Anisotropic Spaces from Standard Pairs

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In recent years, two tools have stood out in the study of the statistical properties of chaotic systems: anisotropic Banach spaces and standard pairs. The former provides a method for applying transfer operators to systems with some hyperbolicity, overcoming the challenge of different behaviors in the stable and unstable directions. Standard pairs, on the other hand, are measures supported on unstable curves that are frequently combined with coupling techniques and other probabilistic ideas to prove many ergodic and mixing properties. This work introduces a method to construct anisotropic norms for a class of piecewise hyperbolic systems based on the idea of standard pairs.