

# Lévy-Fokker-Planck equations

Franz Achleitner, TU Wien

We consider Fokker-Planck equations

$$\partial_t u = \mathcal{L}u + \operatorname{div}(ux) \quad \text{for } x \in \mathbb{R}^d, \quad t > 0, \quad (1)$$

for Lévy operators  $\mathcal{L}$ , including as a special case the Laplacian  $\Delta_x$ . We will review results on the existence of steady states of the Lévy-Fokker-Planck equation (1) and the asymptotic stability of a steady state in relative entropy. In particular, for symmetric Lévy operators, exponential decay to the steady state in relative entropy has been established recently. In addition, we show the exponential decay to the steady state in relative entropy for a class of non-symmetric Lévy operators.