
Franz Peherstorfer and Klaus Schiefermayr

**Description of Inverse Polynomial Images
which Consist of Two Jordan Arcs
with the Help of Jacobi's Elliptic Functions**

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Abstract. First we discuss the description of inverse polynomial images of $[-1, 1]$, which consists of two Jordan arcs, by the endpoints of the arcs only. The polynomial which generates the two Jordan arcs is given explicitly in terms of Jacobi's theta functions. Then we concentrate on the case where the two arcs are symmetric with respect to the real line. In particular it is shown that the endpoints vary monotonically with respect to the modulus k of the associated elliptic functions.

Keywords. Polynomials, elliptic functions, theta functions, inverse polynomial images, Jordan arcs, minimal polynomials.

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