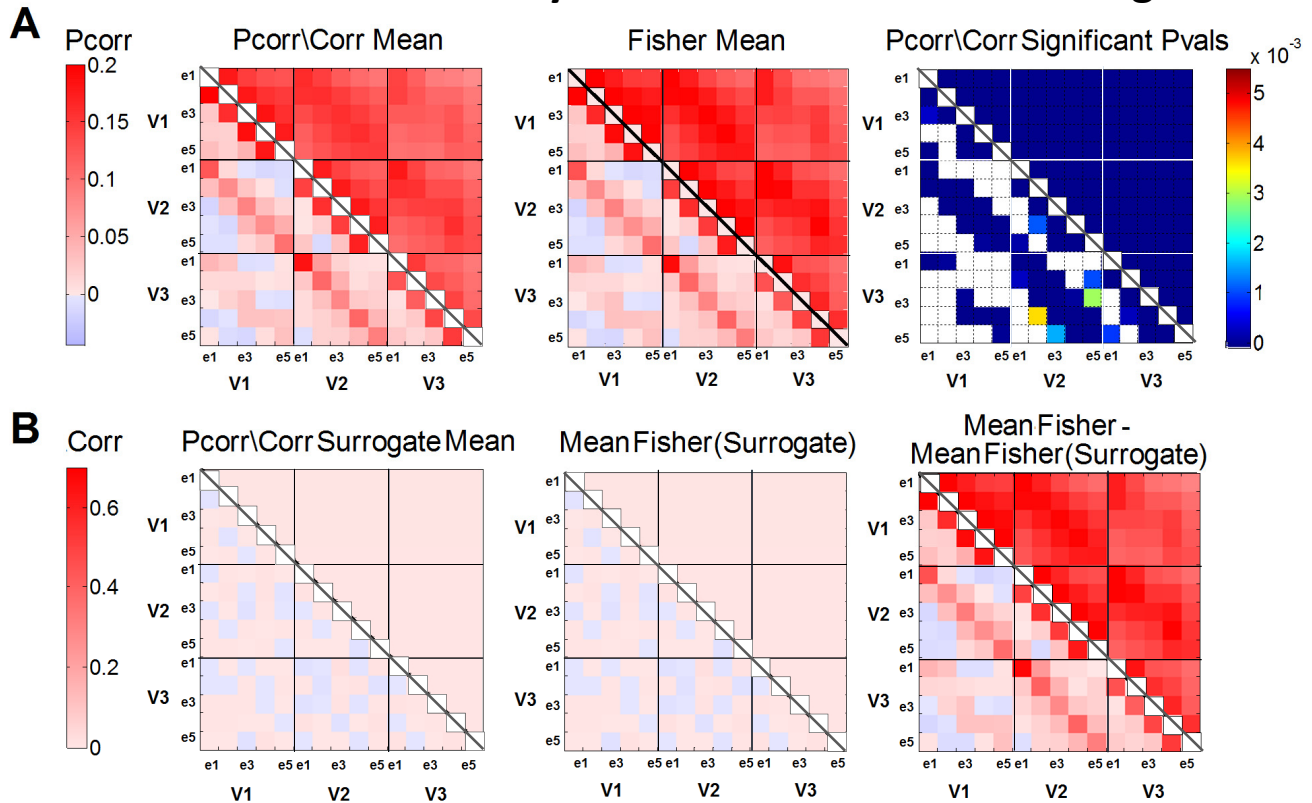


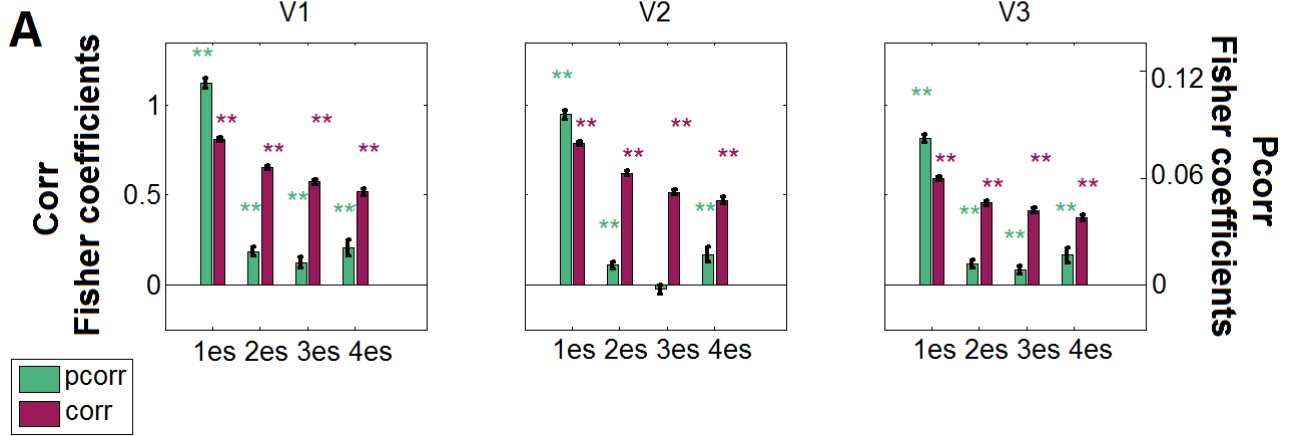
Within Quadrant Analysis With Time Shuffled Surrogate



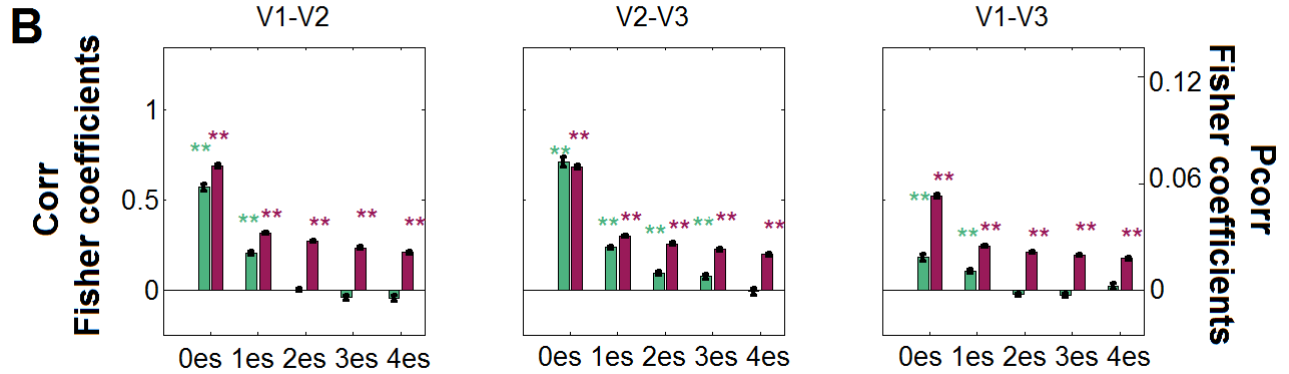
Supplementary Figure 1. Mean functional connectivity measures within a quadrant, computed across all subjects, runs per subjects, and the four quadrants; *statistics done with use of a Time-Shuffled Surrogate*. Shuffling was pursued based on the indices of the 8 scans, while keeping the time-course from each scan unchanged; we computed functional connectivity measures for the maximal possible number of permutations: $([8 \times 8] - 8)/2 = 28$. Thus for each subject, 28 surrogate coefficients were computed for each ROI pair. A) Left: Mean Pcorr / Corr coefficients across all subjects (6), quadrants (4). And runs per subjects (8) ($6 \times 4 \times 8$). Center: Mean Fisher coefficients across all subjects and runs. Right: p values of statistically significant Pcorr / Corr associated with the functional connections in this 5 eccentricity region network. Significance is thresholded at 0.05, with false discovery rate (FDR) correction. White connections did not show statistical significance. B) Left: Mean Pcorr / Corr *Surrogate coefficients* across all subjects (6), quadrants (4) and shuffled runs per subjects (28) ($6 \times 4 \times 28$). Center: Mean Fisher coefficients of *Surrogate* across all subjects and runs. Right: Mean Fisher Pcorr/Corr minus the Mean Fisher of the *Surrogate* distributions.

Within Quadrant Analysis With Time Shuffled Surrogate

Within area mean fisher coefficients according to eccentricity separations

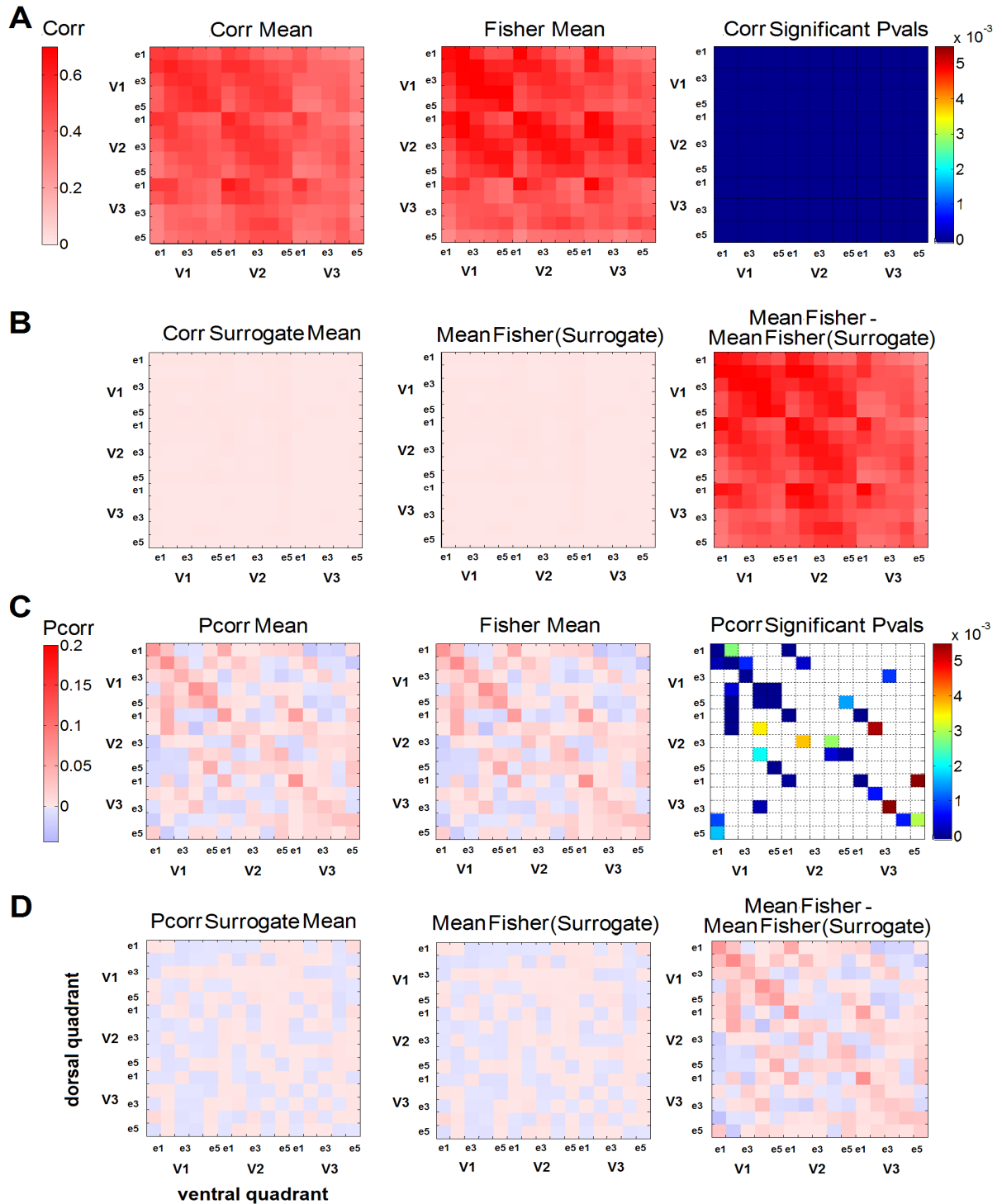


Between area mean fisher coefficients according to eccentricity separations



Supplementary Figure 2. Mean functional connectivity measures according to eccentricity bin groupings associated with ROI pairs composed of regions residing within the quadrant; *statistics done with use of a Time-Shuffled Surrogate*. Across all plots, green and purple bars represent the mean Fisher transformed Pcorr and Corr, respectively, computed across all subjects, runs and quadrants. Error bars reflect the standard error of the mean across measurements. A shows within-visual area Fisher coefficients for different eccentricity separations. Plots in B show the between-area Fisher coefficients of different eccentricity separations. A zero eccentricity separation (0es) indicates regions with the same eccentricity; a separation of one eccentricity (1es) means the regions' eccentricities were adjacent, a separation of two eccentricities (2es) means there was an eccentricity region separating the two regions' eccentricities. A separation of three eccentricities (3es) means there were two eccentricity regions separating the two regions' eccentricities. Finally, a separation of four eccentricities (4es) means there were three eccentricity regions separating the two regions' eccentricities. Statistical significance was assessed using alpha values of 0.05 (*) and 0.001 (**), following repeated measures statistical analyses. Individual connections are shown to be significant with an asterisk directly above the bar.

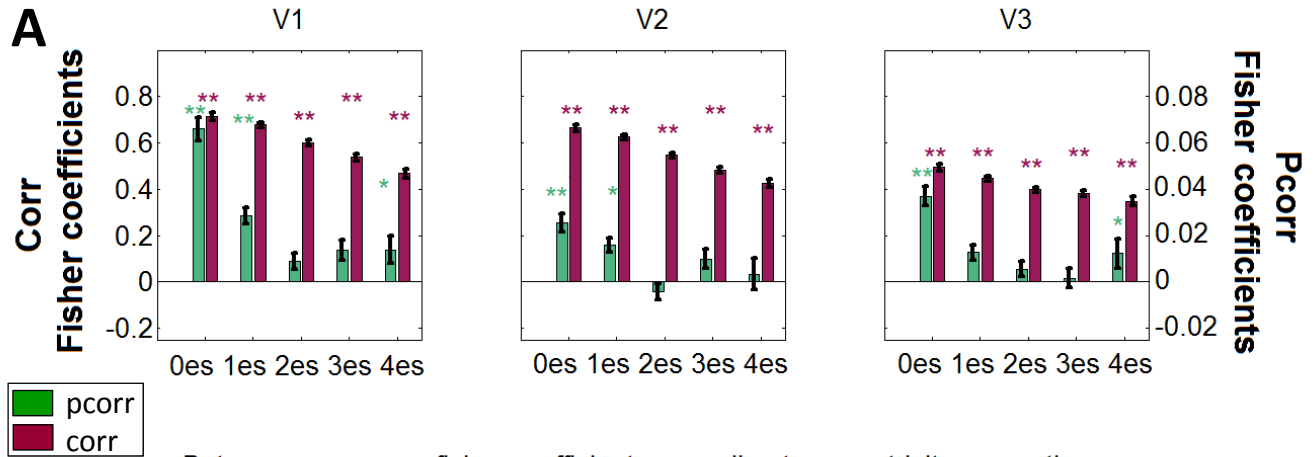
Between Quadrant Analysis With Time Shuffled Surrogate



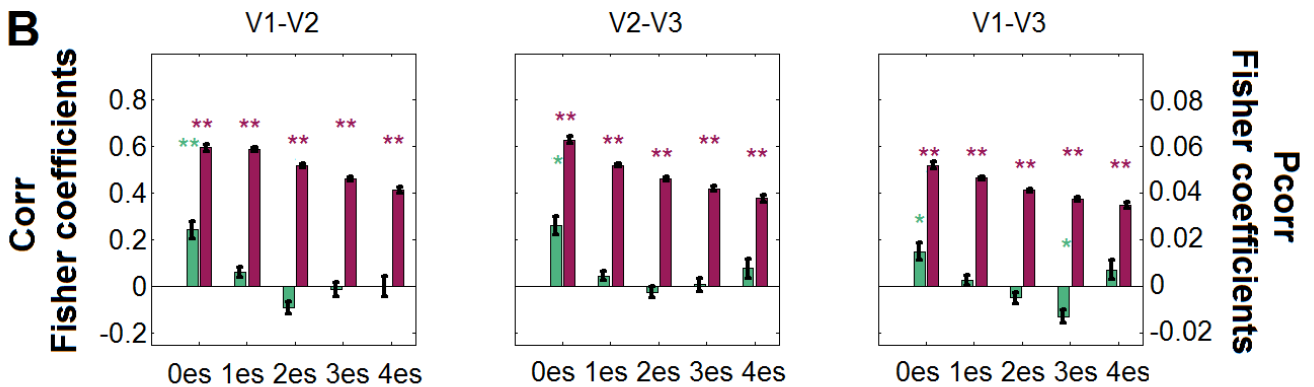
Supplementary Figure 3. Mean functional connectivity measures associated with functional connections between ROIs residing in different quadrants within a hemisphere; *statistics done with use of a Time-Shuffled Surrogate*. The mean connectivity measures were computed across all subjects, runs, and the two quadrant pairs. A & B reflect Corr connectivity measures and C & D reflect Pcorr connectivity measures. Presentation is as in Figure 7 and Supplementary Figures 1A and 1B.

Between Quadrant Analysis With Time Shuffled Surrogate

Within area mean fisher coefficients according to eccentricity separations



Between area mean fisher coefficients according to eccentricity separations



Supplementary Figure 4. Mean functional connectivity measures according to eccentricity bin groupings associated with ROI pairs composed of regions residing in different quadrants of a hemisphere; *statistics done with use of a Time-Shuffled Surrogate*. Across all plots, green and purple bars represent the mean Fisher transformed Pcorr and Corr, respectively, computed across all subjects, runs and pairs of quadrants. Error bars reflect the standard error of the mean across measurements. The format of presentation is as in Figures 8 A and C in the main manuscript and Supplementary Figure 2. * $p < 0.05$; ** $p < 0.001$.