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**Eric Schippers**

**Behaviour of Kernel Functions under Homotopic Variations of Planar Domains**

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**Abstract.** A variational formula is derived for Green's function of multiply connected planar domains under homotopy of the boundary. The formula shows that up to first order, a homotopy behaves like the Hadamard variation. This is applied to show that certain expressions in the derivatives of Green's function are monotonic with respect to set inclusion.

**Keywords.** Green's function, Hadamard variation, Bergman kernel.

**2000 MSC.** 30C40, 30C70.

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