

# Perturbations of frame sequences and the effect on their duals

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We study small perturbations of (operator-valued) frame sequences and examine the canonical and alternate duals of original and perturbed sequence. It is proved that to each dual of the unperturbed frame sequence there is a dual of the perturbed one such that also the duals are "close to each other". Roughly speaking, the duals are stable under small perturbations.

We also study the perturbation effect on fusion frame duals – a concept which was recently introduced by Heineken et al. in [1]. It turns out that this kind of duality is much harder to tackle. However, we obtain a corresponding stability result in the finite-dimensional case.

## References

- [1] S. Heineken, P.M. Morillas, A.M. Benavente, M.I. Zakowicz. Dual fusion frames. Arch. Math. 103 (2014), 355–365.