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Probabilistic thresholding of functional connectomes: Application to schizophrenia

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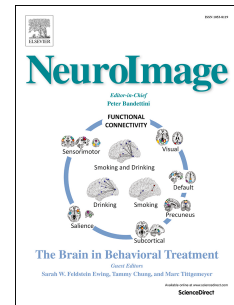
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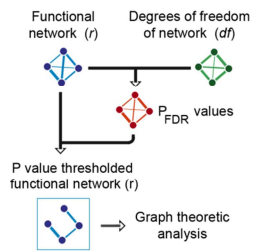
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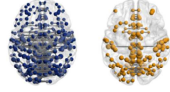
Wavelet despiking enables probabilistic thresholding of functional connectomes



There are two methods to threshold connectomes by P-value; we apply these to schizophrenia:

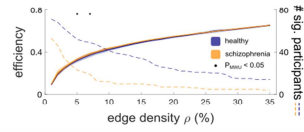
Fixed P_{FDR} (eg: $P_{FDR} < 0.01$)

patient disconnectivity \uparrow



Fixed edge density, by P_{FDR} (eg: 10% edges with lowest P_{FDR})

group Δ driven by inclusion of noisy edges are eliminated when edge $P_{FDR} < 0.01$

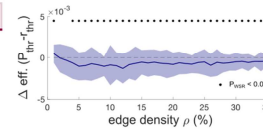


Comparing thresholding by increasing P and decreasing r :

\uparrow consistency (across subjects) of P-thresholded connectomes



decreased randomness in P-thresholded connectomes



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