

# Stress Evaluation from X-Ray Diffraction

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In this lecture we consider the problem of reconstructing the stress tensor of a specimen from X-ray measurements. As mathematical problem a reciprocal Laplace transform has to be inverted.

We first present some results for solving linear inverse problems, mention the nowadays classical X-ray tomography and then present the diffraction problem. The application of the approximate inverse with suitable invariances leads to fast algorithms. Reconstructions from real data complete the presentation.