## Compressed sensing for the sparse Radon transform

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**Abstract:** Compressed sensing allows for the recovery of sparse signals from few measurements, whose number is proportional, up to logarithmic factors, to the sparsity of the unknown signal. The classical theory mostly considers either random linear measurements or subsampled isometries. In particular, the case with the subsampled Fourier transform finds applications to undersampled magnetic resonance imaging. In this talk, I will show how the theory of compressed sensing can also be rigorously applied to the sparse Radon transform, in which only a finite number of angles are considered. One of the main novelties consists in the fact that the Radon transform is associated to an ill-posed inverse problem, and the result follows from a new theory of compressed sensing for abstract inverse problems.