

René Marois, Ph.D.

Position: Professor of Psychology
Chair, Department of Psychology

Address: Department of Psychology
530 Wilson Hall
Vanderbilt University
111 21st Ave. So
Nashville, TN 37240

Telephone: (615) 322-1779

Fax: (615) 343-8449

Email: rene.marois@vanderbilt.edu

Web page: <http://www.psy.vanderbilt.edu/faculty/marois/>

Appointments

- Chair, Psychology Dept, Vanderbilt Univ. June 2014 -
- Professor, Psychology Dept. Vanderbilt Univ. Fall 2012 -
- Associate Professor, Psychology Dept Vanderbilt Univ. Spring '06 - Spring '12
- Assistant Professor, Psychology Dept. Vanderbilt Univ. Fall 1999 - Fall 2005
- Postdoctoral Fellow, NMR Center, Yale Univ. Sch. Med. Spring '97 - Spring '99

Degrees Earned

- | | | | |
|--|-------|--------------|------|
| • Yale University, New Haven, CT, | Ph.D. | Neuroscience | 1996 |
| • Dalhousie University, Halifax, Canada, | M.Sc. | Psychology | 1989 |
| • McGill University, Montreal, Canada, | B.Sc. | Biology | 1986 |

Honors and fellowships

- Best research poster award, 2014, Object Perception, visual Attention, and visual Memory (OPAM) annual conference, Long Beach, CA. With co-authors Benjamin Tamber-Rosenau and Anat Fintzi.
- Terry Anders Memorial Lecture by an outstanding alumnus, Department of Psychology and Neuroscience, Dalhousie University, 2014.
- Member, MacArthur Foundation Law & Neuroscience project, 2008-2010
- Chancellor's Award for Research 2005

- Jeffrey Nordhaus Award for excellence in undergraduate teaching 2004
- John F. Kennedy Center investigator 2000 - present
- Fonds FCAR (Quebec) Postgraduate Scholarship Fall 1991-Summer 1992
- NSERC (Canada) Postgraduate Scholarship Fall 1989-Summer 1991
- Dalhousie Fellowship Fall 1986-Summer 1988

Professional Memberships

- Association for Psychological Science
- Society for Neuroscience
- Cognitive Neuroscience Society
- Psychonomic Society
- Association for the Scientific Study for Consciousness
- International Brain Research Organization
- Organization for Human Brain Mapping

Invited Presentations/Participant

- Invited talk, Department of Psychology, Yale University, October 2015
- Invited talk, Department of Mathematics, Vanderbilt University, September 2015
- Invited symposium at the Association for Scientific Study for Consciousness Annual Meeting, Paris, France, July 2015
- Vanderbilt University School of Medicine, Health Sciences Education Grand Rounds, March 2015
- Dalhousie University Terry Anders Lecture, September 2014
- Utrecht-Vanderbilt Joint Symposium in Cognitive Neuroscience, June 2014
- Southeastern Workers in Memory, Invited Speaker, Nashville TN, March 2014
- Psychology & Neuroscience Colloquium, Duke University, Durham, NC, December 2013
- SFN Annual Convention, Symposium Presentation, San Diego, CA, November 2013
- 25th Attention & Performance Symposium, Presentation, Montreal, CA, July 2013
- APA Annual Convention, Symposium Presentation, Hawaii, HA, July 2013
- Neurology Grand Rounds, Vanderbilt Medical Center, March 2013
- Georgetown University, Dept of Psychology, Washington, DC, February 2013
- Kennedy Center, Vanderbilt University, Nashville, TN February 2013
- Duke Institute of Brain Sciences, Durham, NC, January 2013
- NAS NAKFI Digital World/Informed Brian Conference, Irvine, CA, November 2012
- Slide Session Chair, Society for Neuroscience annual meeting October 2012
- MacArthur Neurolaw Research Project, Boston, MA, September 2012
- Portland Workshop on Working Memory, Portland Oregon, August 2012
- Institute for Intelligent Systems, University of Memphis, February 2012
- Kickoff speaker, University School of Nashville, Evening Classes Program, Jan 2011
- Invited Speaker, Macquarie Center for Cognitive Science, Macquarie University, Sydney, Australia, December 2010

- Keynote Speaker, Center for Perceptual and Cognitive Neurosciences Annual Workshop, Department of Psychology, University of Queensland, Brisbane, Australia, December 2010
- Invited Speaker, Rovereto Attention Workshop, Rovereto, Italy, October 2009
- Invited Speaker, Symposium on Visual Short-Term Memory and Attention, International Congress of Psychology, Berlin, Germany, July 2008
- Invited Speaker, Symposium on the Neural Basis of Visual Short-Term Memory, Cognitive Neuroscience Society, San Francisco, CA, April 2008
- Invited Participant, MacArthur Foundation Law & Neuroscience project, Vanderbilt University. February 2008
- Invited Speaker, Nashville Inn of Court, November 2007
- Slide Session Chair, Society for Neuroscience annual meeting October 2007
- Invited Participant, MacArthur Foundation Law & Neuroscience project, University California, Santa Barbara. September 2007
- Invited Speaker, Introduction to fMRI: Basics, Research Design and Analysis. Vanderbilt Kennedy Center, Vanderbilt University, Nashville, TN. August 2007
- Academy Colloquium on “Blinks of the mind: New insights in temporal attention and consciousness” Royal Netherlands Academy of Arts & Sciences, August 2007
- Brain & Cognition Colloquium, University of Illinois, Urbana-Champaign, November 2006
- Slide Session Chair, Society for Neuroscience annual meeting October 2006
- Perceptual Expertise Network, McGill Univ., Montréal, Canada October 2005
- Yale University Dept. of Psychology-MR Imaging Research Center, New Haven, CT, September 2005
- Montreal Neurological Institute, McGill University, Montréal, Canada, June 2005
- Dept of Psychology, University of Montréal, Montréal, Canada, October 2004
- Invited speaker, Dual-Task Performance Conference, Ohlstadt, Germany, February 26-29, 2004
- Center for the Study of Brain, Mind & Behavior, Princeton University, Princeton, N.J., March 2003
- Vanderbilt University Institute of Imaging Science, February 2003
- 28th Interdisciplinary Conference, Jackson Hole, WY, February 2003
- Invited participant, 20th International Symposium on Attention & Performance, Erice, Sicily. July 2002
- Dept of Neurosciences, Brown University, Providence, RI. November 2001
- Alan Baddeley Colloquium, MRC Cognition & Brain Sciences Unit, Cambridge, UK. June 2001
- Psychology Dept Colloquium, Chinese University of Hong Kong, Hong Kong. May 2001
- Functional Imaging of Human Neural Development Meeting. New Orleans, March 13-15, 2001
- Selected Slide Presentation, Human Brain Mapping Conference, Dusseldorf Germany, June 1999
- Larval Biology Meeting, Harbor Branch Oceanographic Institution, Fort Pierce, FL August 1995

Teaching Experience

Course #	Course Title
PSY 285	Brain & Consciousness
HONS 183	Brain & Consciousness
PSY201	Neuroscience
NURO330	Cognitive Neuroscience
PSY316	Brain Imaging Methods
PSY358	Seminar in Neuroscience (<i>co-ordinator</i>)
PSY285	Neural Basis of Learning & Memory
PSY 344	Neurobiology of Attention

Ad-hoc Reviewer

Journals

- Archives of General Psychiatry
- Canadian Journal of Experimental Psychology
- Cerebral Cortex
- Cognition
- Cognitive and Affective Behavioral Neuroscience
- Cognitive Psychology
- Current Biology
- Experimental Brain Research
- Journal of Cognitive Neuroscience
- Journal of Neuroscience
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Human Perception & Performance
- Nature
- Nature Neuroscience
- Neuroimage
- Neuron
- Perception & Psychophysics
- Public Library of Science (PLOS)
- Proceedings of the National Academy of Sciences
- Psychological Science
- Quarterly Journal of Experimental Psychology
- Trends in Cognitive Sciences
- Vision Research

Granting agencies

- National Science Foundation (NSF)
- NIH B/Start Applications
- Human Frontier Science Program Organization
- Spencer Foundation
- Alzheimer's Association.

Extra-mural services

- F12A Fellowship Review Panel member, 2009-2010
- NIH Special Emphasis Panel/Scientific Review Panel member 2012
- Invitation to serve on National Science Foundation (NSF)'s Graduate Research Fellowship Program (GRFP) panel review, 2016.

Research Grants

Pending

- Sponsor: National Science Foundation,
Title: Graph Theoretical approach to the neural basis of attention
Total support to be requested: \$500,000
Project Date: to be submitted August 2015, for period of May 2016-April 2019

Obtained

- Title: Core Grant for Vision Research
Agency: NIH/NEI
ID Number: 5P30EY008126-22
Project Dates: 05/01/09 - 04/30/14
Role: Image Processing Module Director
- Title: Research Network on Law and Neuroscience
Agency: MacArthur Foundation
ID Number: 11-98158-000-USP
Total Support: \$4851,747
Project Dates: 07/01/11-/06/30/14 (in no cost extension)
Role: Co-Investigator
- Sponsor: MacArthur foundation
Title: Brain Activity during Punishment decisions: Two next steps.
Award Period: November 2009 – June 2010
Direct Costs: \$ 49, 967, Indirect Costs: \$ 7,495
Role: Co-Investigator, Owen Jones (Vanderbilt Law School), PI.
- Sponsor: MacArthur foundation
Title: Juror Decisions about Mental States
Award Period: January 2009 – June 2010
Direct Costs: \$ 8,600, Indirect Costs: \$ 1,290
Role: Principal Investigator, Owen Jones (Vanderbilt Law School), co-PI.
- Sponsor: MacArthur foundation
Title: Neural Correlates of the Decision to Punish
Award Period: January 2009 – June 2010
Direct Costs: \$ 7,000, Indirect Costs: \$ 1,050

Role: Principal Investigator Owen Jones (Vanderbilt Law School), co-PI.

- Sponsor: Vanderbilt University central Discovery Grant Program (Interdisciplinary Grant)
Title: Law and Brain Imaging
Award Period: January 2007 - July 2010
Direct Costs: \$ 98,500
Role: Principal Co-Investigator. Owen Jones (Vanderbilt Law School), co-PI.
- National Institute of Mental Health, \$1,590,650 (April 2004 – Feb 2010)
“Capacity Limits in Multi-Tasking” (MH70776)
- National Science Foundation, \$453,218 July 2001- June 2005, “Attentional Limits to Visual Perception” (NSF#0094992)
- National Institute of Health, \$1,051,900 July 2003- June 2007, “Attention and Neural Plasticity in Humans”
- Vanderbilt General Clinical Research Center. \$10, 000, PI, July 2002- June 2003. "An fMRI Investigation of Human Visual Attention"
- Nicholas Hobbs Foundation, \$10, 0000, July 2000 – June 2001, co-PI, "Functional MRI & behavioral study of interactions between perceptual expertise and attention"
- New Program Development, John F. Kennedy Center (P30 HD1505220), \$15, 000, July 2000 –June 2001, co-PI, “Functional MRI and Behavioral Studies of the Interactions Between Perceptual Expertise and Attention”

Articles in Refereed Journals

Buckholtz, JW, Martin, JW, Treadway, MT, Jan, K, Zald, DH, Jones, OD, & Marois, R (2015) From blame to punishment: Disrupting prefrontal cortex activity reveals norm enforcement mechanisms. *Neuron*, 87:1369-80

Tamber-Rosenau, BJ, Fintzi, A., & Marois, R. (2015) Crowding in visual working memory reveals its spatial resolution and the nature of its representations. *Psychological Science*, 26:1511-21.

Godwin, D., Barry, R.L., & Marois, R. (2015) Breakdown of the brain’s functional network modularity with awareness. *Proceedings of the National Academy of*

Sciences USA, **112**:3799-804.

- Fougnie, DL, Zughni, S., Godwin D, & Marois, R (2015) Working memory storage is intrinsically domain-specific. *Journal of Experimental Psychology: General*. **144**:30-47
- Ginther, MR, Shen, FX, Bonnie, RJ, Hoffman, MB, Jones, OD, Marois, R & Simons, KW. (2014) *The Language of Mens Rea*, 67 *VAND. L. REV.* 1327.
- Treadway MT, Buckholtz JW, Martin JW, Jan K, Asplund CL, Ginther MR, Jones OD, & Marois R. (2014) Corticolimbic Gating of Emotion-Driven Punishment. *Nat. Neurosci.* **17**:1270-5
- Han SW, Marois R. (2014) The effects of stimulus-driven competition and task set on involuntary attention. *J. Vision* **14**:1-24.
- Jones, O.D., Buckholtz, J.W., Schall, J.D., & Marois, R. (2014) Brain Imaging for Judges: An Introduction to Law and Neuroscience. *Court Review*, **50**:44-51.
- Han SW, Marois R. (2014). Functional fractionation of the stimulus-driven attention network. *J. Neurosci.* **34**, 6958-6969.
- Asplund, CL, Fougnie, DL, Zughni, S, Martin, J, & Marois, R (2014) The attentional blink reveals the probabilistic nature of discrete conscious perception. *Psychol. Sci.* **25**: 824-831.
- Filmer, H, Mattingley J, Marois R, and Dux PE (2013) Disrupting prefrontal cortex prevents performance gains from sensory-motor training. *J Neurosci.* **33**: 18654-60
- Jones, OJ, Marois, R., Farah, M, & Greely, H. (2013) Law and Neuroscience, *J Neurosci.* **33**: 17624-30
- Tamber-Rosenau BJ, Dux PE, Tombu MN, Asplund CL, Marois R. (2013) Amodal processing in human prefrontal cortex. *J Neurosci.* **33**:11573-87.
- Han SW, Marois R. (2013) The source of dual-task limitations: Serial or parallel processing of multiple response selections? *Atten Percept Psychophys.* **75**: 1395-1405.
- Katwal, S.B., Gore, J.C., Marois, R, & Rogers, B.P. (2013) Unsupervised Spatiotemporal Analysis of fMRI Data Using Graph-based Visualizations of Self-organizing Maps. *IEEE Transactions on Biomedical Engineering (TBME)*. **60**: 2472-2483.

- Han, S.W., & Marois, R. (2012) Dissociation between process-based and data-based limitations for conscious perception in the human brain. *Neuroimage*, 64: 399-406.
- Buckholtz, J.W., & Marois R. (2012). The roots of modern justice: cognitive and neural foundations of social norms and their enforcement. *Nature Neuroscience* 15: 655-61
- Tombu, M.N, Asplund, C.L., Dux, P.E., Godwin D, Martin J.W., & Marois, R. (2011). A unified attentional bottleneck in the human brain. *Proceedings of the National Academy of Sciences USA*, 108:13426-13431.
- Fougnie, D.L., and Marois, R. (2011). What limits working memory capacity? Evidence for modality-specific sources to the simultaneous storage of visual and auditory arrays. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37:1329-1341.
- Scalf, P., Dux, P.E., Marois, R. (2011). Working memory encoding delays top-down attention to visual cortex. *J. Cogn. Neurosci.* 23:2593-2604.
- Shen, Francis X., Hoffman, Morris B., Jones, Owen D., Greene, Joshua D. and Marois, Rene, *Flipping the Culpability Coin: Where the Model Penal Code Fails Defendants*. Forthcoming, New York University Law Review, Vol. 80 (2011) Available at: <http://ssrn.com/abstract=1746107>
- Todd, J.J., Han, S.W., Harrison, S., & Marois, R. (2011). The neural correlates of visual working memory encoding: A time-resolved fMRI study. *Neuropsychologia*, 49: 1527-1536.
- Fougnie, D.L., Asplund, C. L., & Marois, R. (2010). What are the units of storage in visual working memory? *Journal of Vision*, 10(12):27, 1–11, <http://www.journalofvision.org/content/10/12/27>, doi:10.1167/10.12.27
- Asplund, C. L., Todd, J. J., Snyder, A. P., Gilbert, C. M., & Marois, R. (2010). Surprise-Induced Blindness: A Stimulus-Driven Attentional Limit to Conscious Perception. *Journal of Experimental Psychology: Human Perception and Performance*. 36(6):1372-1381.
- Marois, R. (2010) Mind's eye wide shut. *Trends in Cognitive Sciences* 14:433-434.
- Robitaille, N., Marois, R., Todd, J., Grimault, S., Cheyne, D., Jolicoeur, P. (2010) Distinguishing between lateralized and non-lateralized brain activity associated with visual short-term memory: fMRI, MEG, and EEG evidence from the same observers. *Neuroimage* 53:1334-1345.

- Harrison, A., Jolicoeur, P., & Marois, R. (2010). 'What' and 'Where' in the Intraparietal Sulcus: An fMRI Study of Object Identity and Location in Visual Short-Term Memory. *Cerebral Cortex* 20:2478-2485.
- Asplund, C.L., Todd, J.J., Snyder, A.P., & Marois, R. (2010). A central role for the lateral prefrontal cortex in goal-directed and stimulus-driven attention. *Nature Neuroscience*, 13: 507-512.
- Fougnie, D.L., & Marois, R. (2009). Dual-task interference in visual working memory: A limitation in storage capacity but not in encoding or retrieval. *Attention, Perception & Psychophysics*. 71: 1831-1841.
- Dux, P.E., Tombu, M.N., Harrison, S., Rogers, B.P., Tong, F., & Marois, R. (2009). Training improves multitasking performance by increasing the speed of information processing in human prefrontal cortex. *Neuron*, 63: 127-138.
- Ivanoff, J.I., Branning, P., & Marois, R. (2009). Mapping the pathways of Information Processing from Sensation to Action in Four Distinct Sensorimotor tasks. *Human Brain Mapping*, 30:4167-4186.
- Dux, P.E., & Marois, R. (2009). How humans search for targets through time: A review of data and theory from the attentional blink. *Attention, Perception, & Psychophysics*, 71:1683-700.
- Dux, P. E., Asplund, C. L., & Marois, R. (2009). Both exogenous and endogenous target salience manipulations support resource depletion accounts of the attentional blink: A reply to Olivers, Spalek, Kawahara & Di Lollo. *Psychonomic Bulletin & Review*, 16, 219-224.
- Fougnie, D., & Marois, R. (2009). Attentive tracking disrupts feature binding in visual working memory. *Visual Cognition*, 17, 48-66.
- Dux, P. E., & Marois, R. (2008). Distractor inhibition predicts individual differences in the attentional blink. *PLoS ONE*, 3, e3330.
- Buckholtz, J.W., Asplund, C.L., Dux, P., Zald, D.H., Gore, J.C., Jones, O.W., & Marois, R. (2008). The Neural Correlates of Third-Party Punishment. *Neuron*, 30, 930-940.
- Ivanoff J, Branning P, Marois R. (2008) fMRI evidence for a dual process account of the speed-accuracy tradeoff in decision-making. *PLoS ONE*. Jul 9; 3(7):e2635
- Dux, P. E., Asplund, C. L., & Marois, R. (2008). An attentional blink for sequentially presented targets: Evidence in favor of resource depletion accounts. *Psychonomic Bulletin & Review*, 15, 809-813.

- Dux P, Marois R. (2007). Repetition Blindness is Immune to the Central Bottleneck. *Psychonomic Bulletin Review* 14, 729-734.
- Fougnie DL, Marois R. (2007). Executive Load in Working Memory Induces Inattentive Blindness. *Psychonomic Bulletin Review* 14, 142-147.
- Dux P, Ivanoff, J., Asplund, C., & Marois R. (2006). Isolation of a central bottleneck of information processing with time-resolved fMRI. *Neuron*, 52: 1109-1120.
- Yi DJ, Kelley TA, Marois R, Chun MM. (2006). Attentional Modulation of Repetition Attenuation is Anatomically dissociable for scenes and faces. *Cognitive Brain Research*, 1080:53-62.
- Fougnie DL, Marois R. (2006). Distinct Capacity Limits for Attention and Working Memory. Evidence from Attentive Tracking and Visual Working Memory Paradigms. *Psychological Science*, 17:526-534.
- Marois, R, Larson, JM, Chun MM, & Shima, D. (2006). Response-specific sources of dual-task interference in human premotor cortex. *Psychological Research*, 70:436-447.
- Todd JJ, Fougnie, DL, Marois R. (2005) Visual Short-Term Memory Load Suppresses Right Temporo-Parietal Junction Activity and Induces Inattentive Blindness. *Psychological Science*, 16:965-972.
- Todd JJ, Marois R. (2005) Posterior Parietal Cortex Activity Predicts Individual Differences in Visual Short-Term Memory Capacity. *Cognitive, Affective & Behavioral Neuroscience*, 5:144-155.
- Marois R, Ivanoff J. (2005) Capacity limits of Information processing in the brain. *Trends in Cognitive Sciences*, 9:296-304.
- Yi DJ, Woodman GF, Widders D, Marois R, Chun MM (2004) The neural representation of ignored visual events: Dissociable effects of perceptual attention and working memory attention. *Nature Neuroscience* 7:992-996.
- Todd JJ, Marois R. (2004) The Capacity Limit of Visual Short-Term Memory in Human Posterior Parietal Cortex. *Nature* 428:751-753.
- Marois R, Yi DJ, Chun, MM (2004) The neural fate of perceived and missed events in the attentional blink. *Neuron*. 41:465-472.
- Marois R, Chun MM, Gore JC (2004) A common parieto-frontal network is recruited under both low visibility and high perceptual interference. *Journal of Neurophysiology* 92:2985-2992.

- Schultz RT, Grelotti D, Klin A, Kleinman J, Van der Gaag C, Marois R, and Skudlarski, P. (2003) The Role of the Fusiform Face Area in Social Cognition: Implications for the Pathobiology of Autism. *Philosophical Transactions of the Royal Society of London Series B: Biological Sciences*. 358:415-427.
- Shafritz KM, Gore JC, Marois R (2002) The role of the parietal cortex in visual feature binding. *Proceedings National Academy Sciences USA* 99:10917-10922.
- Palmeri, TJ, Blake, R, Marois, R, Flanery, M, Whetsell, W. (2002) The Perceptual Reality of Synesthetic Colors. *Proceedings National Academy Sciences USA* 99:4127-4131.
- Anderson, A.W., Marois, R., Colson, E.R., Peterson, B.S., Duncan, C.C., Ehrenkranz, R.A., Schneider, K.C., Gore, J.C., & Ment, L.C. (2001). Neonatal Auditory Activation Detected by Functional Magnetic Resonance Imaging. *Magnetic Resonance Imaging* 19:1-5.
- Marois R, Leung HC, Gore JC (2000) A stimulus-driven approach to object identity and location processing in the human brain. *Neuron* 25:717-728.
- Marois R, Chun MM, Gore JC (2000) Neural Correlates of the Attentional Blink. *Neuron*, 28: 299-308.
- Marois R, Carew TJ (1997) Fine structure of the apical ganglion and its serotonergic cells in the larva of *Aplysia californica*. *Biol Bull* 192:388-398.
- Marois R, Carew TJ (1997) Projection patterns and target tissues of the serotonergic cells in larval *Aplysia californica*. *J Comp Neurol* 386:491-506.
- Marois R, Carew TJ (1997) Ontogeny of serotonergic neurons in *Aplysia californica*. *J Comp Neurol* 386:477-490.
- Marois R, Croll RP (1992) Development of serotonin-like immunoreactivity in the embryonic nervous system of the snail *Lymnaea stagnalis*. *J Comp Neurol* 322:255-265.
- Marois R, Croll RP (1991) Hatching asynchrony within the egg mass of the pond snail, *Lymnaea stagnalis*. *Invert. Reprod. Dev.* 19:139-146.

Review Articles, Book Chapters

- Marois, R. (2015). The neural basis of visual working memory: An evolving story. In: *Mechanisms of Sensory Working Memory: Attention and Performance*

- XXV, Jolicoeur, P. and Martinez-Trujillo, J. (eds.). Academic Press: Elsevier, pp. 23-31.
- Tamber-Rosenau B.J., and Marois R. (2015) Attentional Capacity and Limitations. In: Arthur W. Toga, editor. *Brain Mapping: An Encyclopedic Reference*. Academic Press: Elsevier. pp. 281-288.
- Buckholz, J.W., Asplund, C.L., Dux, P., Zald, D.H., Gore, J.C., Jones, O.W., & Marois, R. (2011) The Neural Correlates of Third-Party Punishment. *Neuron*, 30, 930-940. *Law and Neuroscience, Current Legal Issues 2011, Vol. 13*, Freeman, M., Ed. Oxford University Press.
- Jones, O.D., Buckholz, J.W., Schall, J.D., Marois, R. (2009). Brain Imaging for Legal Thinkers: A guide for the Perplexed. 2009 STAN. TECH. L. REV. 5 (<http://stlr.stanford.edu/pdf/jones-brain-imaging.pdf>)
- Jolicoeur, P., Dell'Acqua, R., Brisson, B., Robitaille, N., Sauvé, K., Leblanc, E., Prime, D., Grimault, S., Marois, R., Sessa, P., Grova, C., Lina, J.-M., & Dubarry, A.-S. (2007). Visual spatial attention and visual short-term memory: Electro-magnetic explorations of the mind. In V. Coltheart (Ed.), *Tutorials in visual cognition*. Hove (UK): Psychology Press.
- Marois, R. (2005) Two-timing attention. *Nature Neuroscience* 8:1285-1286.
- Marois, R. (2005) The Neural Basis of the Attentional Blink. In *Neurobiology of Attention*. (Itti L, Rees G, Tsotsos L, Eds.), pp. 383-388, Academic Press/Elsevier.
- Marois, R. (2005) Capacity Limits of Information Processing in the Human Brain. *Phi Kappa Phi Forum*, 85:30-33.
- Blake, R., Palmeri, T.J., Marois, R., Kim, C.-Y. (2005) On the Perceptual Reality of Synesthetic Color. In *Attention on Synesthesia: Cognition, Development, and Neuroscience* (L.Robertson & N. Sagiv, Eds.). pp. 47-73, Oxford University Press.
- Marois R. (2002) The cortical basis of motor planning: Does it take two to tango? *Nature Neuroscience* 5:1254-1255.
- Chun, M.M., Marois, R. (2002) The Dark Side of Attention. *Current Opinion in Neurobiology*. 12:184-189.
- Stark, L.L., Marois, R., Emptage, N.J., Marcus, E.A. and T.J. Carew (1996). Central actions of serotonin across the lifespan of *Aplysia*: Implications for development and learning. In: *Basic Neuroscience in Invertebrates*, H.Koike, Y. Kidokoro, K. Takahashi and T. Kanaseki (eds), Japan Scientific Society

Press, Tokyo.

Marcus, E.A., Emptage, N.J., Marois, R. and T.J. Carew (1994) A comparison of the mechanistic relationships between development and learning in *Aplysia*. *Progr. Brain Res.*, 100:179-188.

Marois, R. and I.A. Meinertzhagen (1990) The visual system of flies: analysis of the number, specificity, plasticity, and phylogeny of identified synapses. In: *Systems Approaches to Developmental Neurobiology*, P.A. Raymond, S.S. Easter and G.M. Innocenti (eds.), Plenum Press, New York.

Marois, R. and T.J. Carew (1990) The gastropod nervous system in metamorphosis. *J. Neurobiol.* **21**:1053-1071.

Conference Proceedings

Godwin D, Barry RL & Marois R (2015) Increase in the brain's functional small-worldness with the capture of attention. Soc. Neurosci. Abstr.

Godwin, D, Barry, R, & Marois, R. (2015) Breakdown of the Brain's functional network modularity with awareness. Association for the Scientific Study of Consciousness Annual Conference, Paris, France, July 2015

Sy J, Marois R, & Tong F. (2015) Degraded precision of consciously perceived targets in the attentional blink. VSS annual abstracts, 2015

Ginther M, Jones OD, & Marois R. (2014) Parsing the neural components underlying third-party punishment decision-making. Soc. Neurosci. Abstr.

Godwin D, Barry RL & Marois R (2014) Target and oddball detection produce opposing effects on global functional connectivity in human cerebral cortex. Soc. Neurosci. Abstr.

Tamber-Rosenau, BJ, Newton, AT & Marois, R. (2014) No truly domain-general resource in the human cerebral cortex. Soc. Neurosci. Abstr.

Tamber-Rosenau, BJ, Fintzi, AR & Marois, R. (2014) Distinct sources of error limit the spatial resolution of perception and visual working memory. Annual Workshop on Object Perception, Attention, and Memory (OPAM).

Godwin, D, Barry, R, & Marois, R. (2014) Breakdown of the Brain's functional network modularity with awareness. Human Brain Mapping Conf.

Han, S.-W., & Marois, R. (2013) An alerting function of anterior insular cortex. Soc. Neurosci. Abstr.

Filmer, HL, Mattingley, JB, Marois, R, Dux PE. (2013) Disrupting human prefrontal cortex prevents performance gains from sensory-motor training. Soc. Neurosci. Abstr.

Godwin, D, Barry, R, & Marois, R. (2013) Assessing functional modularity with awareness in the human brain. Soc. Neurosci. Abstr.

Treadway MT, Buckholtz JW, Martin JW, Jan K, Asplund CL, Jones OD, & Marois R. Amygdala Gating of Affective Bias in Punishment. Cog. Neurosci. Soc. Ann. Meeting.

- Han, S.-W., & Marois, R. (2013) Functional fractionation of the stimulus-driven attention network. *Cog. Neurosci. Soc. Ann. Meeting.*
- Han, S.-W., & Marois, R. (2012) Functional fractionation of the stimulus-driven attention network: A time-resolved fMRI study. *Soc. Neurosci. Abstr.* 2012
- Godwin, D., & Marois, R. Overlapping Neural Correlates of Awareness and Attention with fMRI. *Soc. Neurosci. Abstr.* 2012
- Marois, R. Asplund, C.L., Fougny, D.L., & Martin, J. Graded vs Quantal Allocation of Attention and Awareness. *Vision Sciences Society*, Naples, Florida, May 2012.
- Tamber-Rosenau, B.J., Dux, P.E., Tombu, M.N., Asplund, C.L., & Marois, R. Multivoxel pattern analysis fMRI evidence for amodal central processing in the human prefrontal cortex. *Soc. Neurosci. Abstr.* 2011.
- Marois, R. Asplund, C.L., Fougny, D.L., & Martin, J. The Attentional Blink reveals the quantal nature of conscious perception. *European Conference on Visual Perception*, Toulouse, France, August 2011.
- Han, S. & Marois, R. Involuntary attention improves perception by resolving competition. *Vision Sciences Society*, Naples, Florida, May 2011.
- Han, S., & Marois, R. Disruption of attentional control is associated with prefrontal cortex activation. *Soc. Neurosci. Abstr.* 2010
- Asplund, C.L., & Marois, R. Functional Dissociation of lateral prefrontal cortex and dorsal network in the endogenous control of attention. *Soc. Neurosci. Abstr.* (2010).
- Fougny, D.L., Asplund, C.L., & Marois, R. Object load and feature load have distinct effects on visual working memory. *Vision Sciences Society*, Naples, Florida, May 2010.
- Asplund, C.L., Todd, J.J., Snyder, A., Gilbert, C., & Marois, R. Convergence of goal-directed and stimulus-driven attention in lateral frontal/prefrontal cortex. *Soc. Neurosci. Abstr.* (2009).
- Han, S., & Marois, R. The nature of the central capacity limit in human information processing: Serial bottleneck or graded sharing? *Object Perception, Attention, and Memory*. Boston, MA, 2009.
- Scalf, P., Dux, P.E., & Marois, R. Working memory consolidation delays top-down attentional processing in visual cortex: A time-resolved fMRI study. *Vision Sciences Society*, Naples, Florida, May 2009.
- Asplund, C.L., Todd, J.J., Snyder, A., Gilbert, C., & Marois, R. Convergence of goal-directed and stimulus-driven selection in lateral prefrontal cortex. *Vision Sciences Society*, Naples, Florida, May 2009.
- Todd, J.J., Han, S.W., Harrison, S., & Marois, R. The neural correlates of working memory consolidation: A time-resolved fMRI study. *Vision Sciences Society*, Naples, Florida, May 2009.
- Robitaille, N., Grimault, S., Todd, J.J., Marois, R., Cheyne, D., & Jolicoeur, P. Multiple physiological markers of visual short-term memory capacity: convergence and divergence. *Vision Sciences Society*, Naples, Florida, May 2009.
- Fougny, D.L., Asplund, C.L., & Marois, R. Visual working memory capacity can be assessed independent of comparison errors. *Vision Sciences Society*,

- Naples, Florida, May 2009.
- Dux, P.E., Asplund, C.L., & Marois, R. Both exogenous and endogenous target salience manipulations support resource depletion accounts of the attentional blink. *Vision Sciences Society*, Naples, Florida, May 2009.
- Asplund, C.L., & Marois, R. The ventral, but not dorsal, attention network mediates stimulus-driven attentional limit to conscious perception. *Soc. Neurosci. Abstr.* (2008).
- Fougnie, D.L., & Marois, R. Do visual and auditory working memory share the same capacity limit? A potential resolution to the debate. *Object Perception, Attention and Memory*, Chicago, IL, 2008.
- Scalf, P.E., Dux, P.E. & Marois, R. Working Memory Consolidation Delays Perceptual Processing in Visual Cortex: A Time-Resolved fMRI Study. *Human Brain Mapping*, 2008.
- Fougnie, D. & Marois, R. Working memory capacity is modality-specific: Evidence of separate stores for auditory and visuospatial stimuli. *Vision Sciences Society*, Naples, Florida, May 2008.
- Dux, P. E., & Marois, R. Individual differences in distractor priming during the attentional blink: Distractor inhibition gives rise to awareness. *Vision Sciences Society*, Naples, Florida, May, 2008.
- Dux, P.E.D., Tombu, M., & Marois, R. From Capacity-Limited to Capacity-Free Processing: Training Eliminates Dual-Task Costs in Human Prefrontal Cortex. *Soc. Neurosci. Abstr.* (2007).
- Buckholtz, J.W., Asplund, C.L., Dux, P., Zald, D.H., Gore, J.C., Jones, O.W., & Marois, R. The Neural basis of Legal Decision-Making. *Soc. Neurosci. Abstr.* (2007).
- Todd, J.J., & Marois, R. Endogenous orienting of attention in impervious to masked priming. *Vision Science Society Meeting* (2007).
- Asplund, C.L., & Marois, R. An fMRI comparison of Theory of Mind, Default Mode of Processing, Stimulus-Driven Attention, and Egocentric Spatial Attention Networks. *Human Brain Mapping Conference*, Chicago, IL, June 2007
- Dux, P.E., Asplund, C.L., Marois, R. Evidence in favor of a Resource Depletion Account of the Attentional Blink. *Vision Science Society Meeting* (2007).
- Fougnie, D.L., & Marois, R. Multiple object tracking disrupts feature binding in visual working memory. *Vision Science Society Meeting* (2007).
- Dux, P.E., Ivanoff, J., Asplund, C., Marois, R. Isolation of a central bottleneck of information processing with time-resolved fMRI. *Soc. Neurosci. Abstr.* (2006).
- Ivanoff, J, Branning, P, Marois R. On the neural hemodynamics of speed and accuracy mental sets in decision-making. *Soc. Neurosci. Abstr.* (2006).
- Slide Session Chair, *Society for Neuroscience annual meeting* (2006).
- Dux, P.E., Marois, R. Repetition Blindness is immune to the central bottleneck. *Vision Science Society Meeting* (2006).
- Todd JJ, Harrison, S, Marois R. Neural Dissociation of visual working memory consolidation and maintenance. *Vision Science Society Meeting* (2006).
- Ivanoff J, Branning P, Marois R. The neural hemodynamics of speed-accuracy

trade-off in decision criterion. Human Brain Mapping Conference (2005).

Todd JJ, Marois R. Posterior parietal cortex activity predicts individual differences in visual short-term memory capacity. Vision Science Society Meeting (2005).

Ivanoff J, Branning P, Marois R. The neural hemodynamics of speed-accuracy trade-off in decision criterion. Vision Science Society Meeting (2005).

Fougnie DL, Todd JJ, Marois R. Visual short-term memory load induces inattention blindness. Vision Science Society Meeting (2005).

Branning P, Ivanoff JG, Marois R. Mapping the pathways of information processing from sensation to action in two distinct sensorimotor tasks. Soc. Neurosci. Abstr. (2004).

Todd JJ, Snyder, AM, Marois R. The Neural correlates of Surprise Blindness. Vision Science Society Meeting (2004).

Fougnie DL, Marois R. Is the capacity limit of attentional tracking and visual working memory one and the same? Vision Science Society Meeting (2004).

Todd JJ, Marois, R. Reciprocal response of the intra-parietal cortex and right temporo-parietal junction with increased visual short-term memory load. Cognitive Neurosciences Society Meeting (2004).

Yi DJ, Woodman GF, Widders D, Marois R, Chun, MM. Dissociating the Effects of Perceptual and Working Memory Load Using fMRI. Psychonomics Soc. Abstr. (2003).

Todd JJ, Marois R. Neural correlates of visual short-term memory capacity. Psychonomics Soc. Abstr. (2003).

Todd JJ, Marois R. Neural correlates of visual short-term memory capacity. Soc. Neurosci. Abstr. (2003).

Blake R, Palmeri, T.J., Marois, R., Kim C.Y. Synesthetic Colors Act Like Real Colors and Interact With Real Colors. Vision Science Society Meeting (2003).

Marois R, Todd, J.J., Gilbert, C. Surprise Blindness: A Distinct form of attentional limit to explicit perception? Vision Science Society Meeting (2003).

Marois R, Larson, JM, Chun, MM, Shima, D. The Neural correlates of the response bottleneck. Soc. Neurosci. Abstr. (2002).

Marois R, Larson, JM, Chun, MM, Shima, D. The Neural correlates of the response bottleneck. Human Brain Mapping Conference (2002).

Marois R, Todd JJ, Chun, MM. The impact of visual short-term memory capacity on the attentional blink. Vision Science Society Meeting (2002).

Shafritz KM, Gore JC, Marois R. The role of the parietal cortex in visual feature binding. Soc. Neurosci. Abstr. (2001).

Marois R, Chun, MM, Gore JC. A Parametric Study of Visual Short-term Memory Encoding. Neuroimage Suppl., (2001).

Marois R, Chun, MM, Gore JC. Dissociating perceptual interference from perceptual difficulty with fMRI. Soc. Neurosci. Abstr. (2000).

Marois R, Chun, MM, Gore JC: The neural correlates of an attentional bottleneck. J. Cognitive Neuroscience Suppl. 2000.

Marois R, Chun MM, Gore JC: Imaging Attentional Blinks and Attentional Crowding In the Brain. Society for Neuroscience Abstracts 1999, 25:288.

Marois R, Chun MM, Gore JC: Imaging Attentional Blinks in the Human Brain. Neuroimage Suppl., 1999, 9:750

- Marois R, Leung HC, Moylan, J., Gore JC: A stimulus-driven approach to object identity, location and their conjunction. *J. Cognitive Neuroscience Suppl.* 1999, 79.
- Marois R, Moylan J, Feineigle P, Gore JC: How early does perceptual grouping emerge? *Neuroimage* 1998;7:S355.
- Marois R, Moylan J, Gore JC: Dissociation of visual frames of reference using fMRI. *Journal of Cognitive Neuroscience Suppl.* 1998;58.
- Marois R, Gauthier I, Moylan J, Gore JC: Neural substrates of perceptual grouping. *Society for Neuroscience Abstracts* 1997;23:2064.
- Marois R, Skudlarski P, Gore JC: An fMRI study of visual feature integration. *Neuroimage* 1997;5:S168.
- Olson IR, Marois R, Ruddle F, Carew TJ: Cloning of two homeobox genes in *Aplysia*. *Society for Neuroscience Abstracts* 1996;22:1878.
- Marois R, Hofstadter P, Carew TJ: Expression of an engrailed-like protein in *Aplysia*. *Society for Neuroscience Abstracts* 1994;20:1317.
- Marois R, Hofstadter P, Carew TJ: Birthdate and identification of serotonergic cells in embryonic and larval *Aplysia*. *Society for Neuroscience Abstracts* 1993;19:1287.
- Marois R, Kelly GM, Hockfield S, Carew TJ: An ultrastructural study of serotonergic cells in the CNS of embryonic and larval *Aplysia*. *Society for Neuroscience Abstracts* 1992;18:1471.
- Marois R, Croll RP: Embryonic development of serotonin-like immunoreactivity in the CNS of the pond snail *Lymnaea*. *Bull Can Soc Zool* 1988;19:22.
- Marois R, Chiasson BJ, Croll RP: Embryonic development of serotonin-like immunoreactivity in the pond snail, *Lymnaea stagnalis*. *Bull Can Soc Zool* 1987;18:23.
- Marois R, Carew TJ: Pre-metamorphic development of serotonin immunoreactivity in *Aplysia*. *Society for Neuroscience Abstracts* 1989;15:1121.
- Marois R, Chiasson BJ, Croll RP: Embryonic development of serotonin-like immunoreactivity in the central nervous system of the snail *Lymnaea*. *Society for Neuroscience Abstracts* 1987;13:1142.

Services

- Chair, Department of Psychology, Vanderbilt University 2014-
- Member, Steering Committee, Vanderbilt Brain Institute 2012-
- Member, Education & Training Subcommittee, VBI 2012-
- Chair, tenure review committee, Psychology Dept 2012
- Member, reappointment review committee for Lecturer Sandberg 2011
- Director of Graduate Studies, Department of Psychology 2011-2014
- Member, Vanderbilt's Junior Advisory Review Committee (JARC) 2010-present
- Member, Faculty Reappointment committee, Psychology Dept 2009
- Chair, Socio-Affective faculty search committee, Psychology Dept 2007
- Dept Representative, Graduate Faculty Delegate Assembly 2006-2007

- Chair, EEG faculty search committee, Psychology Dept 2006
- Member, Future Direction Committee, Psychology Dept 2006
- Member, Self-study Committee, Interdepartmental Neuroscience Program 2004-2005
- Co-Director, Imaging Module, Vanderbilt Vision Research Training Grant 2003-present
- Member, 3T Scanner Advisory committee 2003-present
- Member, Colloquium Committee, Psychology Department 2001-2011
- Member, Graduate Committee, Department of Psychology 2000-present
- Member, Graduate Committee, Interdepartmental Neuroscience Program 2000-2008

Ph.D. and Post Doctoral Advisors

Thomas J. Carew, Ph.D.	Dept. Psychology, Yale University
John C. Gore, Ph.D	Dept. Diagnostic Radiology, Yale University School of Medicine

Graduate students and Post-Doctoral Advisees

Suk-Won Han	Post-doctoral fellow (June 2013- December 2013)
Ben Tamber-Rosenau	NEI post-doctoral fellow (2010-)
Michael Tombu	NIH post-doctoral fellow (2006-2008)
Paige Scalf	Post-doctoral fellow (2006-2009)
Paul Dux, Ph.D.,	NIH post-doctoral fellow (2005- 2008)
Jason Ivanoff, Ph.D.	NSERC post-doctoral fellow (2003-2006)
Hana Eaton	Graduate Program in Psychology (2015-)
Lauren Hartsough	Graduate Program in Psychology (2015-)
Anat Fintzi	Graduate Program in Psychology (2012-)
Doug Godwin	Graduate program in Psychology (2010-)
Suk-Won Han	Graduate program in Psychology (2007-2013)
Chris Asplund	Graduate program in Neuroscience (2005-2010)
Daryl Fougne	Graduate program in Psychology (2003-2009)
Jay Todd	Graduate program in Psychology (2002-2008)