Ratio Expected/Unexpected: 50/50. Average of 100 models Cross temporal decoding score Convergence of loss function on test data 2.0 reg. 0.8 1.8 Training time tau (Cross Entropy + L1 oss test data Ω 0.6 1.6 Ω - 0.4 1.4 0.2 1.2 0.0 1.0 10 20 30 A A B B CCD D 40 Testing time t **Epoch** Ratio Expected/Unexpected: 60/40. Average of 89 models Cross temporal decoding score Convergence of loss function on test data 2.0 reg. 0.8 1.8 Training time tau (Cross Entropy + L1 0.6 1.6 - 0.4 1.4 0.2 1.2 0.0 1.0 10 20 30 0 40 AВВ CCD D Testing time t **Epoch** Ratio Expected/Unexpected: 75/25. Average of 100 models Convergence of loss function on test data Cross temporal decoding score 2.0 (Cross Entropy + L1 reg 0.8 1.8 Training time tau 0.6 1.6 - 0.4 1.4 0.2 1.2 DD 0.0 1.0 0 10 20 30 40 AAВВ CCD D Testing time t **Epoch** Ratio Expected/Unexpected: 90/10. Average of 100 models Cross temporal decoding score Convergence of loss function on test data 2.0 (Cross Entropy + L1 reg. 0.8 1.8 Training time tau 0.6 1.6 - 0.4 1.4 0.2 1.2 0.0 1.0 D D 0 10 20 30 A A ВВ CC40 **Epoch** Testing time t

