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Scene statistics: neural representation of real-world structure in rapid visual perception

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List of publications

Described research

Chapter two

Groen IIA, Ghebreab S, Lamme VAF, Scholte HS (2012) Spatially pooled contrast statistics predict neural and perceptual similarity of naturalistic image categories. *PLoS Computational Biology* 8(10): e1002726.

Chapter three

Groen IIA, Ghebreab S, Lamme VAF, Scholte HS (2012) Low-level contrast statistics are diagnostic of invariance of natural textures. *Frontiers in Computational Neuroscience* 6:34.

Chapter four

Groen IIA, Ghebreab S, Prins H, Lamme VAF, Scholte HS (2013) From image statistics to scene gist: evoked activity reveals transformation from low-level natural image structure to scene category. *The Journal of Neuroscience* 33(48): 18814-18824.

Chapter five

Groen IIA, Ghebreab S, Lamme VAF, Scholte HS (2014) Neural representation of global scene information is both automatic and task-dependent. *Manuscript under review*.

Chapter six

Groen IIA*, Jahfari S*, Ghebreab S, Lamme VAF, Scholte HS (2014) Scene gist influences recurrent processing during object categorization in real-world scenes. *Manuscript in preparation*. *equal contribution

Other research

Barese MD, Groen IIA, Lee ACH, Yeung LK, Brady SM, Gregori M, Kapur N, Bussey TJ, Saksida LM, Henson RNA (2012) Intact memory for irrelevant items impairs perception in amnesia. *Neuron* 75(1):157-67.

Ramakrishnan K, Groen IIA, Scholte HS, Smeulders AWM, Ghebreab S (2013) Visual word representation in the brain. In: *3rd NIPS Workshop on Machine Learning and Interpretation in NeuroImaging (MLINI)*, Lake Tahoe, Nevada, USA.

Ramakrishnan K, Groen IIA, Scholte HS, Smeulders AWM, Ghebreab S (2014) Visual dictionaries in the brain: comparing HMAX and BoW. *IEEE International Conference on Multimedia and Expo (ICME)*, Chengdu, China.

van Loon AM, Groen IIA, Fahrenfort JJ, Scholte HS, Lamme VAF. Bottom-up and top-down influences on category representations in human lateral occipital cortex. *Manuscript in preparation*.

Ramakrishnan K, Scholte HS, Groen IIA, Smeulders AWM, Ghebreab S. Visual dictionaries as intermediate features in the human brain. *Under review*.

Scholte HS, Sligte IG, Groen IIA, Lamme VAF, Ghebreab S. LO1/LO2 computes summary statistics of visual scenes. *Manuscript in preparation*.

Winkel JG, Wijnen J, Danielmeijer C, Groen IIA, Derfuss J, Ridderinkhof KR, Forstmann BU (2012) Observed and self-experienced conflict induce similar behavioral and neural adaptation. *Social Neuroscience*, 7:4, 385-397.

Winkel JG, Wijnen JG, Ridderinkhof KR, Groen IIA, Derfuss J, Danielmeijer C and Forstmann BU (2009) Your conflict matters to me! Behavioral and neural manifestations of control adjustment after self-experienced and observed decision-conflict. *Frontiers in Human Neuroscience* 3:57.