Multiorgan Volume Registration

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- Motion is a problem in resting state fMRIs
- Various protocols have been developed to prevent motion in neonatal, pediatric, and adult patients, but these protocols are not compatible for fetal patients
- A motion monitoring software tool has been developed by X for the purpose of evaluating patient motion during an MRI; however, it only monitors and does nothing to actively correct the effects of motion
- A number of post acquisition motion correction pipelines exist, and they all have their own strengths and limitations
- Note that all motion correction pipelines begin with volume registration
- Traditional volume registration chooses one volume in the image sequence as the template volume and aligns all volumes to it. This technique can result in failed volume registrations in image sequences containing large amounts of motion.
- Recently, we proposed a volume registration method that accounts for spatio-temporal relationships between neighboring volumes in an image sequence.
- We applied this technique to a set of (description of SVR subjects here)