2020 ISMRM Workshop on Data Sampling & Image Reconstruction

Session 1: Setting the Stage

The State of Image Reconstruction in Medical CT

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This review talk will describe the status of advanced reconstruction methods that have been used clinically for X-ray CT (and PET) imaging for several years, and compare and contrast those methods to the iterative reconstruction methods for compressed sensing that have been FDA-approved for MRI in the past couple of years.

For surveys of iterative reconstruction methods for X-ray CT see [1-4].

For the slides from the presentation, see:
https://web.eecs.umich.edu/~fessler/papers/files/talk/20/sedona.pdf

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[2] Jiang Hsieh, Brian Nett, Zhou Yu, Ken Sauer, Jean-Baptiste Thibault, Charles A Bouman.
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Recent advances in CT image reconstruction.
Current Radiology Reports, 1(1):39-51, Mar. 2013.

[3] Hao Zhang, Jing Wang, Dong Zeng, Xi Tao, Jianhua Ma.
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In "Machine Learning for Tomographic Imaging," IOP, pp. 5:1-39, 2019.