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Computation of Multiply Connected Schwarz-Christoffel Maps for Exterior Domains

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Abstract. We have recently derived a Schwarz-Christoffel formula for the conformal mapping of the exterior of a finite number of disks to the exterior of a set of polygonal curves [5]. In this work we show how to formulate a set of equations for determining the parameters of such a map. A number of examples are computed, including exteriors of multiple slits. We also recall the derivation of the mapping formulae and give a new formula for the doubly connected case.

Keywords. Schwarz-Christoffel transformation, conformal mapping.

2000 MSC. Primary 30C30; Secondary 65E05.

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- [5] T. K. DeLillo, A. R. Elcrat, and J. A. Pfaltzgraff, Schwarz-Christoffel mapping of multiply connected domains, *J. d'Analyse Math.* **94** (2004),