

**A unitary Procrustes problem**

*Arnold R. Kräuter\** (MU Leoben), *Balder Ortner* (Erich Schmid Inst., Austrian Acad. Sc.)

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Using the MOORE-PENROSE inverse we present an iteration procedure in order to find the best possible unitary approximation of a given complex  $m \times n$  matrix ( $m \geq n$ ) with full column rank.

We show that, in several respects, our result improves previous work. Furthermore we mention applications of our findings to problems in material physics.