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Sommario/riassunto	Tikhonov regularization is a cornerstone technique in solving inverse problems with applications in countless scientic elds. Richard Huber discusses a multi-parameter Tikhonov approach for systems of inverse problems in order to take advantage of their specic structure. Such an approach allows to choose the regularization weights of each subproblem individually with respect to the corresponding noise levels and degrees of ill-posedness. Contents General Tikhonov Regularization Specific Discrepancies Regularization Functionals Application to STEM Tomography Reconstruction Target Groups Researchers and students in the field of mathematics Experts in the areas of mathematics, imaging, computer vision and nanotechnology

The Author Richard Huber wrote his master’s thesis under the supervision of Prof. Dr. Kristian Bredies at the Institute for Mathematics and Scientific Computing at Graz University, Austria.