



一类多重向量值双正交小波包的刻划

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Characteristics of biorthogonal multiple vector-valued wavelet packets

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摘要 研究向量值小波包. 给出一类3尺度多重向量值双正交小波包的定义及构造. 运用积分理论与算子理论, 刻划了多重向量值双正交小波包的特征, 得到多重向量值小波包的双正交公式. 进而, 得到向量值函数空间 $L^2(R, C^{s \times s})$ 新的Riesz基.

关键词: 双正交 多重 向量值多分辨分析 向量值尺度函数 向量值小波 向量值小波包

Abstract: It is been to investigate the vector-valued wavelet packets. A class of 3-scale biorthogonal multiple vector-valued wavelet packets is defined and a procedure for constructing them is presented. The properties for the biorthogonal multiple vector-valued wavelet packets are characterized. Biorthogonality fomulae for the multiple vector-valued wavelet packets are obtained. Furthermore, new Riesz bases of $L^2(R, C^{s \times s})$ are constructed from the biorthogonal multiple vector-valued wavelet packets.

Key words: biorthogonal multiple vector-valued multiresolution analysis vector-valued scaling functions vector-valued wavelet vector-valued wavelet packets

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