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## **Growth Envelopes in Weighted Function Spaces**

In the theory of elliptic partial differential equations with singular boundary functions, in particular, existence and uniqueness of solutions and regularity questions, weighted function spaces of Besov and Sobolev type with Muckenhoupt weights of the class  $\mathcal{A}_p$ , or more general doubling weights, play an important role. In this connection, one uses modern decomposition results (atoms, wavelets) as well as exact characterisations of singularities. A relatively new and far-reaching method consists in the investigation of growth envelopes, we refer to (HAR07, TRI01).

### **References**

- (HAR07) D.D. Haroske. *Envelopes and Sharp Embeddings of Function Spaces*. Chapman & Hall/CRC, 2007.  
(TRI01) H. Triebel. *The structure of functions*. Birkhäuser, Basel, 2001.