

# Lothar-Collatz-Seminar

Wed, 16. Dec · 4:15 pm · online

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## Radon-based image reconstruction in magnetic particle imaging with an FFL-scanner

### Abstract:

Magnetic particle imaging (MPI) is a promising medical imaging technique first published in 2005 by Gleich and Weizenecker. It allows for the reconstruction of the spatial distribution of superparamagnetic iron oxide nanoparticles via exploiting their non-linear magnetization response to changing magnetic fields. In this talk, we dedicate ourselves towards MPI using a field-free line for spatial encoding. We will have a look at similarities to the data acquisition process in computerized tomography, relate the data to the Radon transform of the particle distribution, and state numerical results obtained by using the well-known filtered backprojection method for reconstruction.

For further information please contact

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[www.c3s.uni-hamburg.de/news-events/seminar-c3s.html](http://www.c3s.uni-hamburg.de/news-events/seminar-c3s.html)