

# A penalization approach for tomographic reconstruction of binary axially symmetric objects

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## Abstract

We propose a variational method for tomographic reconstruction of blurred and noised binary images based on a penalization process of a minimization problem settled in the space of bounded variation functions. We prove existence and/or uniqueness results and derive a penalized optimality system. Numerical simulations are provided to demonstrate the relevance of the approach.

**Key Words:** Tomography, Optimization, Penalization