Algorithm 2 Distributed Clock Synchronization

procedure ALMOST SURE GLOBAL SYNCHRONIZATION
    Inputs: r *and* $\mathbb{G} = (\mathcal{V}, \mathcal{E})$, $\mathcal{E} \leftarrow$ *Edge Set*
        $\{\tau_i(0,0)\}_{i=1}^{N} \leftarrow$ *Initial phase of N-Clocks*
    Each agent $i \in \mathcal{V}$ *receives information from all its in-neighbours* J *that satisfy* $\nu_{ji} = 1, \forall j \in J$, *where* $\nu_{ji} \sim$ *Bernoulli*(p) *and does the following:*
    while $\tau_i \in [0,1]$ **do**
        if $\tau_i = 1$ **then** $\tau_i^+ = 0$
        if $\max_{j \in J} \tau_j = 1$ **then**
            if $0 \leq \tau_i < r_i$ **then** $\tau_i^+ = 0$
            if $\tau_i > r_i$ **then** $\tau_i^+ = 1.$
            if $\tau_i = r_i$ **then** $\tau_i^+ \in \{0,1\}.$
        $\dot{\tau}_i = \omega$