New Research in Journal of Vision

Congratulations to Eckart, Concetta and David, whose latest paper has just been published in Journal of Vision!

Zimmermann, E., Morrone, M. C. & Burr, D. C. (2014). The visual component to saccadic compression, J Vis, 12 (14), PDF

Visual objects presented around the time of saccadic eye movements are strongly mislocalized towards the saccadic target, a phenomenon known as "saccadic compression." Here we show that perisaccadic compression is modulated by the presence of a visual saccadic target. When subjects saccaded to the center of the screen with no visible target, perisaccadic localization was more veridical than when tested with a target. Presenting a saccadic target sometime before saccade initiation was sufficient to induce mislocalization. When we systematically varied the onset of the saccade target, we found that it had to be presented around 100 ms before saccade execution to cause strong mislocalization: saccadic targets presented after this time caused progressively less mislocalization. When subjects made a saccade to screen center with a reference object placed at various positions, mislocalization was focused towards the position of the reference object. The results suggest that saccadic compression is a signature of a mechanism attempting to match objects seen before the saccade with those seen after.