

## Embeddings of Weighted Tensor Product Spaces

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We study embeddings between tensor products of weighted reproducing kernel Hilbert spaces. The setting is based on a sequence of weights  $\gamma_j > 0$  and sequences  $1 + \gamma_j k$  and  $1 + l_{\gamma_j}$  of reproducing kernels  $k$  such that  $H(1 + \gamma_j k) = H(1 + l_{\gamma_j})$ , in particular. We derive necessary and sufficient conditions for the norms on  $\bigotimes_{j=1}^s H(1 + \gamma_j k)$  and  $\bigotimes_{j=1}^s H(1 + l_{\gamma_j})$  to be equivalent uniformly in  $s$ . Furthermore, we study relaxed versions of uniform equivalence by modifying the sequence of weights, e.g., by constant factors, and by analyzing embeddings of the respective spaces. Likewise, we analyze the limiting case  $s = \infty$ .

This is joint work with Klaus Ritter.