



Notes from SfN

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LocaNMF

Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data

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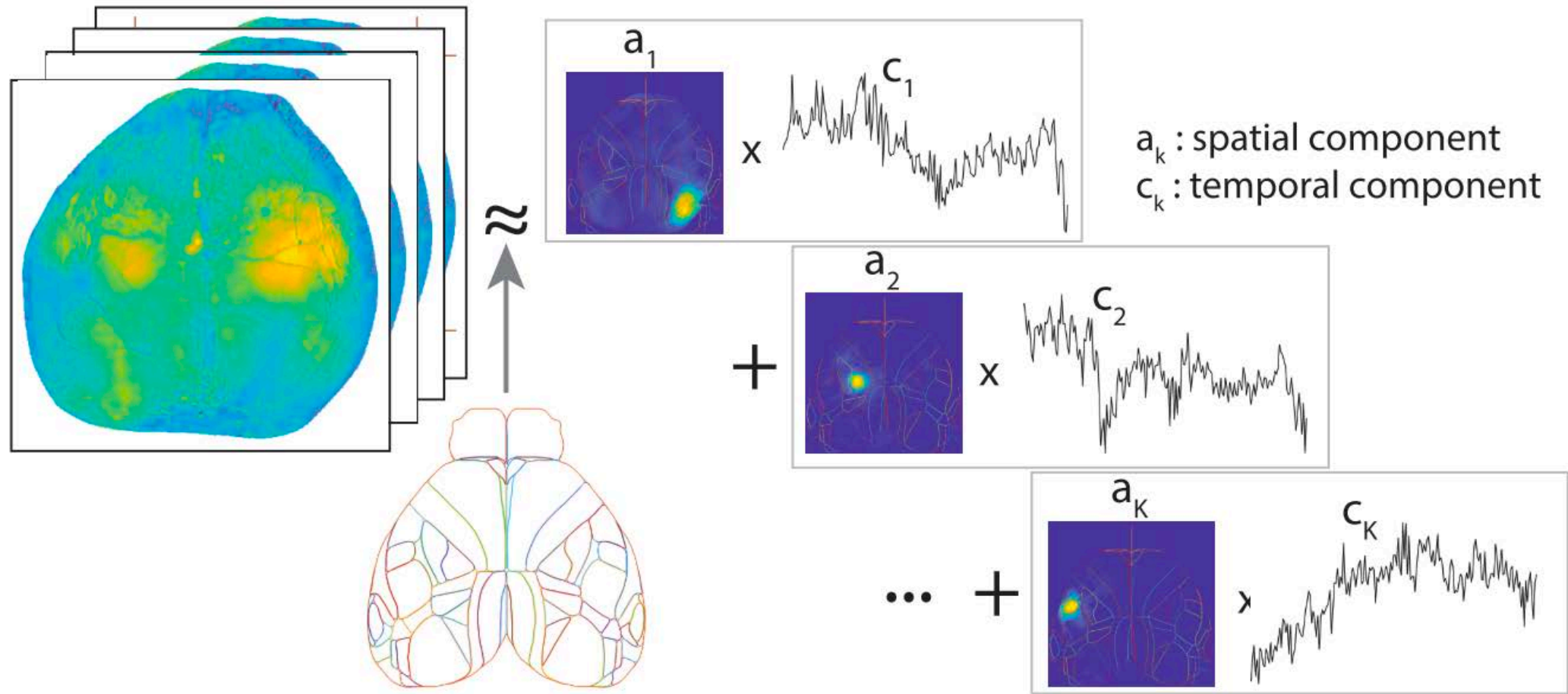
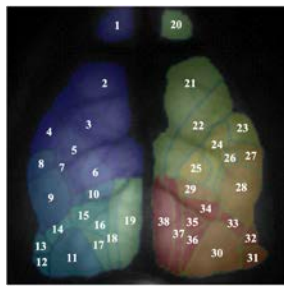
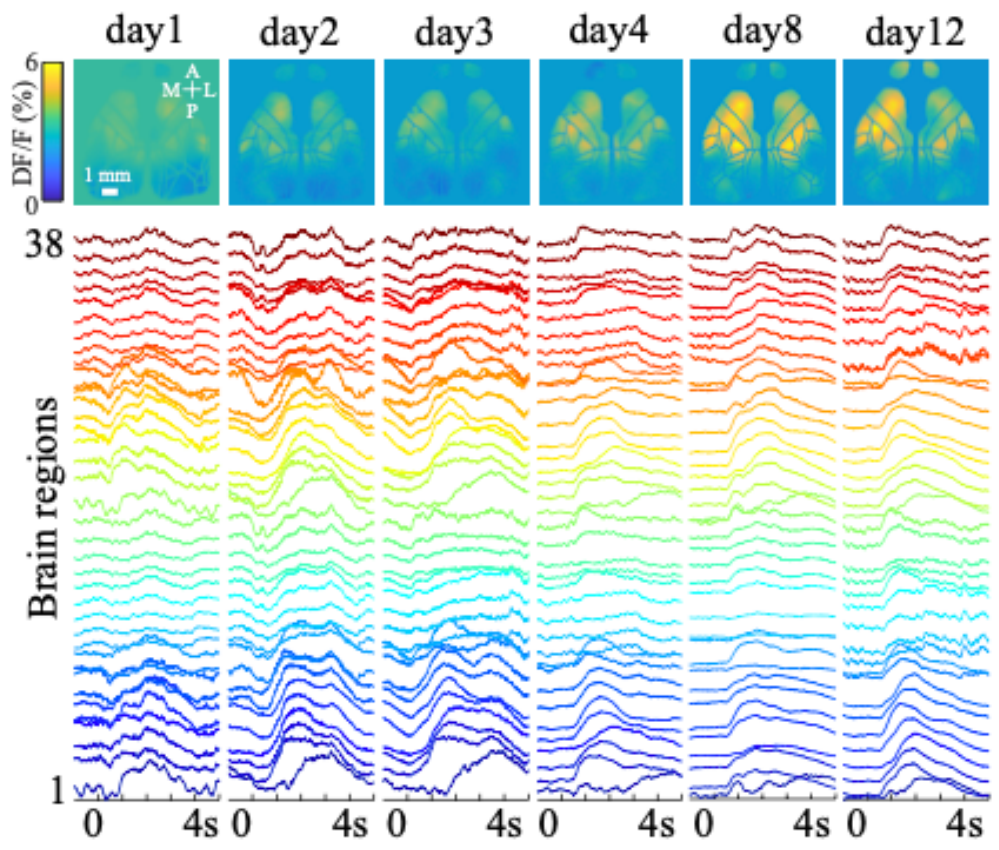
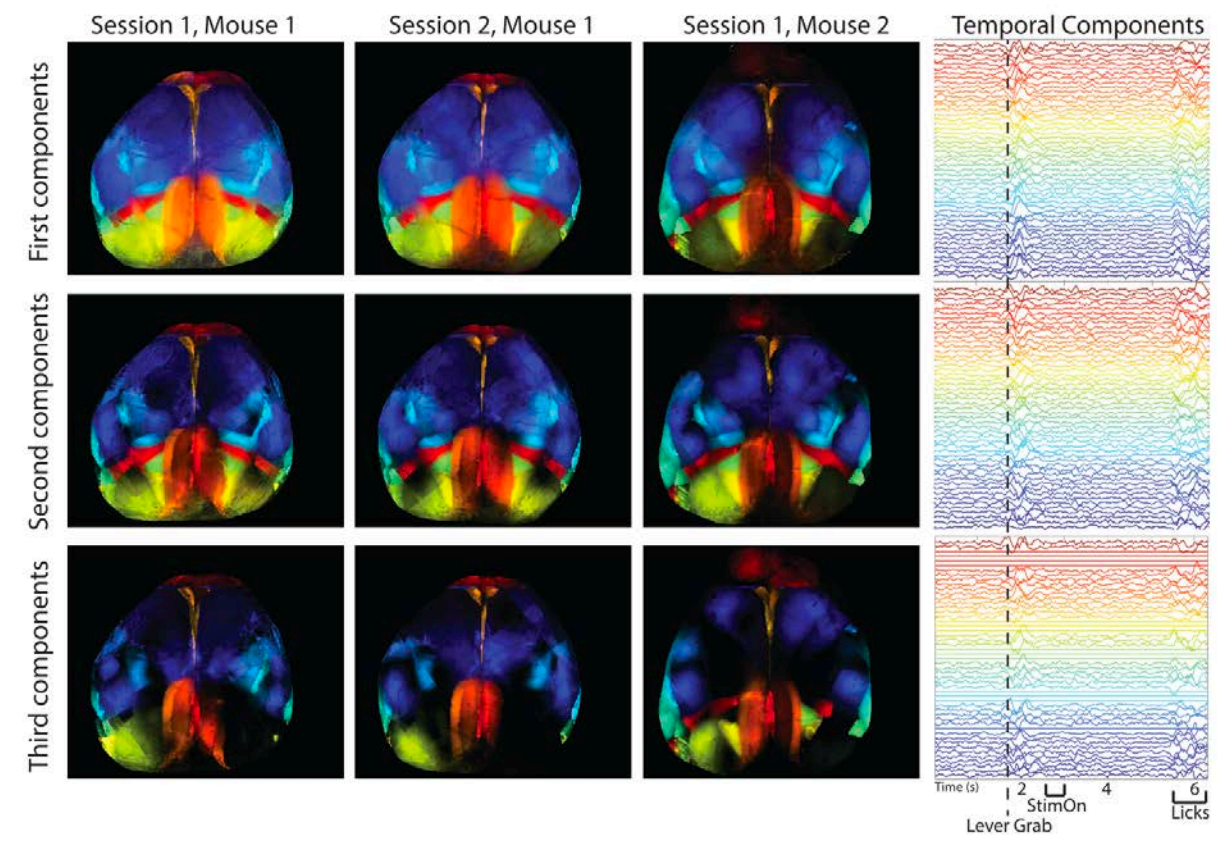


Figure 1: Overview of LocaNMF: a decomposition of the WFCI video into spatial components A and temporal components C , with the spatial components soft aligned to an atlas, here the Allen atlas.

Our system (MesoNet)



LocaNMF



Notes on LocaNMF

LocaNMF can represent functional activation between (not just within) brain regions

Requires a manually aligned Allen Brain Atlas– may not be robust to multiple animals

Interesting integration of behavioural data recording and wide-field calcium imaging

References

Saxena, S., Kinsella, I., Musall, S., Kim, S. H., Meszaros, J., Thibodeaux, D. N., ... Paninski, L. (2019). Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data. *BioRxiv*, 650093.
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