1017-31-12   **Steven R. Bell** (`bell@math.purdue.edu`), Department of Mathematics, Purdue University, West Laffayette, IN, **Peter Ebenfelt** (`pebenfel@ucsd.edu`), Department of Mathematics, UCSD, La Jolla, CA, **Dima Khavinson*** (`dkhavins@nsf.gov`), Suite 1025 DMS/MPS/NSF, 4201 Wilson Blvd., Arlington, VA 22230, and **Harold S. Shapiro** (`shapiro@math.kth.se`), Department of Mathematics, Royal Institute of Technology, S10044 Stockholm, Sweden. *Algebraic aspects of the Dirirchlet problem.*

We shall consider the Dirichlet problem with rational data on the boundary of a plane domain. We characterize disks as the only domains for which all solutions of such boundary value problems are rational. We also characterize simply connected quadrature domains as the only domains for which solutions of all such Dirichlet problems are algebraic functions whose singularities are controlled by those of the Riemann mapping function. (Received December 03, 2005)