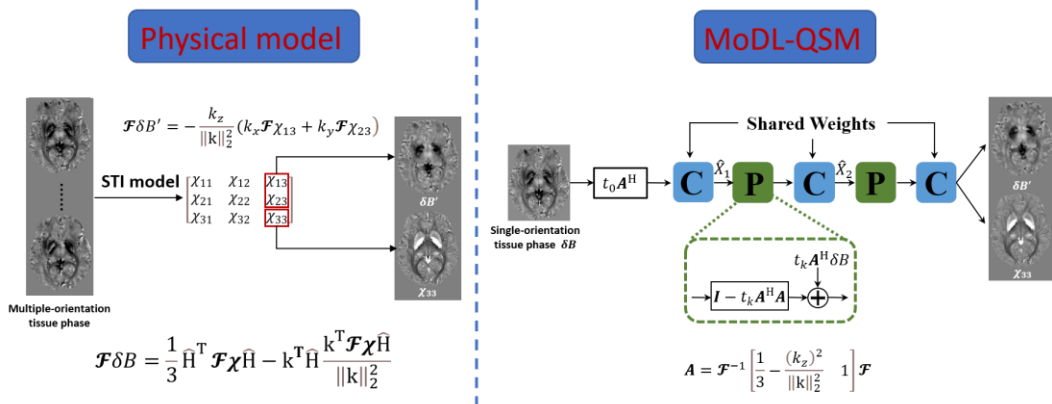


MoDL-QSM: Model-based Deep Learning for Quantitative Susceptibility Mapping

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MoDL-QSM was also developed by Prof. Hongjiang Wei's group. It incorporates the physical Susceptibility Tensor model into convolutional neural networks. MoDL-QSM reconstructs high quality STI component χ_{33} map and the field induced by χ_{13} and χ_{23} terms from the tissue phase.

MoDL-QSM: Model-based Deep Learning for Quantitative Susceptibility Mapping

Our contributions:

- STI (Susceptibility tensor imaging) model-based deep learning;
- Provide a more realistic susceptibility reference for single-orientation QSM;
- Simultaneously predict χ_{33} and the field induced by χ_{13} and χ_{23} terms;

Links:

download link: <https://github.com/AMRI-Lab/MoDL-QSM>

publication links: <https://arxiv.org/abs/2101.08413>

Feng et al. NIMG, under review

The advantages of MoDL-QSM include: STI model based, preserve the susceptibility anisotropy, and simultaneously predict χ_{33} and the field induced by χ_{13} and χ_{23} terms. MoDL-QSM provide a more realistic reference for single-orientation QSM. The source codes and trained networks ready for testing can be download at: <https://github.com/AMRI-Lab/MoDL-QSM>. The paper was submitted to NIMG and can be found at arXiv : <https://arxiv.org/abs/2101.08413>