

Quilted Gabor Frames arranged in the theory of Fusion Frames

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As the amount of data has increased in the last decades, efficient methods for the analysis get more important. For the analysis of audio signals Gabor Frames have limitations, since it is not possible to analyse the signal as its best in time and frequency. Therefore the new concept of Quilted Gabor Frames was introduced by Monika Dörfler in 2011. With the Quilted Gabor Frames it is possible to use different Gabor Frames over the time-frequency-plan. This new freedom achieves better results for the analysis. At the same time it is more difficult to secure the Frame properties. By the classification in the theory of Fusion Frames it is possible to transfer some results from the Fusion Frames to the Quilted Gabor Frames. Therefore we get a bigger group of Quilted Gabor Frames with secured Frame properties.