



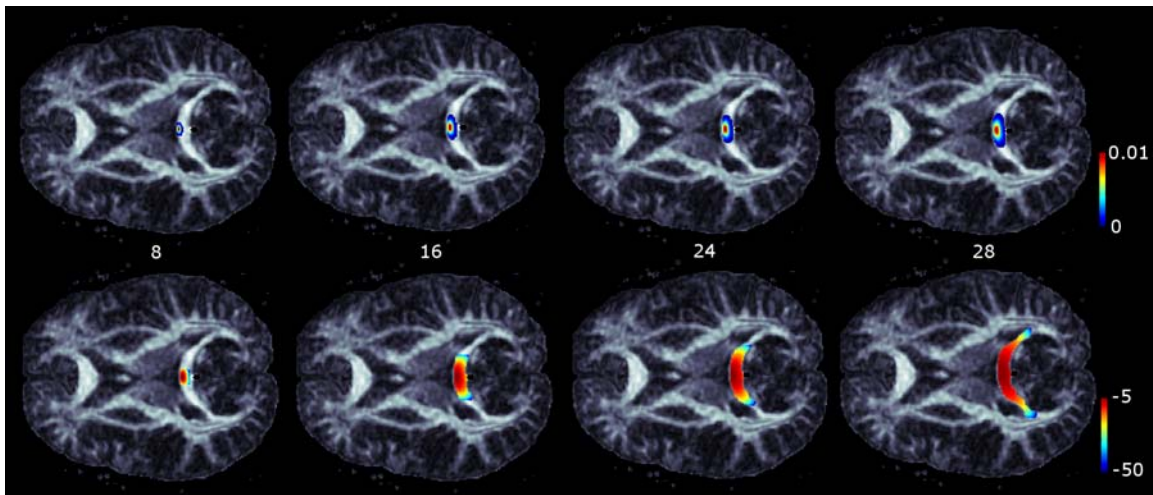
Image Analysis Seminar

Wednesday April 27, 2005 at 3:00pm
in Waisman Center T137

Anisotropic Kernel Smoothing in Diffusion Tensor Imaging: Theoretical Framework

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We present a theoretical framework for smoothing diffusion tensor images. We formulate smoothing data along the white fiber tracks as iterated anisotropic Gaussian kernel smoothing. The formulation is directly derived from the construction of the transition probability of the underlying water molecule diffusion process. The smoothing is performed in such a way that it smooth data more along the most likely direction of water molecule diffusion. Statistical and mathematical properties of our smoothing are presented. Vector spline (Div-curl spline) methods are also presented for smoothing the principal eigenvector fields. Joint work with Jee Eun Lee and Andrew L. Alexander.

Please contact Moo Chung mchung@stat.wisc.edu for image analysis seminar mailing list.