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Luis A Medina* (luis.medina17@upr.edu), **Matthew G Parker**, **Constanza Riera** and **Pantelimon Stanica**. *Root-Hadamard transforms and complementary sequences*. Preliminary report.

We define a new transform on (generalized) Boolean functions, which generalizes the Walsh-Hadamard, nega-Hadamard, 2^k -Hadamard, consta-Hadamard and all HN -transforms. We describe the behavior of what we call the root-Hadamard transform for a generalized Boolean function f in terms of the binary components of f . Further, we define a notion of complementarity (in the spirit of the Golay sequences) with respect to this transform and furthermore, we describe the complementarity of a generalized Boolean set with respect to the binary components of the elements of that set. (Received September 03, 2019)