Algorithm 2 Resampling wheel

procedure RESAMPLING_WHEEL($\mathcal{X}_{temp}, w_t$)
    $\mathcal{X}_t \leftarrow \emptyset$
    sample $idx \sim M \cdot \mathcal{U}(0,1)$
    $\beta \leftarrow 0$
    $mw = max(w_t)$
    for $m = 1$ to M **do**
        $\beta \leftarrow \beta + \mathcal{U}(0,1) \cdot 2 \cdot mw$
        while $\beta > w_t[idx]$ **do**
            $\beta \leftarrow beta - w_t[idx]$
            $idx \leftarrow (idx + 1) \mod M$
        add $\mathcal{X}_{temp}[idx]$ to $\mathcal{X}_t$