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## 37th European Conference on Visual Perception Belgrade, Serbia 24 – 28 August 2014

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## Sponsors

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The Rank Prize Funds

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2007 Arezzo (I)

2008 Utrecht (NL)

2009 Regensburg (D)

2010 Lausanne (CH)

2011 Toulouse (F)

2012 Alghero (I)

2013 Bremen (D)



Wednesday

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◆ **Uncovering the functional role of infants' biases in viewpoint selection during object exploration**

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As we move objects close to us, and act on them, we generate dynamic views. Recent studies have examined the viewpoints that infants select during free play and found large developmental changes in dwell time distribution, namely an increasing preference for orienting objects on or around planar views – i.e. viewpoints where the main axis is parallel (foreshortened) or perpendicular to the line of sight. This bias is characteristic of mature viewing and was found to promote more efficient learning. The functional role of this active viewing bias is unknown. We investigated two general properties of object views that seem relevant: (1) main axis expansion/foreshortening, and (2) instability – related to dynamic viewing, where rotations around planar views typically yield larger visual changes. There were two key results: (1) main axis is typically maintained in view (infrequent foreshortening) – this suggests that elongation is a distinctive property of preferred views and supports other evidence that points to the main axis as an important structural property; (2) planar views correspond to more stable periods of the object manipulation – this suggests that sampling planar views corresponds to moments of focused attention and perhaps learning of a static view is occurring.

[This research was funded by Fundação para a Ciência e Tecnologia (FCT) with Portuguese Government funds under the project PTDC/PSI-PCO/121494/2010 “Visual Object Recognition and Children’s Self-Generated Object Views: Developmental Changes in Active Viewing“ and under the project Scope: PEst-OE/EEI/UI0319/2014. AFP was also supported by a Marie Curie International Incoming Fellowship PIIF-GA-2011-301155.]