

Wavelet frames of higher Riesz transforms

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Up to now steerable wavelets are in general either steerable filters or (higher-) Riesz transforms of radial wavelets. In the talk we will look at the representation theoretic background behind both approaches to see the relation between them. This will result in a new definition of higher Riesz transforms that yields a phase decomposition and a construction method for customized higher Riesz transforms.

Finally we will take a closer look at the properties of higher Riesz transforms and implementational aspects.