Editorial Notes

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In addition to the articles described in this Special Issue, we would like to draw the reader's attention to the following articles that appeared earlier in this journal and which complement the selection shown here.

Ho-Phuoc et al. [1] evaluated quantitatively the relative contribution of basic low-level features as candidate factors to visual attention and eye movements by comparing their visual saliency with statistics model to their experimentally collected data. They showed a statistically significant role of high frequency luminance and a major contribution of a central fixation bias.

Wischnewski et al. [2] present a novel computational attention system where low-level static and dynamic visual features of the environment (bottom-up), medium-level visual features of proto-objects and the task (top-down) are integrated to decide where to look next. The target of the next saccade is determined as the center of gravity of the proto-object with the highest weight according to the task. They illustrate their approach by applying it to several real world image sequences and show its robustness to parameter variations.

Marcus Wallenberg and Per-Erik Forssén [3] presented a computational system that implements recognition and

object permanence. Their recognition system implements a KNN classifier with bag-of-features prototypes. Different uncertainty measures for target observation allow the system to decide whether to continue to observe an object or to move on, and to decide whether the observed object is previously seen or novel. The system is able to successfully reject all novel objects as “unknown”, while still recognizing most of the previously seen objects.

References

1. Ho-Phuoc T, Guyader N, Guérin-Dugué A. A functional and statistical bottom-up saliency model to reveal the relative contributions of low-level visual guiding factors. *Cognit Comput.* 2010; 2(4):344–59.
2. Wischnewski M, Belardinelli A, Werner XS, Steil JJ. Where to look next? combining static and dynamic proto-objects in a TVA-based model of visual attention. *Cognit Comput.* 2010;2(4): 326–43.
3. Wallenberg M, Forssén Per-Erik. Embodied object recognition using adaptive target observations. *Cognit Comput.* 2010;2(4): 316–25.

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