

# ELLIPTIC EQUATIONS WITH DEGENERATE WEIGHTS

LARS DIENING

We study the regularity of the weighted Laplacian and  $p$ -Laplacian with degenerate elliptic matrix-valued weights. We establish a novel logarithmic BMO-condition on the weight that allows to transfer higher integrability of the data to the gradient of the solution. The sharpness of our estimates is proved by examples.

The talk is based on joint work with Anna Balci, Raffaella Giova and Antonia Passarelli di Napoli.