

1106-AA-1809 **Richard Balka** and **Yuval Peres***, 1 Microsoft Way, Redmond, WA 98052. *The largest dimension of sets on which Brownian motion is monotone.*

It is a classical fact that level sets of one-dimensional Brownian motion, as well as the set of record times, have Hausdorff dimension $1/2$ a.s. Can we find a larger random set A on which Brownian motion is monotone? Perhaps surprisingly, the answer is obtained by using Kaufmann's dimension doubling theorem for planar Brownian motion. Analogous results for Fractional Brownian motion, deterministic self-affine functions and random walks (obtained in joint work with Omer Angel and Andras Mathe) will also be described. (Received September 15, 2014)