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**Pair Correlation of Fractional Parts Derived from Rational Valued Sequences.**

We investigate the pair correlation of the sequence of fractional parts of $\alpha x_n$, $n \in \mathbb{N}$, where $x_n$ is rational valued and $\alpha$ is a real number. As examples, we offer two classes of sequences $x_n$ whose pair correlation behaves as that of random sequences for almost all real numbers $\alpha$. First, sequences of the form $x_n = a_n/b_n$ where $a_n$ is lacunary and $b_n$ satisfies a certain growth condition. Second, sequences of the form $x_n = g^n/2^{\omega(n)}$ for a positive integer $g$ which is not a power of 2 and where $\omega(n)$ denotes the number of distinct prime factors of $n$. We complement these results with a discussion on rational valued vector sequences. (Received September 15, 2015)