

## MINIMAL DEGREE RATIONAL UNIMODULAR INTERPOLATION ON THE UNIT CIRCLE\*

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**Abstract.** We consider an interpolation problem with  $n$  distinct nodes  $z_1, \dots, z_n$  and  $n$  interpolation values  $w_1, \dots, w_n$ , all on the complex unit circle, and seek interpolants  $b(z)$  of minimal degree in the class consisting of ratios of finite Blaschke products. The focus is on the so-called damaged cases where the interpolant of minimal degree is non-uniquely determined. This paper is a continuation of the work in Glader [Comput. Methods Funct. Theory, 6 (2006), pp. 481–492], which treated the uniquely solvable fragile and elastic cases.

**Key words.** rational interpolation, Blaschke product, Nevanlinna parametrization

**AMS subject classifications.** 30D50, 35E05

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