

# Fast and stable unitary QR algorithm

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## Abstract

A fast Fortran implementation of a variant of Gragg's unitary Hessenberg QR algorithm is presented. It is proved, moreover, that all QR- and QZ-like algorithms for the unitary eigenvalue problems are equivalent. The algorithm is backward stable. Numerical experiments are presented that confirm the backward stability and compare the speed and accuracy of this algorithm with other methods.

## Article information

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