Title: Biophysically based method to deconvolve spatiotemporal neurovascular signals from fMRI data

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Highlights

- A biophysically based method is developed to deconvolve BOLD-fMRI data
- It combines a physiological cortical hemodynamic model with a Wiener filter
- It extracts the spatiotemporal dynamics of neurovascular signals underlying BOLD
- Results are consistent with separate neuroimaging measurements in the literature
- The work produces testable predictions based on fMRI for understanding the brain