



तेजपुर विश्वविद्यालय

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Department of Mathematical Sciences

Report on research collaboration

between

Dr. Pankaj Kumar Das, Department of Mathematical Sciences, Tezpur University

and

Dr. Lalit K. Vashisht, Saakshi Garg and Deepshikha, Department of Mathematics, University of Delhi

Title of collaboration:

On generalized weaving frames of Hilbert spaces

Summary of collaboration:

A collaborative research work was undertaken by Dr. Pankaj Kumar Das, Dr. Lalit K. Vashisht, Saakshi Garg and Deepshikha with the aim to study generalized frames (in short, g-frames) in the context of distributed signal processing, The main emphasis in this paper is to study weaving properties of g-frames. Firstly, necessary, and sufficient conditions for weaving g-frames in Hilbert spaces are studied and extension of some previous results are studied. Then some Paley-Wiener type perturbation results for weaving g-frames are obtained. Finally, we study necessary and sufficient conditions for weaving g-Riesz bases.

Duration of collaboration:

The collaboration started in the month **February, 2017** and culminated in the form of a published research paper in the month of **June, 2018**.

Details of collaboration:

Details of collaboration could be found in the article-

On generalized weaving frames of Hilbert spaces, **Rocky Mountain J. Math.** 48 (2018), no. 2, 661-85, DOI: 10.1216/RMJ-2018-48-2-661.



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