1113-37-52   **Johannes Jaerisch*** (`jaerisch@riko.shimane-u.ac.jp`), Matsue, Japan, and **Hiroki Sumi**, Osaka, Japan. *Hölder regularity of the complex analogues of the Takagi function.*

Recently, H. Sumi introduced complex analogues of the Takagi function, which play a role in the iteration of rational maps on the Riemann sphere $\hat{\mathbb{C}}$ and random complex dynamical systems. We investigate the Hölder regularity of a complex analogue C of the Takagi function. Under certain assumptions, by employing methods from ergodic theory, we obtain new results about the set of points in which C satisfies a local Hölder condition with a prescribed Hölder exponent. In particular, we determine the set of points $z \in \hat{\mathbb{C}}$ for which C is not locally constant in a neighbourhood of z. This is a joint work with H. Sumi. (Received August 05, 2015)