

**MEETING ON TOMOGRAPHY AND
APPLICATIONS
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Multi-GPU parallelization of 3D X-Ray Reconstruction

ABSTRACT In this talk, parallelization on GPU of iterative algorithm for 3D X-ray reconstruction will be presented. Our forward and backward operators and our laplacian operator (used for quadratic regularization) has been parallelized on a 8 GPUs server. A special focus would be done on optimization of memory transfers between the host PC and the GPU board. Asynchronous transfers and half float compression of data has been used in that purpose. Results would be presented on 1024^3 and 2048^3 volume.

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