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Numerical experiment on conformal mapping of doubly connected regions onto a disk with a slit. (English) [Zbl 1178.30004](#)

Int. J. Pure Appl. Math. 51, No. 4, 589-608 (2009).

The authors present a method for computing conformal mappings of ring-domains bounded by regular Jordan curves onto a disk $|w| < r$ with a concentric circular slit $|w| = \mu r$, $0 < \mu < 1$. Starting from an integral boundary equation with the Neumann kernel they derive a system of integral equations. Then the system is solved numerically by the method of Nyström with the trapez rule. They provide five examples in which exact forms of the mapping are known.

Reviewer: [Eligiusz Złotkiewicz \(Lublin\)](#)

MSC:

[30C30](#) Schwarz-Christoffel-type mappings

[65R20](#) Numerical methods for integral equations

[65E05](#) General theory of numerical methods in complex analysis (potential theory, etc.)

Cited in **1** Review
Cited in **8** Documents

Keywords:

[conformal mapping](#); [ring domain](#)