algorithm.

Algorithm 1: Correlated Poisson generator algorithm

Input: $\mathbf{g}$, $\mathbf{\Sigma}$

Init : $\mathbf{m} \leftarrow \text{array}\,()$

$\mathbf{u} \leftarrow \mathcal{N}(\mathbf{0}, \mathbf{\Sigma})$

for $i \leftarrow 0$ **to** $\text{range}\,(\mathbf{g})$ **do**

- $u \leftarrow \mathbf{u}\,[i]$
- $m_i \leftarrow 0$
- $p \leftarrow e^{-\mathbf{g}[i]}$
- $s \leftarrow p$
- **while** $u > s$ **do**
  - $m_i \leftarrow m_i + 1$
  - $p \leftarrow p * \mathbf{g}\,[i]\,/m_i$
  - $s \leftarrow s + p$
- **end**
- $\mathbf{m}$.append(m_i)

end

return m