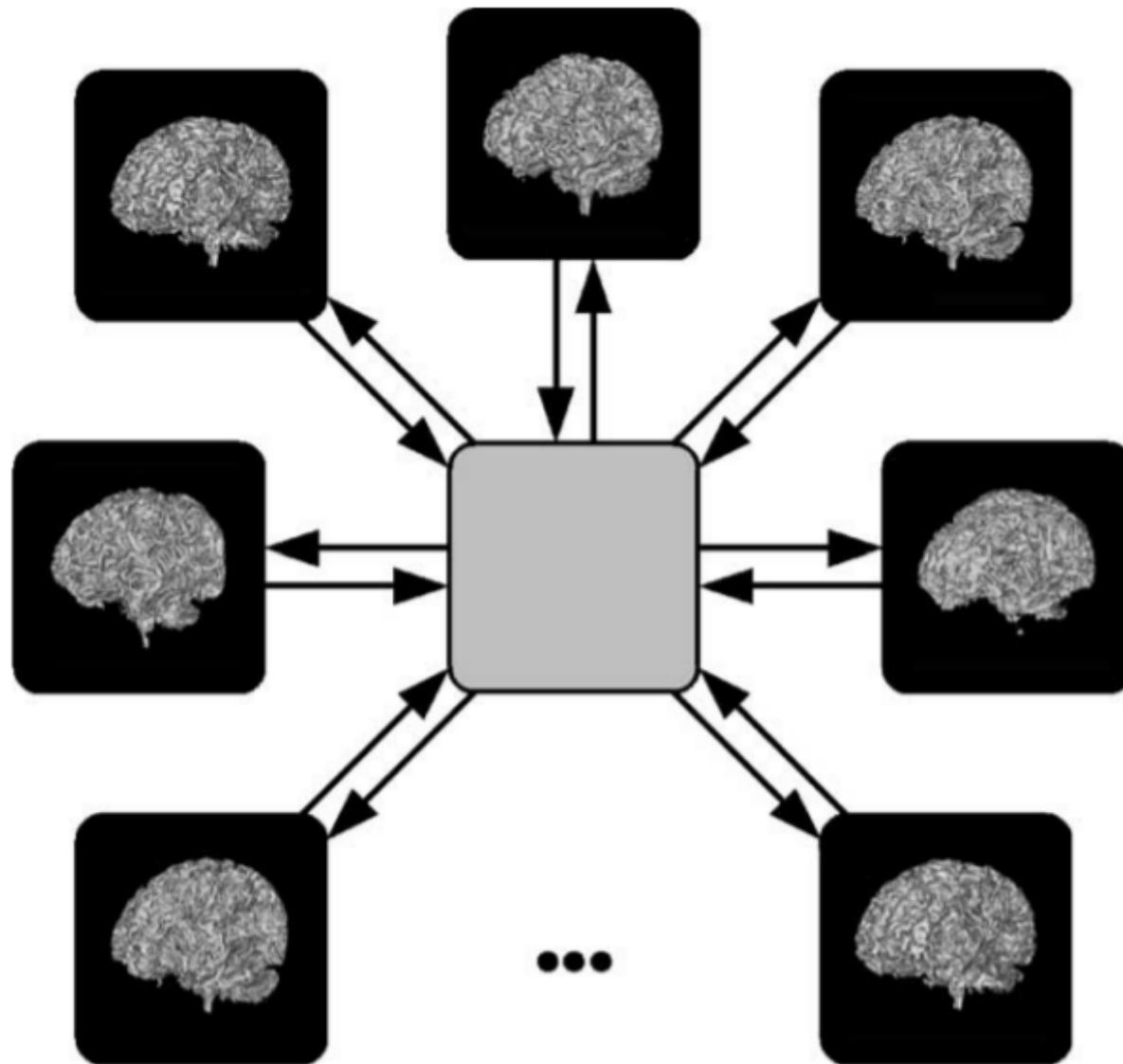


voxelmorph.mit.edu

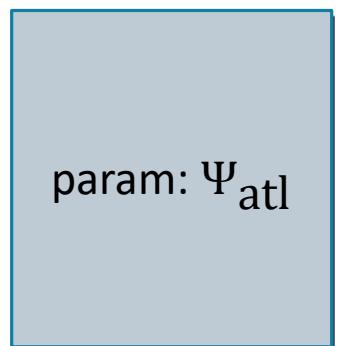
Learning Conditional Deformable Templates with Convolutional Networks

Adrian V. Dalca, Marianne Rakic, John Guttag, Mert R. Sabuncu
MIT, MGH, ETH, Cornell



Template Construction

Moving 3D Image (\mathbf{m})



param: Ψ_{atl}

Fixed 3D Image (\mathbf{f})



param: ψ

velocity
statistics

μ

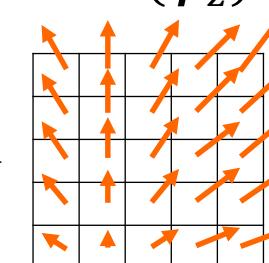
Σ

sample
velocity
field

z

integrate

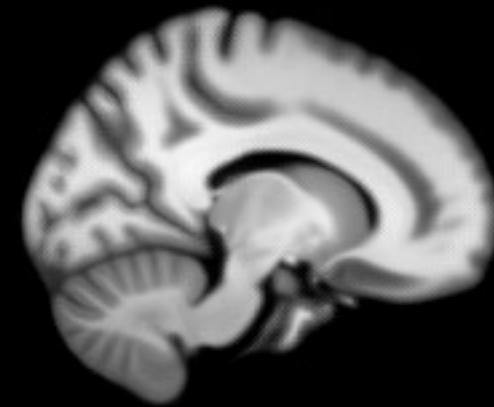
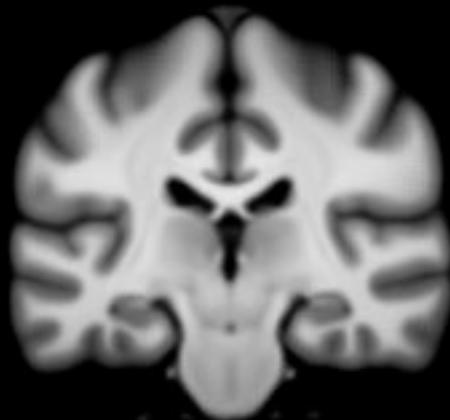
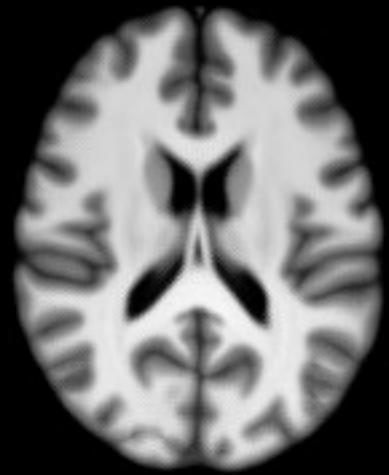
deformation
field (ϕ_z)



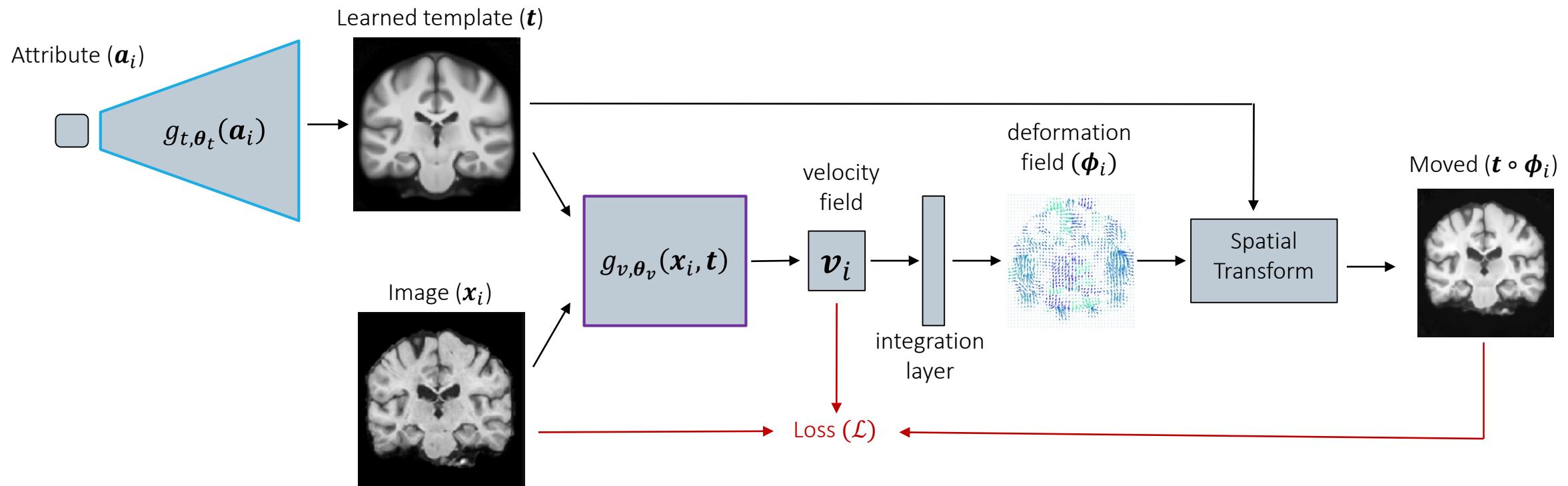
→ O →
spatial
transform

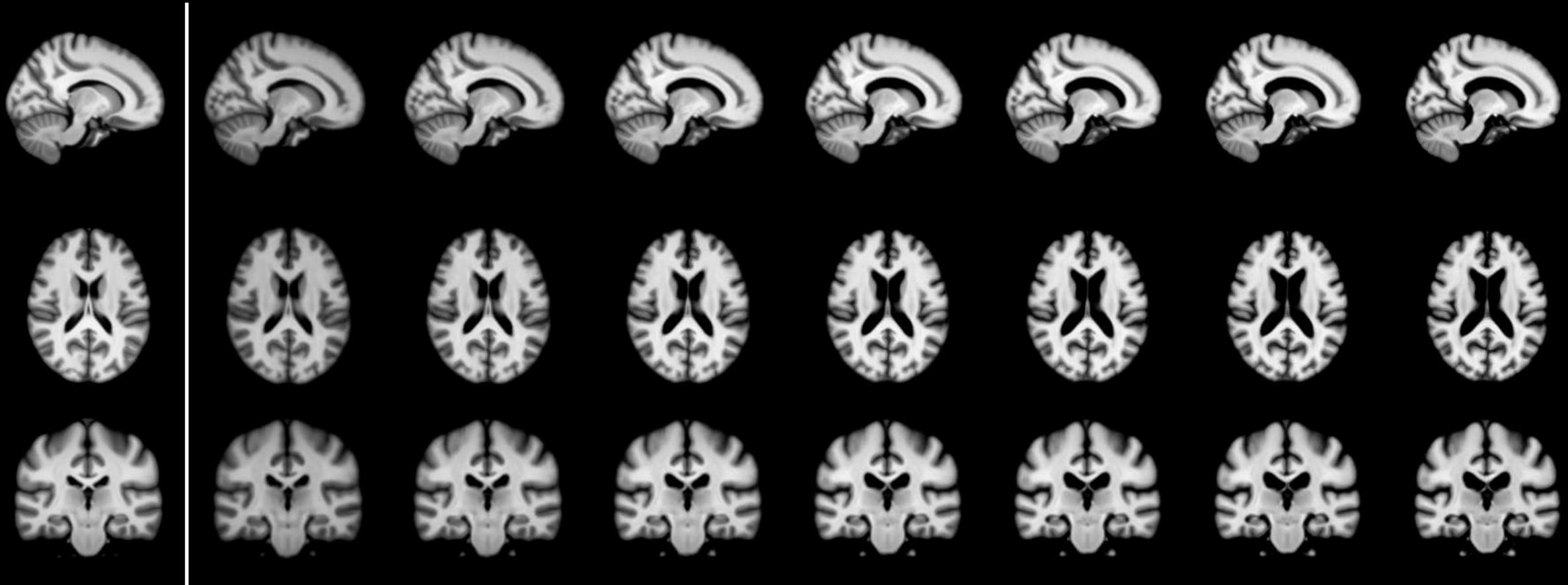
Moved ($\mathbf{m} \circ \phi_z$)





Conditional template construction





15 ← → 90

age: 15.0

