Rooted Tree Linear Cascades

1 Why

TODO

2 Definition

A *rooted tree linear cascade* is an ordered pair: the first object is a rooted weighted tree; the second is a random vector whose covariance is the identity matrix. We call the random vector the noise. Given a rooted tree linear cascade, we define a random vector whose component at the root is the is defined to be the cascade's random We def A rooted tre To a rooted tree linear cascade corresponds a random vector A rooted tree linear cascade induces

2.1 Notation

Let $(A, \mathcal{A}, ¶)$ be a probability space. Let $e : A \to \mathbf{R}^d$ be a random vector, let T be a tree on $\{1, \ldots, d\}$ with $a_{ij} = a_{ji}$ the weight on edge $\{i, j\}$.