A New Method for Frequency Domain Causality Analysis

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Partial directed coherence (PDC) is an important method for causality analysis in frequency domain. We expect that the frequency domain methods can provide a more detailed explanation of causal influence over different frequencies, but PDC provides no quantitative information to quantify the causal strength and the interpretation of causality over a specific frequency is still unexplained. To deal with these problems, a new frequency domain causality analysis method based on the statistical property of the renormalized PDC will be introduced in this talk.