Probability density function (log-normal) realBranch rate $r(\vec{\mathcal{R}})$ 2.0 5 Mean=1 $\sigma = 0.1$ 4 -1.5 = 0.5 $p(r|\sigma)$ $\sigma = 1$ 3 1.0 2 0.50.0 2.0 0.5 1.0 2.0 0.0 0.5 1.0 1.5 0.0 1.5 Abstraction $\vec{\mathcal{R}}$ [rate] Branch rate rcat with 10 bins quantBranch rate $r(\vec{\mathcal{R}}^{})$ Branch rate $r(ec{\mathcal{R}}_{})$ 2.0 2.0 1.5 1.5 1.0 1.0 -0.50.5 0.0 0.0 0 0.8 0.9 Abstraction $\vec{\mathcal{R}}$ [category number] Abstraction $\vec{\mathcal{R}}$ [quantile]