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**Education and Research Experience**

- 2010 - **Postdoctoral Associate**, Queen's University, Canada  
(Supervisor: Dr. Douglas Munoz)
  
- 2009 **Ph.D. in Cognitive Neuroscience**, National Yang-Ming University, Taiwan  
(Supervisor: Drs. Ovid Tzeng and Jie-Li Tsai)
  
- 2007 - **Research Visit**, Department of Psychology, Binghamton University, NY  
2009 (Supervisor: Dr. Albrecht Inhoff)
  
- 2004 **M.S. in Cognitive Neuroscience**, National Yang-Ming University, Taiwan  
(Supervisor: Drs. Ovid Tzeng, Jie-Li Tsai and Daisy Hung)
  
- 2002 **B.S. in Psychology**, Fu Jen Catholic University, Taiwan

**Funding and Awards**

- 2012 - Postdoctoral Research Fellowship from the Natural Sciences and Engineering Research  
2014 Council of Canada
  
- 2009 Germany Humboldt Postdoctoral Research Fellowship (declined to work with Dr. Munoz)
  
- 2009 Chiang Ching-Kuo Foundation Scholarship for Doctoral Students  
Short-Term Research Overseas (Taiwan)
  
- 2008 Fulbright Scholarship (USA)
  
- 2007 National Science Council Oversea Scholarship (Taiwan)

**Publications**

*Refereed Journal Articles (\*corresponding author; trainees are underlined)*

1. \***Wang C-A**, Huang J, Yep R, Munoz DP. Pupil light responses reveal concurrent processing between saccade planning and working memory (invited submission to *Journal of Cognition*).
2. \***Wang C-A**, Munoz DP. Neural basis of location-specific pupil luminance modulation (in revision).
3. Solomon MJ, Seymour BA, **Wang C-A**, \*Inhoff AW. (accepted). Selection for processing and saccade targeting in reading. *Journal of Eye Movement Research*. [IF: 1.11]

4. \***Wang C-A**, Blohm G, Huang J, Boehnke SE, Munoz DP. (in press) Multisensory integration in orienting behavior: pupil size, microsaccades and saccades. *Biological Psychology*. [IF: 3.070]
5. \***Wang C-A**, McInnis H, Brien DC, Pari G, \*Munoz DP. (2016). Disruption of pupil size modulation correlates with voluntary saccade deficits in Parkinson's disease. *Neuropsychologia*, 80(8):176-184. [IF: 2.989]
6. **Wang C-A**, \*Munoz DP. (2015). A circuit for pupil orienting responses: implications for cognitive modulation of pupil size. *Current Opinion in Neurobiology*, 33:134-140. [IF: 6.373]
7. \***Wang C-A**, Brien DC, \*Munoz DP. (2015). Pupil size reveals preparatory processes in the generation of pro- and anti-saccades. *European Journal of Neuroscience*, 41(8):1102-1110. [IF: 2.975]
8. Ikeda T, Boehnke SE, Marino RA, White BJ, **Wang C-A**, Levy R, \*Munoz, DP. (2015) Spatio-temporal response properties of local field potentials in the primate superior colliculus. *European Journal of Neuroscience*, 41(6): 856-865. [IF: 2.975]
9. \***Wang C-A**, Munoz, D.P. (2014). Modulation of stimulus contrast on the human pupil orienting response. *European Journal of Neuroscience*, 40(5):2822-2832. [IF: 2.975]
10. \***Wang C-A**, Boehnke SE, Itti L, Munoz DP. (2014). Transient pupil response is modulated by contrast-based saliency. *Journal of Neuroscience*, 34(2):408-417. [IF: 5.924]
11. **Wang C-A**, \*Inhoff AW. (2013). Extraction of linguistic information from successive words during reading: evidence for spatially distributed lexical processing. *Journal of Experimental Psychology: Human Perception and Performance*, 35, 1571-1584. [IF: 2.425]
12. **Wang C-A**, Boehnke SE, White BJ, \*Munoz DP. (2012). Microstimulation of the primate superior colliculus induces pupil dilation without evoking saccades. *Journal of Neuroscience*, 32, 3269-3236. [IF: 5.924]
13. \***Wang C-A**, Inhoff AW. (2010). The influence of visual contrast and case changes on parafoveal preview benefits during reading. *Quarterly Journal of Experimental Psychology*, 63, 805-817. [IF: 2.13]
14. \*Inhoff AW, Greenberg SN, Solomon M, **Wang C-A**. (2009). Word integration and regression programming during reading: A test of the E-Z Reader 10 model. *Journal of Experimental Psychology: Human Perception and Performance*, 35, 1571-1584. [IF: 2.425]
15. **Wang C-A**, \*Inhoff AW, Radach R. (2009). Is attention confined to one word at a time? The spatial distribution of parafoveal preview benefits during reading. *Attention, Perception, & Psychophysics*, 71, 1487-1494. [IF: 1.782]
16. **Wang C-A**, \*Tsai J-L, Inhoff AW, Tzeng OJL. (2009). Acquisition of linguistic information to the left of fixation during the reading of Chinese text. *Language and Cognitive Processes*, 24, 1097-1123. [IF: 2.101]
17. \*Tsai J-L, Yen M-H, **Wang C-A**. (2005). Recoding on eye movements and its application on Chinese reading. *Research in Applied Psychology*, 28, 91-104. (in Chinese)

*Manuscripts in Preparation*

**Wang C-A**, Munoz DP. Neural substrate for coordinated pupil and saccade responses. [to be submitted]

Tworzyanski L, **Wang C-A**, Huang J, Munoz DP. The consensual response in the pupillary light and darkness reflexes. [to be submitted]

Huang J, Smorenburg M, Coe B, **Wang C-A**, Munoz DP. Using pupil response to assess cognitive function across the healthy lifespan.

**Wang C-A**, Baird T, Brien DC, Munoz DP. Emotional face processing: evidence from pupillometry, skin conductance and heart rate.

**Wang C-A**, Inhoff AW. Parafoveal processing after word skipping during the reading of Chinese.

*Conference Proceedings (\*talks: 14; trainees are underlined)*

\***Wang C-A**, Munoz DP. *The role of the superior colliculus in pupillary responses to saliency.* International Conference on Cognitive Science, 2017.

**Wang C-A**, Munoz DP. *Coordinated pupillary and saccadic responses through the superior colliculus.* Gordon Research Conference on Eye Movements, 2017.

\***Wang C-A**, Munoz DP. *Superior colliculus coordinates pupillary and saccadic responses.* Vision Sciences Society, 2017.

**Wang C-A**, Munoz DP. *Modulation of pupillary light responses by saccade preparation, working memory, and microstimulation of the superior colliculus.* Society for Neuroscience, 2016.

Huang J, Smorenburg M, **Wang C-A**, Munoz DP. *Using pupil response to assess cognitive function across the healthy lifespan.* Canadian Association for Neuroscience, 2016.

\***Wang C-A**, Munoz DP. *Attentional modulation of pupillary light responses by microstimulation of the superior colliculus.* Vision Sciences Society, 2016.

Kan JY, White BJ, **Wang C-A**, Itti, L, Munoz, DP. *Visual saliency response in the superficial and intermediate superior colliculus and the pupil.* Vision Sciences Society, 2016.

\***Wang C-A**, Munoz DP. *Microstimulation of the superior colliculus produces coordinated saccade and pupil responses.* Society for Neuroscience, 2015.

\***Wang C-A**, Munoz DP. *Pupil orienting responses coordinated by the superior colliculus.* International Pupil Colloquium, 2015.

\***Wang C-A**, Munoz DP. *The role of the superior colliculus in the coordination of the pupil orienting response.* European Conference on Eye Movements, 2015.

Huang J, **Wang C-A**, Munoz DP. *Multisensory integration in human pupil orienting response.* Canadian Association for Neuroscience, 2015.

\***Wang C-A**, Brien DC, Munoz DP. *Pupil size reveals preparatory processes in the generation of pro- and anti-saccades.* Vision Sciences Society, 2015.

**Wang C-A**, Munoz DP. *The role of the superior colliculus in the coordination of the pupil orienting response.* Society for Neuroscience, 2014.

**Wang C-A**, Munoz DP. *Modulation of stimulus saliency on human pupil orienting response.* Canadian

Association for Neuroscience, 2014.

\***Wang C-A**, Munoz DP. *The role of the superior colliculus in the coordination of the pupil orienting response*. Canadian Association for Neuroscience (satellite on Brain Circuits and Behaviour), 2014.

Ikeda T, Boehnke SE, White BJ, **Wang C-A**, Marino RA, Levy R, Munoz DP. *Visuomotor processing in the Superior Colliculus: Comparison between single unit activity and local field potentials*. Society for Neuroscience, 2013.

**Wang C-A**, Boehnke SE, Itti L, Munoz DP. *Modulation of stimulus saliency and modality on transient pupil responses*. Society for Neuroscience, 2013.

Ikeda T, Boehnke SE, **Wang C-A**, White BJ, Marino RA, Levy R, Munoz DP. *Comparison of single unit and local field potential visual responses in the Superior Colliculus*. Gordon Research Conference on Eye Movements, 2013.

**Wang C-A**, Boehnke SE, Munoz DP. *Transient pupil response is evoked by a salient stimulus and superior colliculus microstimulation*. Gordon Research Conference on Eye Movements, 2013.

**Wang C-A**, Boehnke SE, Munoz DP. *Transient pupil dilation is evoked by salient visual stimulation and superior colliculus microstimulation*. Canadian Association for Neuroscience, 2013.

\***Wang C-A**, Boehnke SE, Munoz DP. *The role of the superior colliculus in salience-driven pupil dilation*. Society for Neuroscience, 2012.

\***Wang C-A**, Boehnke SE, White BJ, Munoz DP. *Pupil dilation is evoked by visual stimulus salience and microstimulation of the superior colliculus*. Canadian Society for Brain, Behaviour and Cognitive Science meeting, 2012.

**Wang C-A**, Boehnke SE, Munoz DP. *Pupil dilation evoked by a salient auditory stimulus facilitates saccade reaction times to a visual stimulus*. Vision Sciences Society, 2012.

\***Wang C-A**, Boehnke SE, White BJ, Munoz DP. *Microstimulation of the primate superior colliculus induces pupil dilation without evoking saccades*. European Conference on Eye Movements, 2011.

**Wang C-A**, Boehnke SE, White BJ, Munoz DP. *Subthreshold microstimulation of the superior colliculus induces pupil dilation*. Vision Sciences Society, 2011.

**Wang C-A**, Boehnke SE, Munoz DP. *Pupil modulation during visual and oculomotor tasks*. Society for Neuroscience. 2010.

\*Inhoff AW, Seymour BA, **Wang C-A**, Fleischer J, Radach R. *Words are spatially indexed during reading*. Psychonomic Society, 2009.

\*Inhoff AW, **Wang C-A**. *Information acquisition after the skipping of words during reading*. European Conference on Eye Movements, 2009.

Seymour BA, Inhoff AW, **Wang C-A**. *Saccade Trajectory Deviations in Van der Stigchel & Theeuwes (2007): General Inhibition, or Inhibition-of-Return?* Eastern Psychological Association, 2009.

**Wang C-A**, Inhoff AW, Seymour BA, Solomon MJ. *The influence of parafoveal word N-1 visibility on word N+1 recognition during reading*. Psychonomic Society, 2008.

Inhoff AW, **Wang CA**, Solomon M, Seymour BA. *Is the processing of successive words strictly serial*

during reading? Psychonomic Society, 2007.

**Wang C-A**, Tsai J-L, Inhoff AW, Lee C-Y, Hung DL, Tzeng OJL. *Parafoveal-on-foveal effects in Chinese Reading: an Eye-Movements Study*. European Conference on Eye Movements, 2007.

\*Inhoff AW, Solomon MJ, Seymour BA, **Wang C-A**. *Does saccade targeting determine the acquisition of parafoveal word information?* European Conference on Eye Movements, 2007.

**Wang C-A**, Tsai J-L, Tzeng OJL, Hung DL. *Retrieving word information in the left of fixation during Chinese sentence reading*. Annual Conference on Architectures and Mechanisms for Language Processing, 2006.

**Wang C-A**, Tsai J-L, Tzeng OJL, Hung DL. *Word identification in the left of fixation during Chinese sentence reading: An eye movement study*. International Conference on Processing Chinese and Other East Asian Languages, 2005.

**Wang C-A**, Tsai J-L, Tzeng OJL, Hung DL. *Using saccadic inhibition to investigate attentional control in reading Chinese: an oculomotor study*. Cognitive Neuroscience Society, 2005.

## Invited Presentations

7.2016 What novel approaches would you take to teaching and how would you engage with students, and how do you plan to undertake world-leading research? *Department of Psychology, Swansea University*

1.2016 A circuit for pupil orienting responses: implications for cognitive modulation of pupil size, *Center for Neuroscience Studies, Queen's University*

3.2014 The role of the superior colliculus in the coordination of the pupil orienting response, *Center for Neuroscience Studies, Queen's University*

1.2014 Modulation of stimulus saliency on transient pupil orienting response, *Human Mobility Research Centre, Queen's University*

9.2012 The role of the superior colliculus in salience-driven pupil dilation, *NSERC Collaborative Research and Training Experience Program meeting, Canada*.

4.2012 Using pupillometry to examine cognitive functions, *Center for Neuroscience Studies, Queen's University*

11.2010 Pupil modulation during visual and oculomotor tasks, *Neuroethology and Sensory Biology Discussion Group Seminar, Queen's University*

2.2010 Is attention confined to one word at a time? The spatial distribution of parafoveal preview benefits during reading, *Center for Neuroscience Studies, Queen's University*

12.2008 Does the E-Z reader model of eye movement control during reading predict parafoveal

preview benefits? *Department of Psychology, Binghamton University*

4.2008 The selection of words for recognition during eye fixations in reading, *Department of Psychology, Binghamton University*

10.2007 Is word processing during reading strictly serial? Evidence from preview benefits of N+2?, *Department of Psychology, Binghamton University*

## **Supervisory/Teaching Experience**

### *Undergraduate Honor's Thesis Co-Advisor*

- 1) Tali Baird (2016-2017, Life Sciences Program, Queen's University). Thesis title: Exploring the interaction of endogenous and emotional attention: evidence from pupillometry, heart rate and skin conductance.
- 2) Leanne Tworzyanski (2016-2017, Life Sciences Program, Queen's University). Thesis title: Investigating the consensual response in the pupillary light and darkness reflexes.
- 3) Jeff Huang (2014-2015, Life Sciences Program, Queen's University). Thesis title: Contrast modulation in multisensory integration of pupil orienting response.
- 4) Asher Blum (2007-2008, Psychology Department, Binghamton University). Thesis title: The influence on inhibition of return by the directionality of language: A bilingual study.
- 5) Craig Matthews (2007-2008, Psychology Department, Binghamton University). Thesis title: Word highlighting and memory retention, possible enhancements in recognition.

### *Advisor for Independent Study and/or Summer Students*

I have been actively involved in training many undergraduate and graduate students to develop research skills such as experimental design, programming, data collection and analysis, and theoretical development and interpretation. Queen's University: Tali Baird (2016), Rachel Yep (2015), Jeff Huang (2014), Benedict Chang (2011) and Zoe Sharp (2011). Binghamton University: Asher Blum (2007), Mallory Bersamira (2007-2008), Kay Dawson (2007), Jason Fleischer (2008-2009), Jing Li (2007-2009), Johnson Li (2007-2008), and Craig Matthews (2007-2008). National Yang-Ming University (Graduate students): Ying-Chun Lin (2004-2007), Chien-Chung Yang (2003-2005).

### *Teaching Experience*

Lecture, Queen's University  
Systems Neuroscience (2015-2017) in Life Sciences Program

Course Assistant, Queen's University  
Honors Thesis Program (neuroscience thesis research project course) in Life Sciences Program (2014-2015)

Teaching Assistant, Binghamton University

Human Cognition in the Department of Psychology (Fall 2008, undergraduate course)

### **Research Grant Application Experience**

- 1) I assisted Dr. Munoz in writing multiple Canadian Institutes of Health Research (CIHR) research grants (particularly in two awarded grants: Neural mechanisms of saliency and orienting in 2014; Using the eye movement system to study brain function and dysfunction in 2016).
- 2) I assisted Dr. Inhoff in writing NIH (USA) and NSF (USA) research grant proposals.

### **Research Workshop Experience**

- 1) Summer School in Computational Sensory-Motor Neuroscience (organized by Dr. Gunnar Blohm, Queens University) at Queen's University, Canada (Aug 7-21, 2011).
- 2) Second Annual Summer Institute in Cognitive Neuroscience at Academia Sinica, Taiwan (Aug 3-7, 2005).
- 3) First Annual Summer Institute in Cognitive Neuroscience at the National Central University, Taiwan (Aug 16 - Sep 9, 2004).
- 4) Computational and Connectionist Modeling workshop (instructed by Dr. Kim Plunkett, Oxford University) at the National Chung Cheng University, Taiwan (Oct 29-31, 2003).

### **Administrative Duties**

Ad-hoc reviewer for Applied Ergonomics, Experimental Brain Research, European Journal of Neuroscience, Journal of Neurophysiology, Journal of Vision, Reading and Writing.

Youth Outreach and Community Service: Annual Brain Awareness Day (2010-2016): Queen's University, Canada. Demonstrations the neural control of eye movements using video-based eye trackers for elementary and middle school students (or being a group leader).

### **Professional Affiliations**

Member of the Society for Neuroscience

Member of the Vision Sciences Society

## References

### **Ovid J. L. Tzeng, Ph.D.**

Distinguished Chair Professor and  
Research Fellow, Institute of Linguistics,  
Academia Sinica, 128, Section 2,  
Academia Road 115, Taipei, Taiwan  
Phone: 886-2-26525033  
Email: [ovid@gate.sinica.edu.tw](mailto:ovid@gate.sinica.edu.tw)

### **Douglas P. Munoz, Ph.D.**

Canada Research Chair Professor  
Director, Centre for Neuroscience Studies  
Department of Biomedical and Molecular  
Sciences, Psychology, and Medicine,  
Queen's University, Kingston, Ontario,  
Canada, K7L 3N6  
Phone: 613-533-2111  
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Email: [doug.munoz@queensu.ca](mailto:doug.munoz@queensu.ca)

### **Albrecht W. Inhoff, Ph.D.**

Professor of Psychology  
Department of Psychology, Binghamton  
University, State University of New York,  
Binghamton, New York 13902  
Phone: 607-777-3958  
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### **Laurent Itti, Ph.D.**

Professor of Computer Science, Psychology and  
Neuroscience, University of Southern California  
Hedco Neuroscience Building, Room 07A, 3641 Watt  
Way, Los Angeles, CA 90089  
Phone: 213-740-3527  
Fax: 213-740-5687  
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### **Gunnar Blohm, Ph.D.**

Associate Professor of Neuroscience and Psychology  
Centre for Neuroscience Studies, Departments of  
Biomedical and Molecular Sciences, Queen's  
University, Kingston, Ontario, Canada, K7L 3N6  
Phone: 613-533-3385  
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### **Cynthia M. Connine, Ph.D.**

Professor of Psychology and Linguistics  
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