

## 1 Consolidation assignment

Implement the forward Radon transform either via geometric projection or using the relationship to the Fourier transform. Test your algorithm with a simple geometric shape, e.g., a triangle. Compare your result with the result of the `radon` function of Matlab/Octave.

## 2 Preparation assignment

- 1) **Peruse** the pdf titled “Discrete tomographic data” in StudOn.
- 2) Check the stability condition of the linear inverse tomography problem  $Au = f$  by investigating the properties of the system matrix  $A$  in equation (2.48).
- 3) Exercise 2.3.1. already conveys the idea of smoothing the measurement data  $m$  by convolution with a Gaussian kernel  $p$ . Think about the implications of this smoothing in the Fourier space and try to understand what this kernel exactly realizes.

## 3 Notes / Insights from class