College, Easton, MA
5. Wood, D.K., Cruse, D., & Goodale, M.A., 2012, Electrophysiological correlates of biomechanically induced bistability of preferred arm postures. SfN, New Orleans
4. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2012, Implicit extraction of probability in formation from arbitrary color cues. ECVF, Sardinia, Italy
3. Wood, D.K., Buckingham, G., Anwar, A., & Goodale, M.A., 2011, Foreknowledge of sequence optimizes fingertip force prediction in the absence of distinguishing visual cues. SfN, Washington, D.C.
2. Wood, D.K., Chapman, C.S., Gallivan, J.P., Milne, J.L., Culham, J.C., & Goodale, M.A., 2010, Visual salience of potential targets overrides spatial probabilities in a rapid visuomotor task. SfN, San Diego
1. Wood, D.K., & Goodale, M.A., 2009, The effects of response ambiguity and trial order on the selection of goal-directed actions. VSS, Naples, Florida

THESES SUPERVISED

1. Asia Giammarco – MSc 04/16 "Measuring distractibility in a natural scene search task" *Northwestern University*
2. Karim Farrag – MSc 04/15 "How does filtered visual energy affect search strategies in natural scenes?" *Northwestern University*

3. Emily Berthiaume – MSc 04/15 “Impact of target presentation mode on Frontal Eye Field activity” *Northwestern University*
4. Alex Major – Honors BSc 04/13 “Localization of brain areas responsible for wrist posture selection in ambiguous situations” *University of Western Ontario*
5. Daryl Chambers – Honors BSc 04/11 “Lifting objects that vary in size and weight” *University of Western Ontario*

SYNERGISTIC ACTIVITIES

- *Referee*: Journal of Neurophysiology, Experimental Brain Research, Journal of Cognitive Neuroscience, Current Eye Research, Psychonomic Bulletin and Review, Frontiers in Human Neuroscience
- *Society Membership*: Society for Neuroscience, Vision Sciences Society, Society for the Neural Control of Movement
- Student-Hosted Seminar Series Committee, Northwestern University

TEACHING

@ *Northwestern University, Neurobiology Dept.:*

- Winter 2014, 2015: **Guest Lecturer, BIOL SCI 306 Fundamentals of Neurobiology II**
Lecture topics: Dorsal extrastriate visual system, Sensorimotor integration

@ *University of Western Ontario, Psychology Dept.:*

- 2008: **Course coordinator, Psych 280E Research Methods**
Designed curriculum and oversaw instruction in 10 labs.
- 2007-2009: **Teaching Assistant, Psych 280E Research Methods**
Taught lab portion of course to 21 students. Lectured (two hours weekly) on experimental design, statistical analysis, and scientific writing.

@ *Brigham Young University, Philosophy Dept.:*

- 2006: **PHIL 305 Predicate Logic**
Taught classes and held office hours weekly. Graded coursework and term papers.