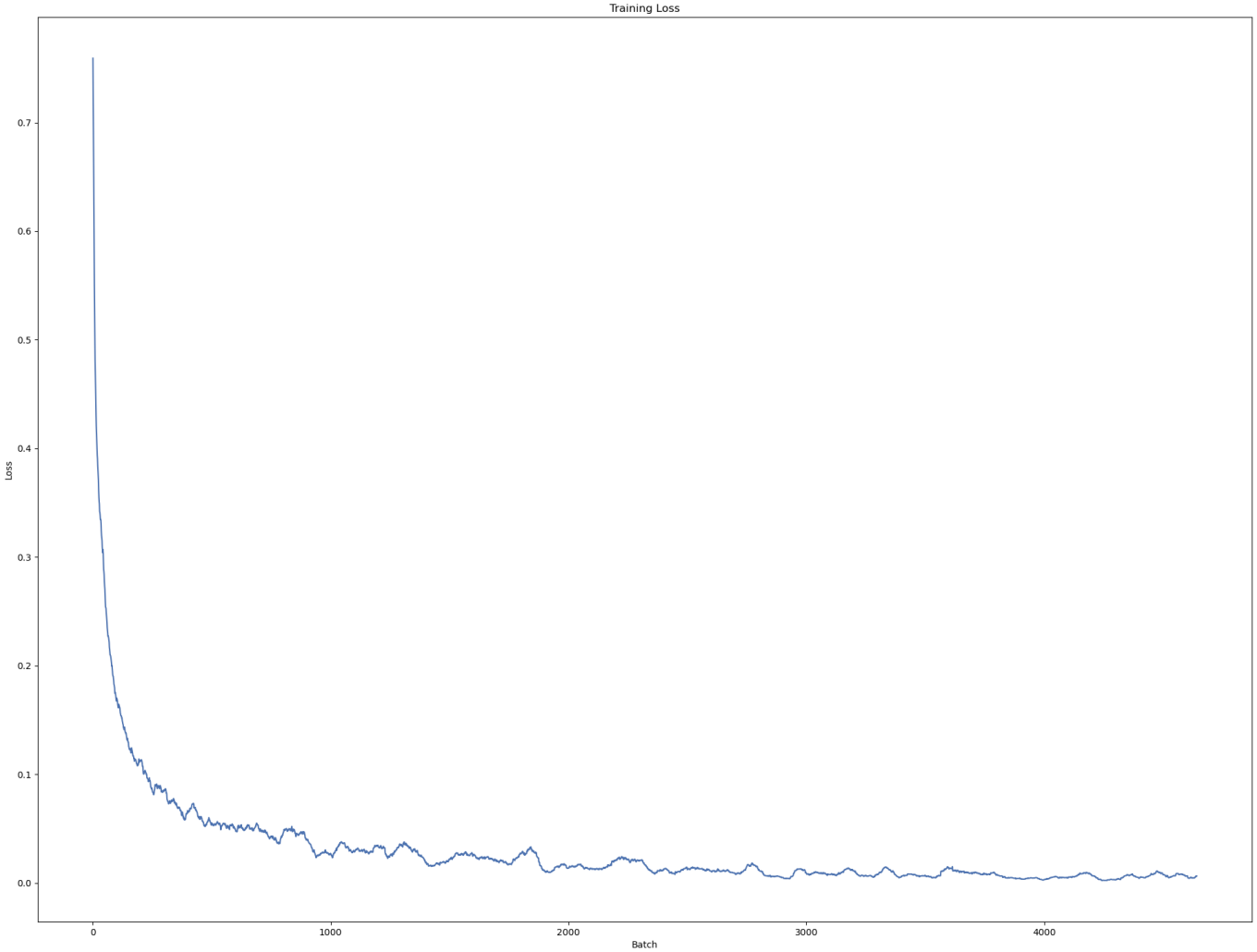
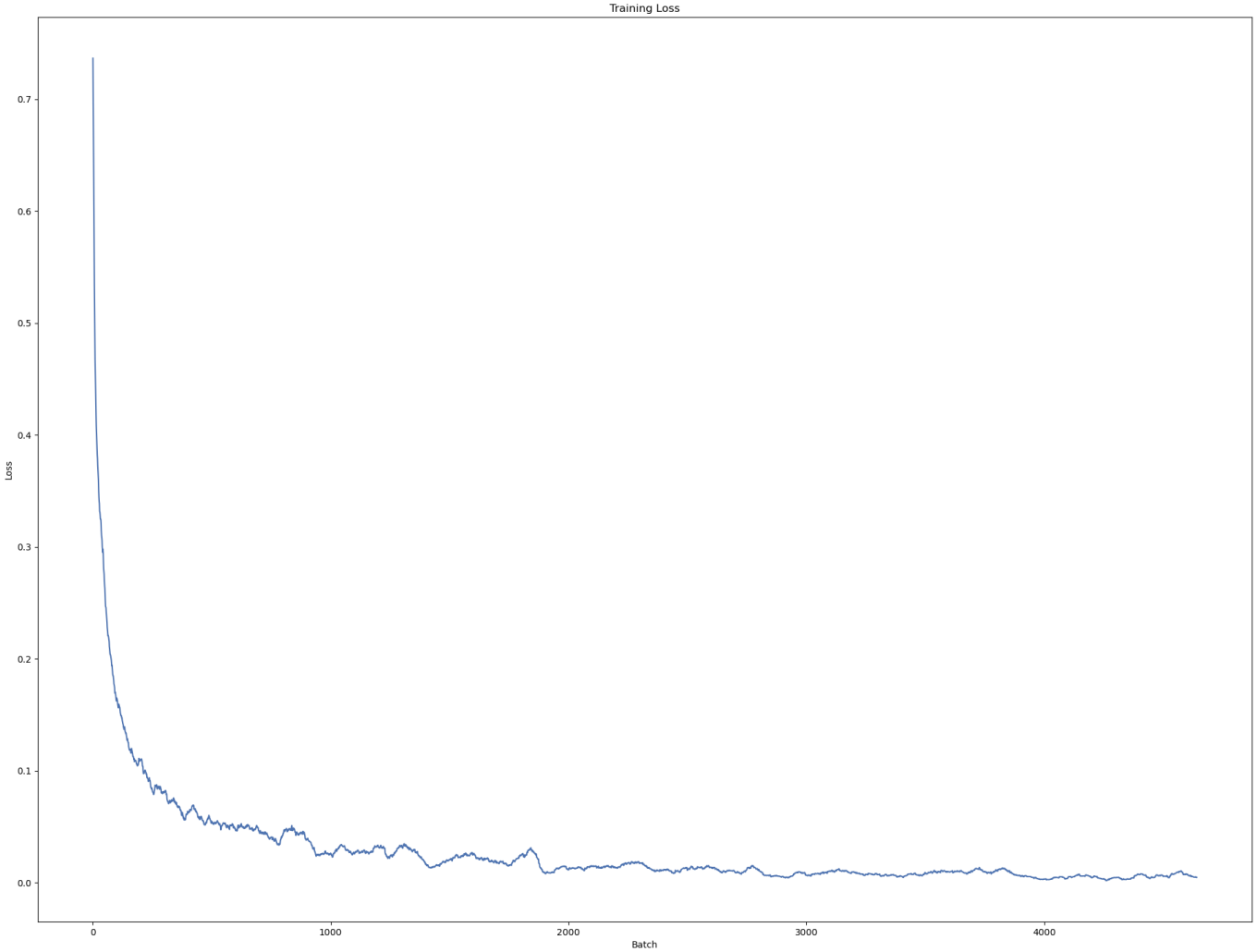
Some experiments on Jacobian regularization and other remarks
Training plots by plot

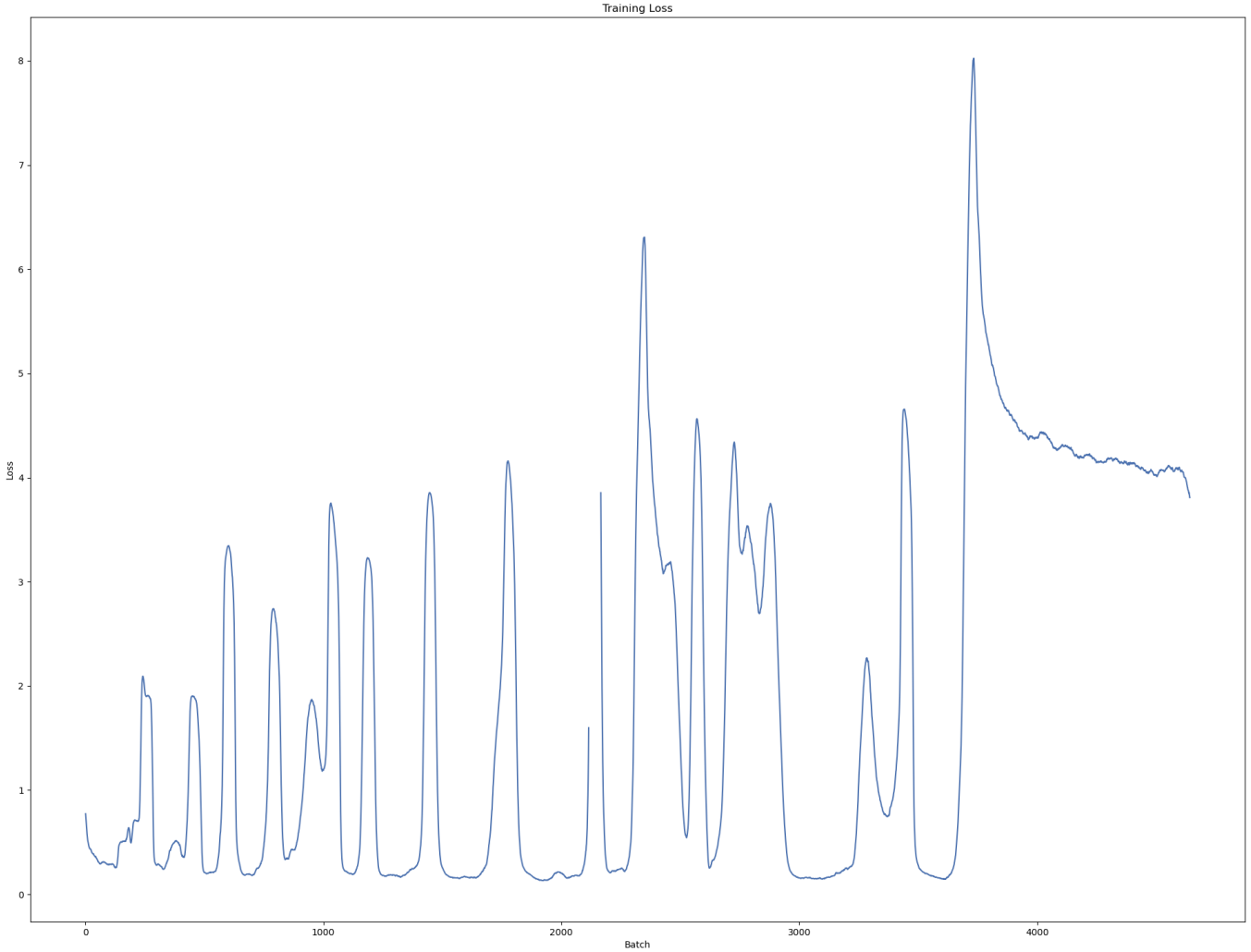
Baseline 1 - Training loss



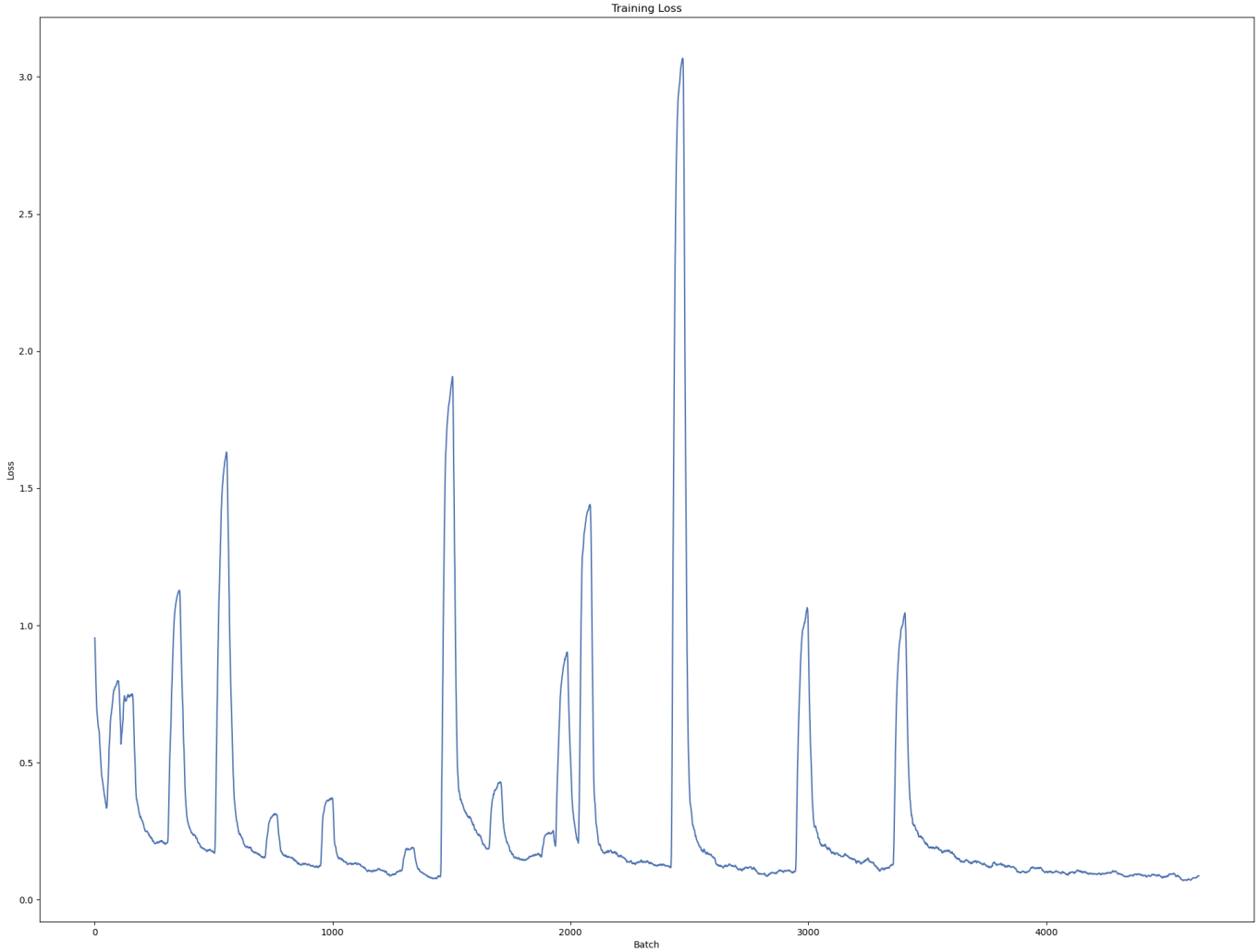
Jacobian 0.1 - Training loss



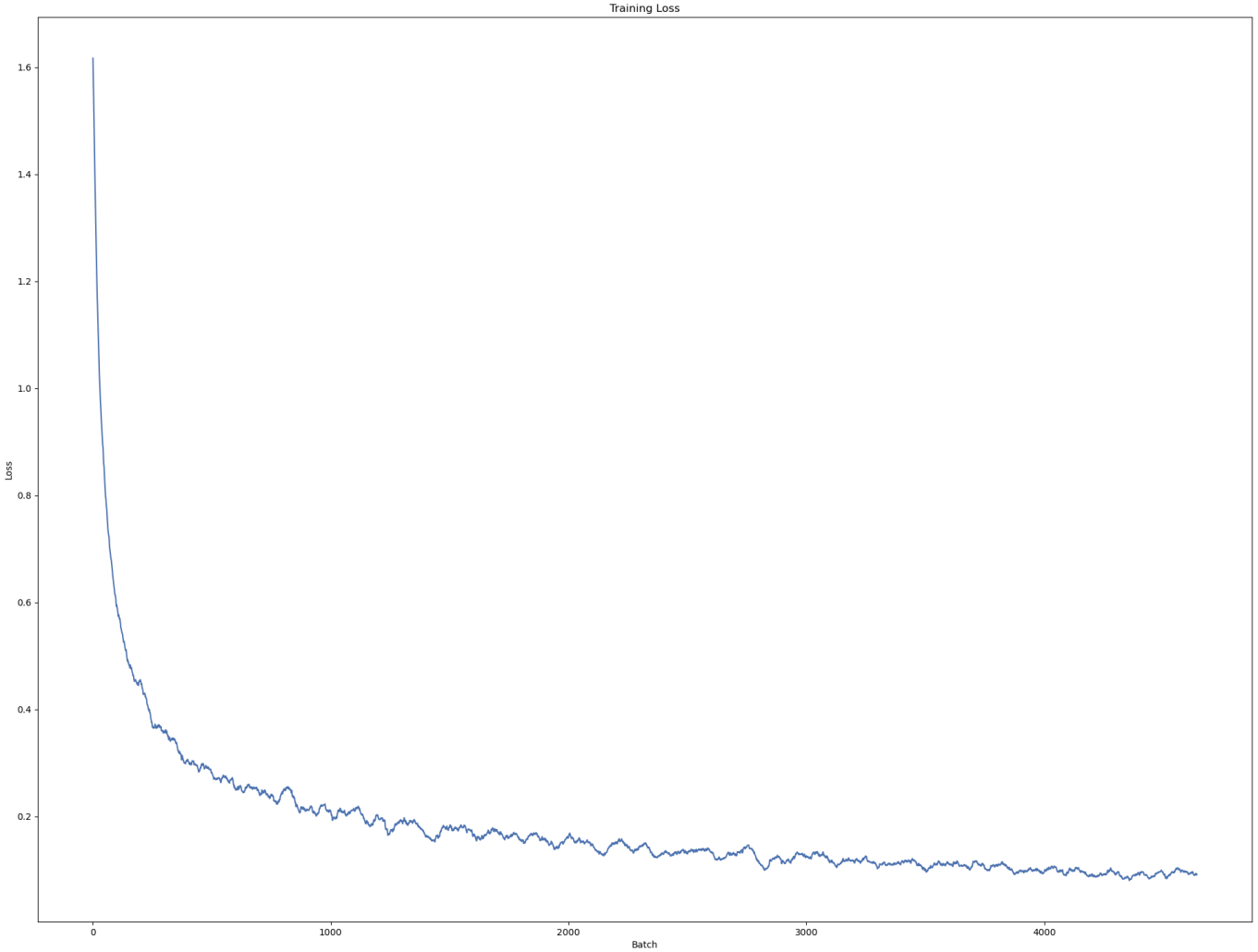
Jacobian 8.4 - Training loss



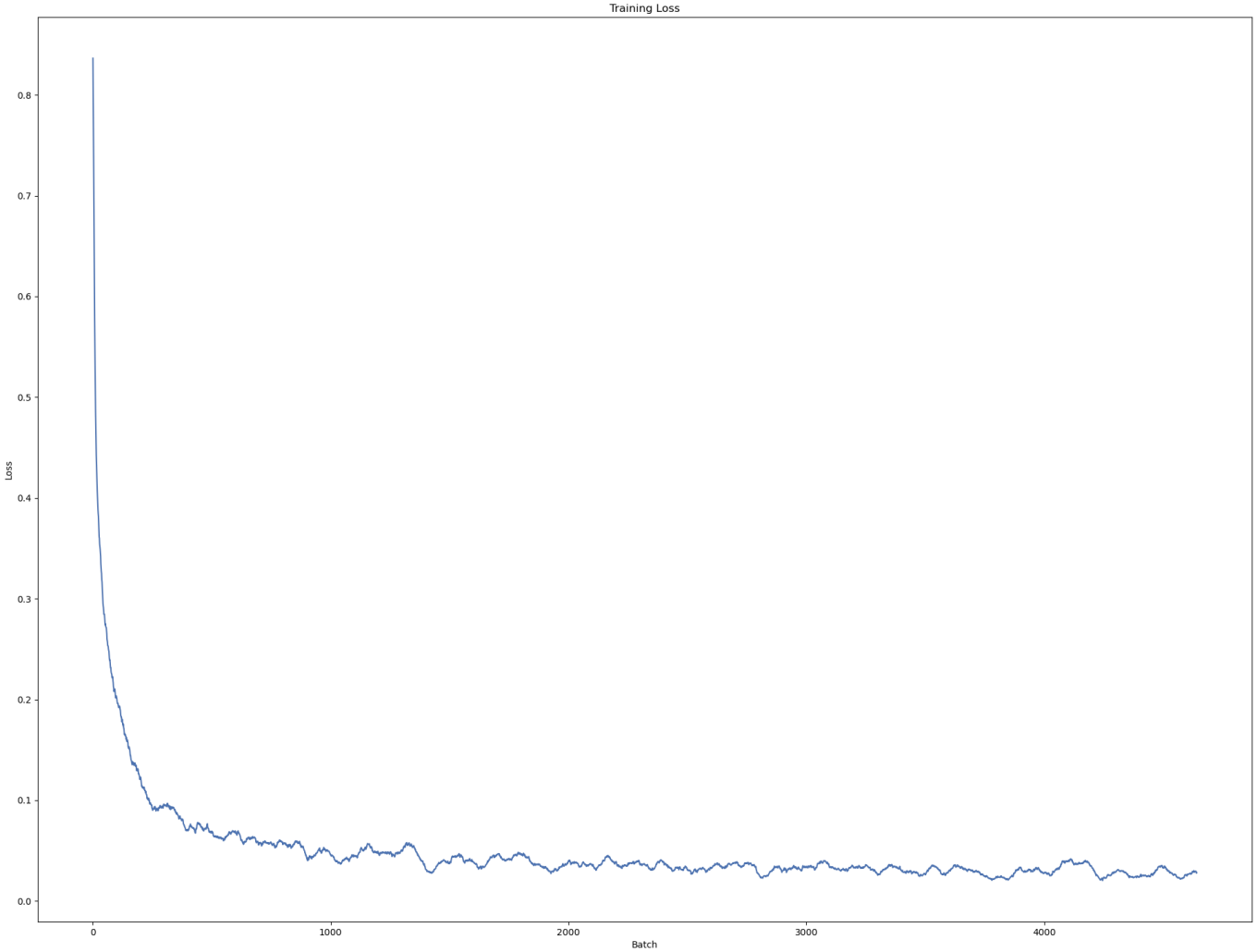
Isometry 8.4 - Training loss



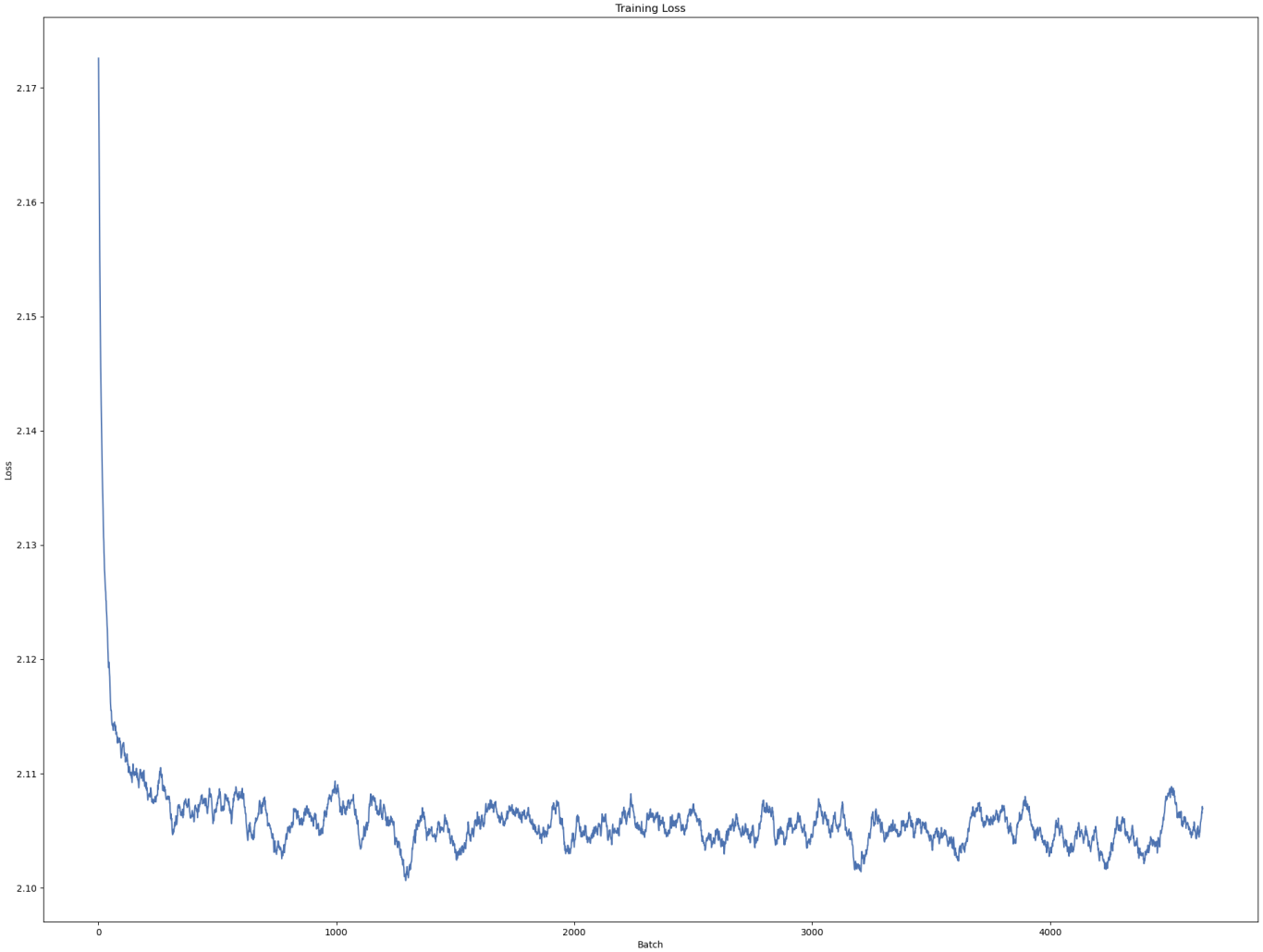
Adversarial training - Training loss



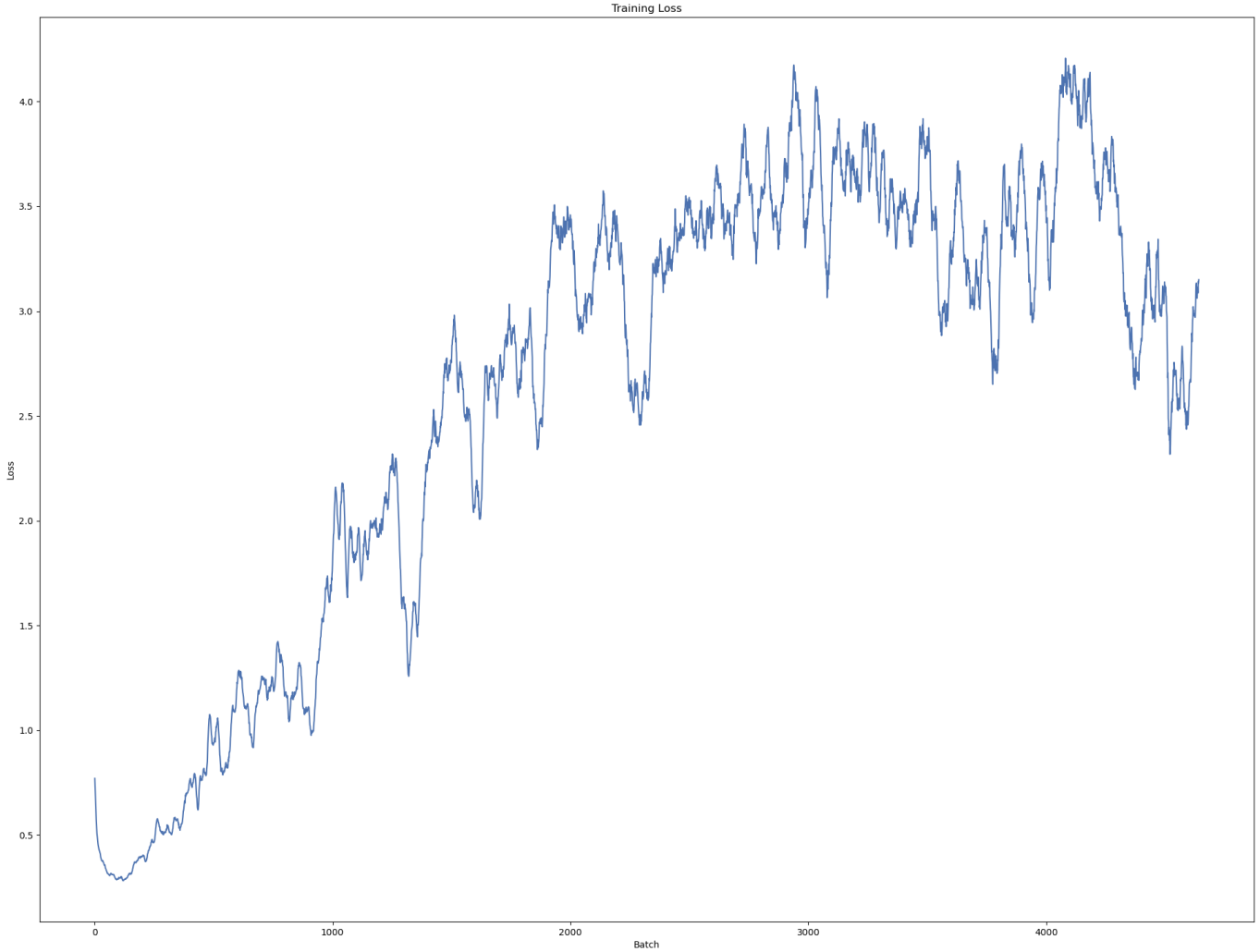
Parseval - Training loss



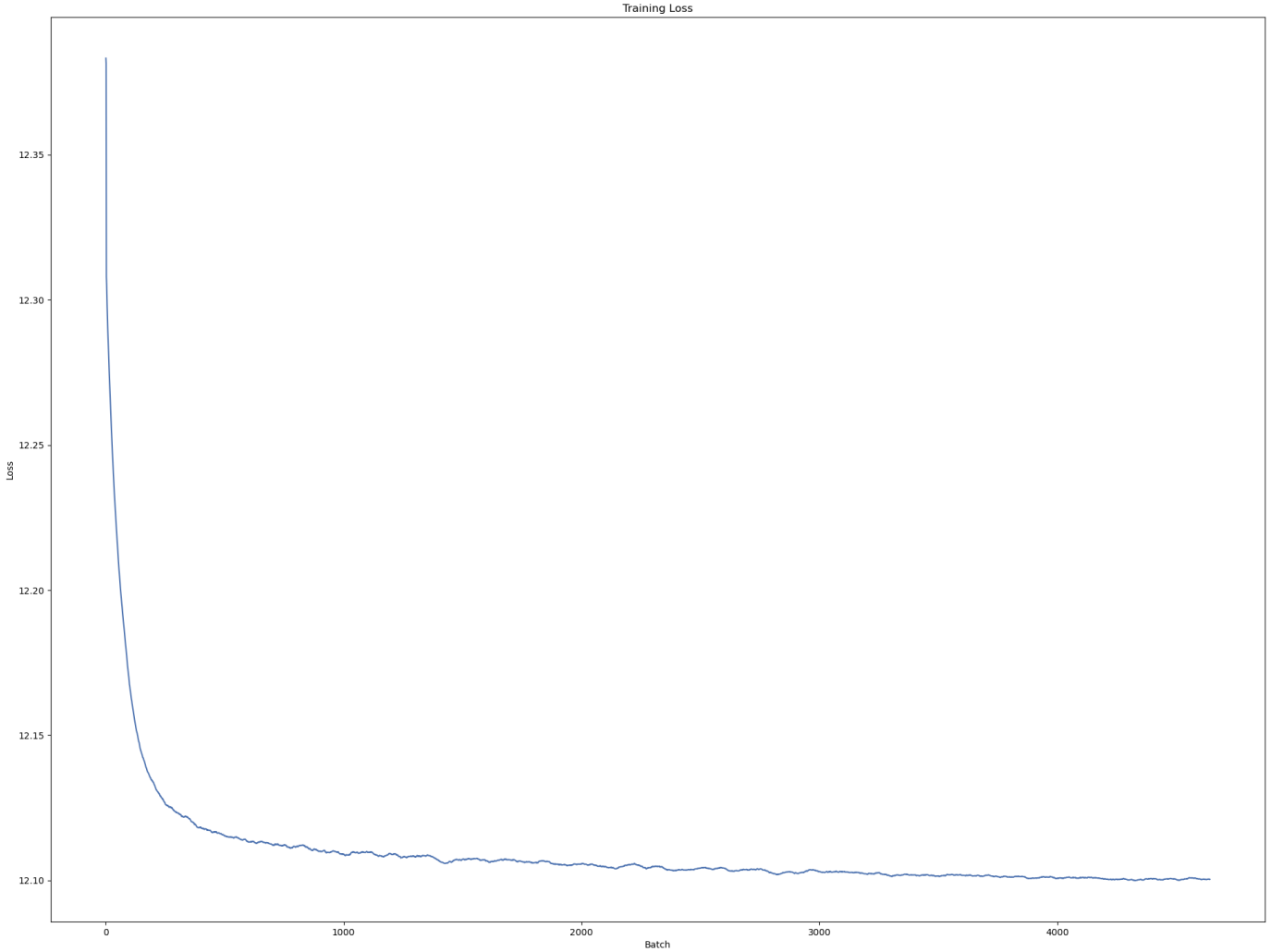
Distillation - Training loss



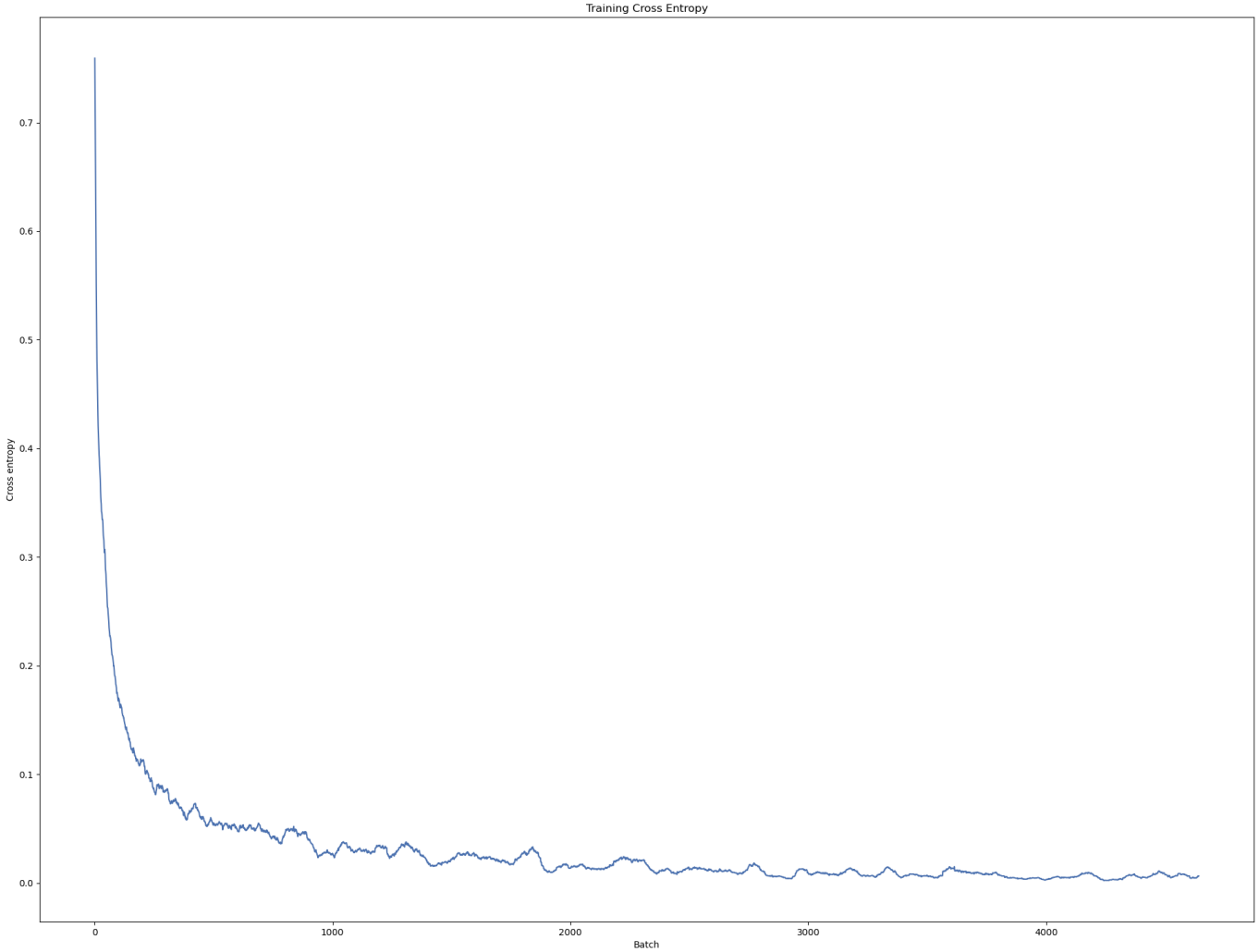
Jacobian regularization only - Training loss



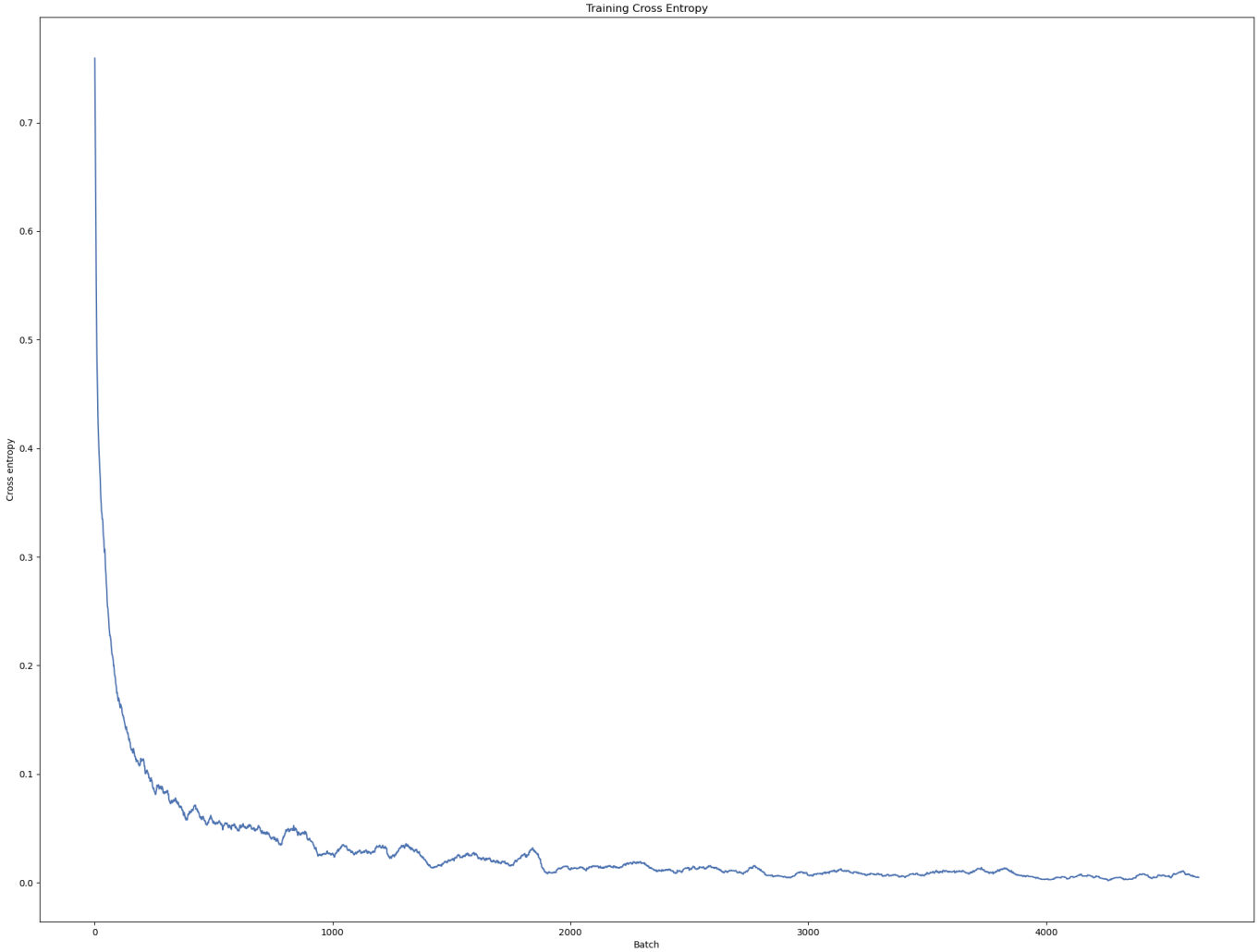
Suppress max eigenvalue - Training loss



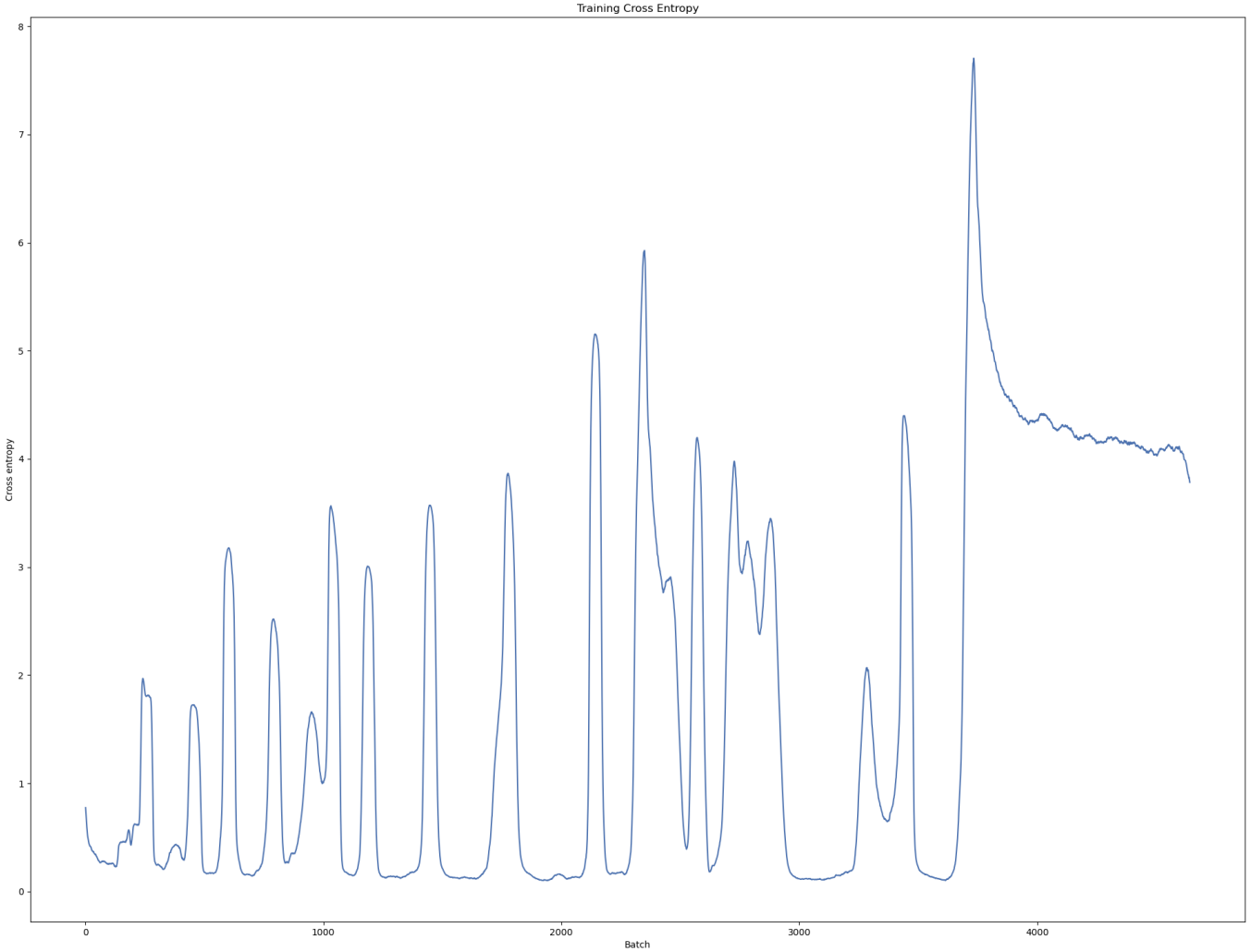
Baseline 1 - Training cross entropy



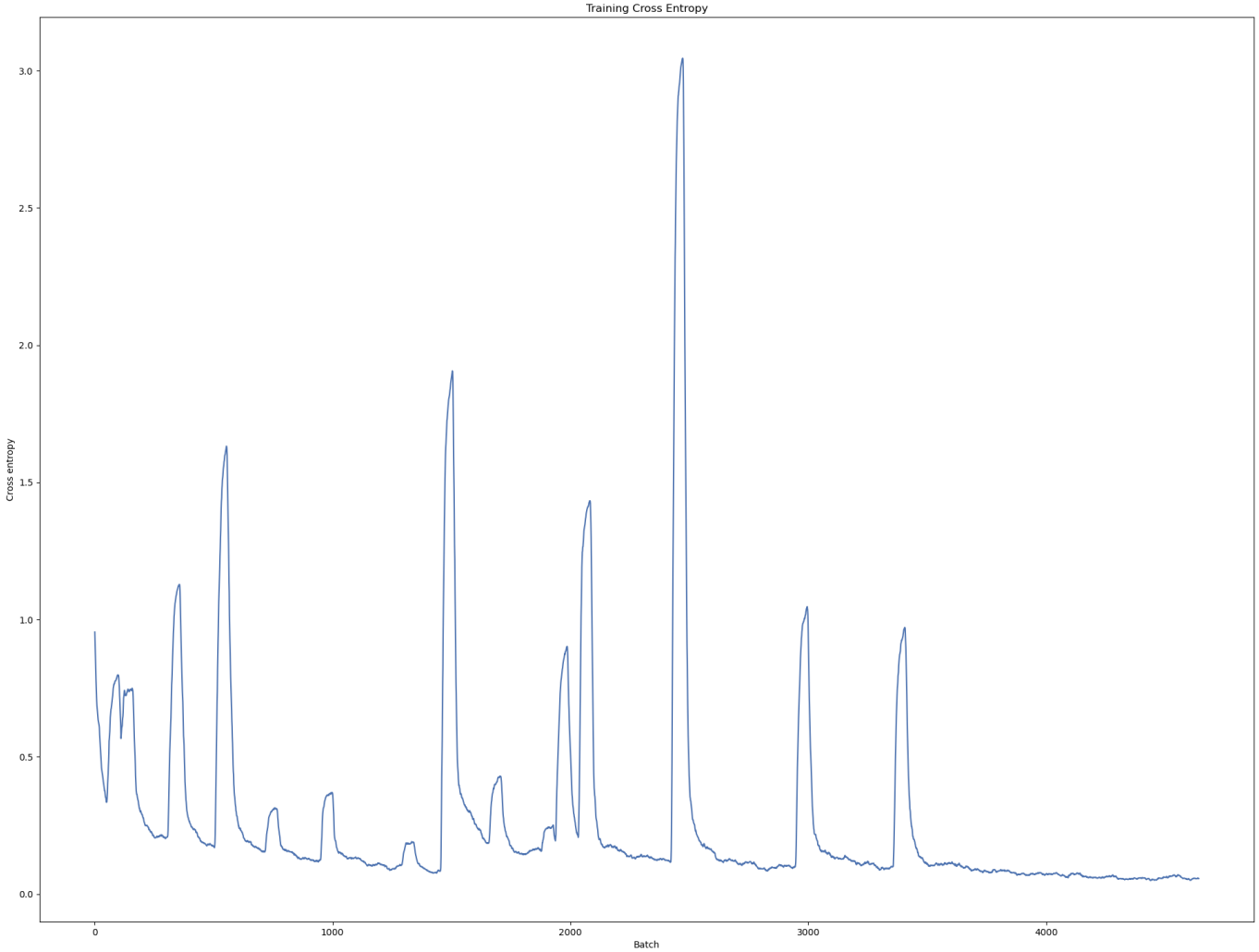
Jacobian 0.1 - Training cross entropy



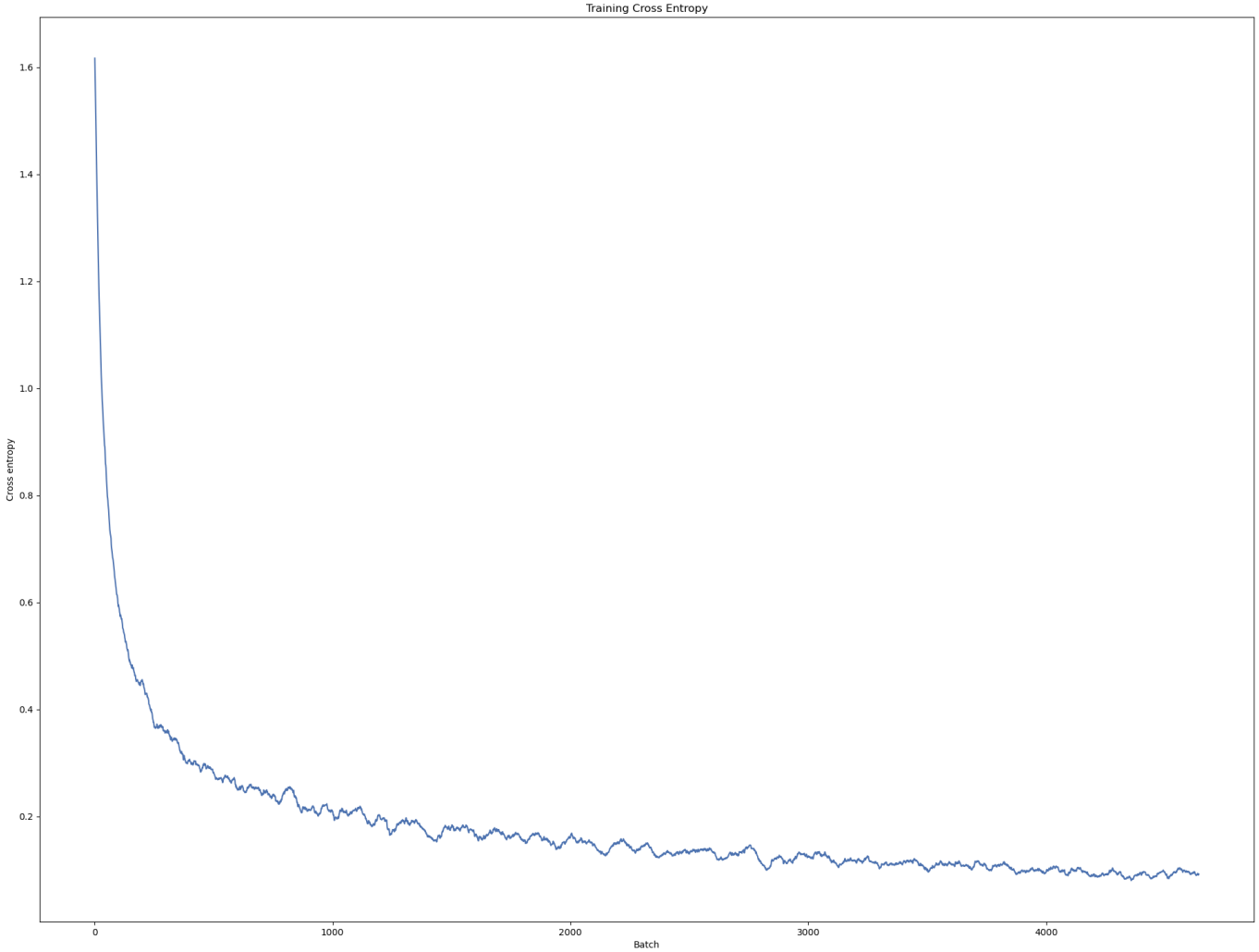
Jacobian 8.4 - Training cross entropy



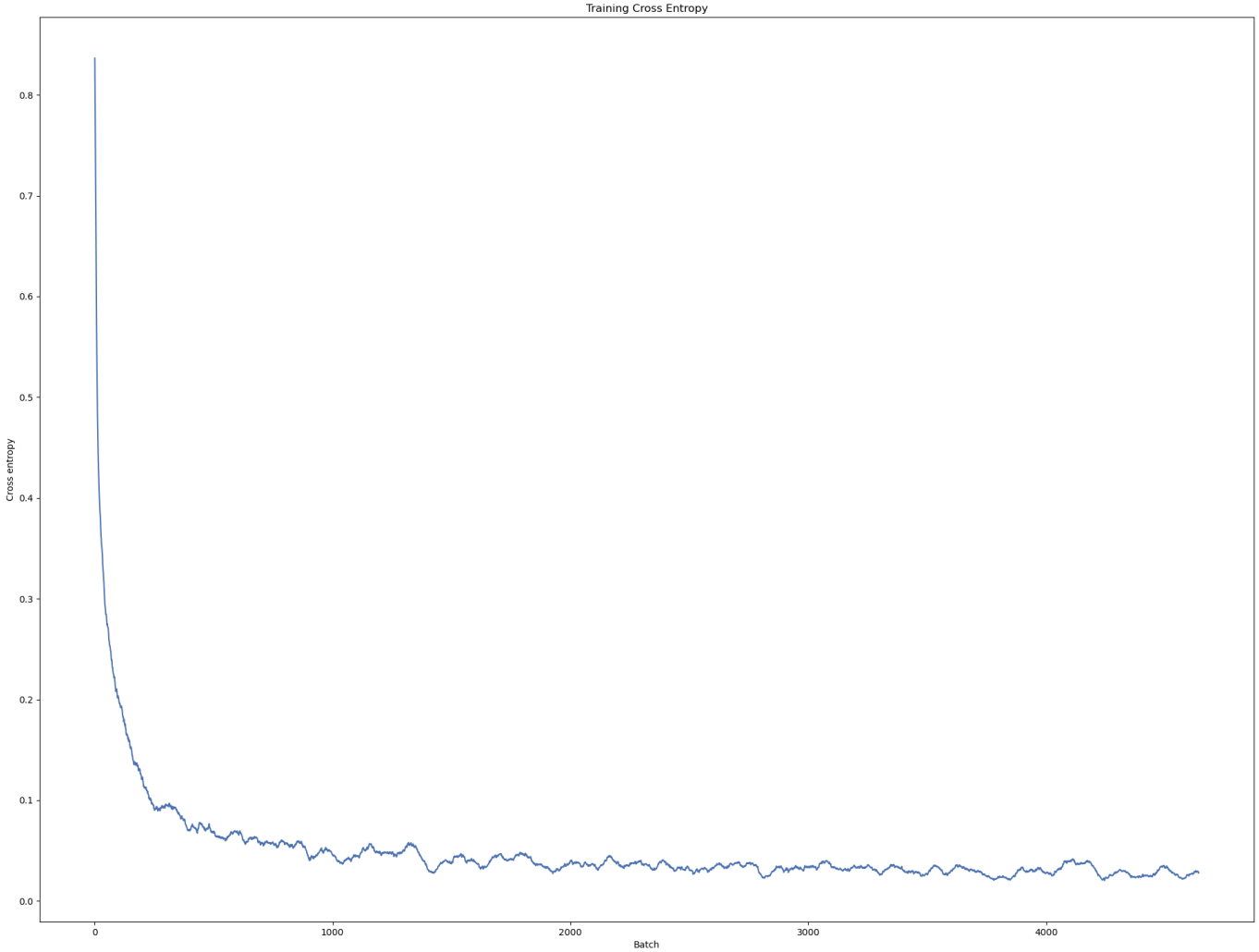
Isometry 8.4 - Training cross entropy



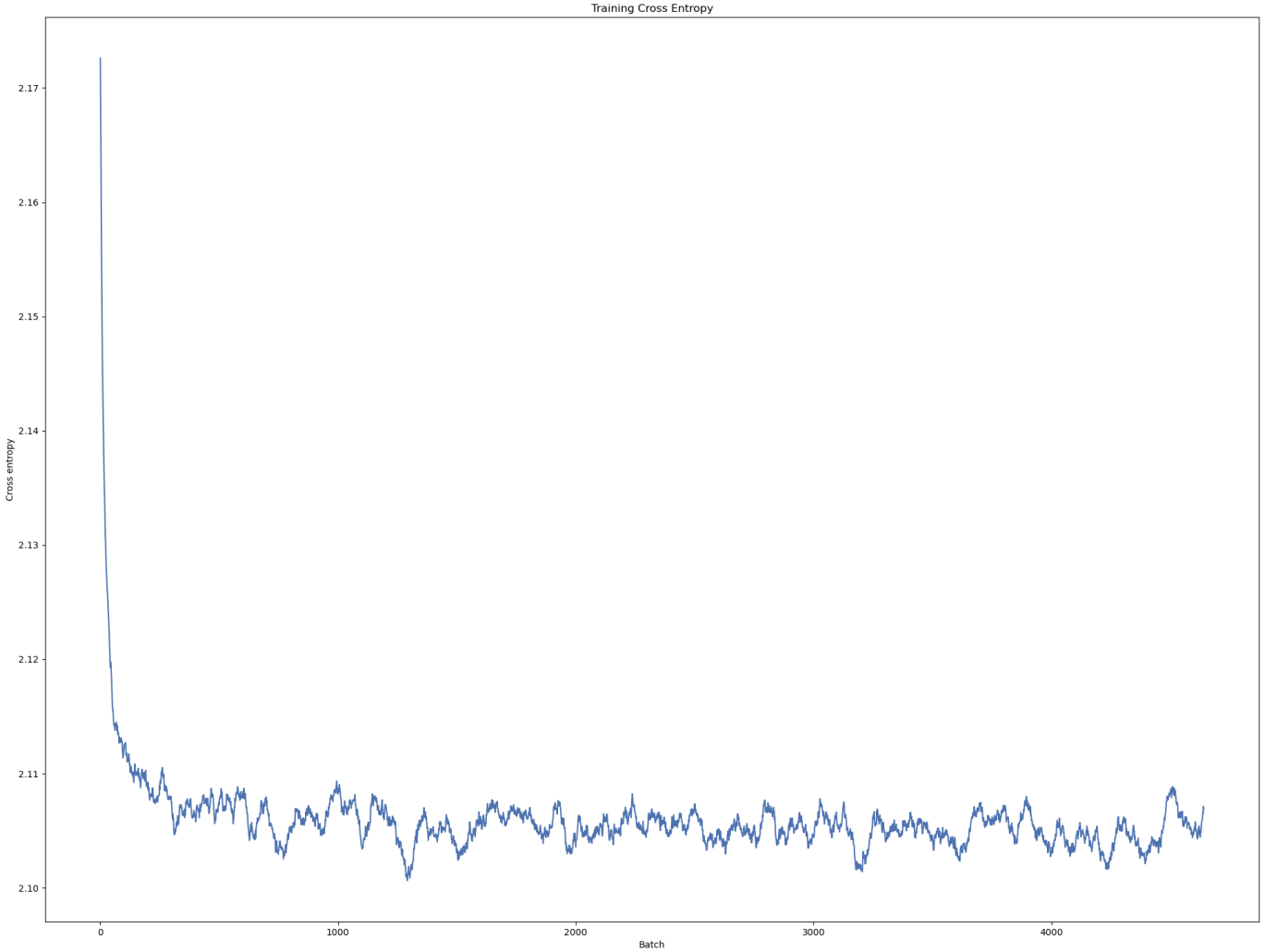
Adversarial training - Training cross entropy



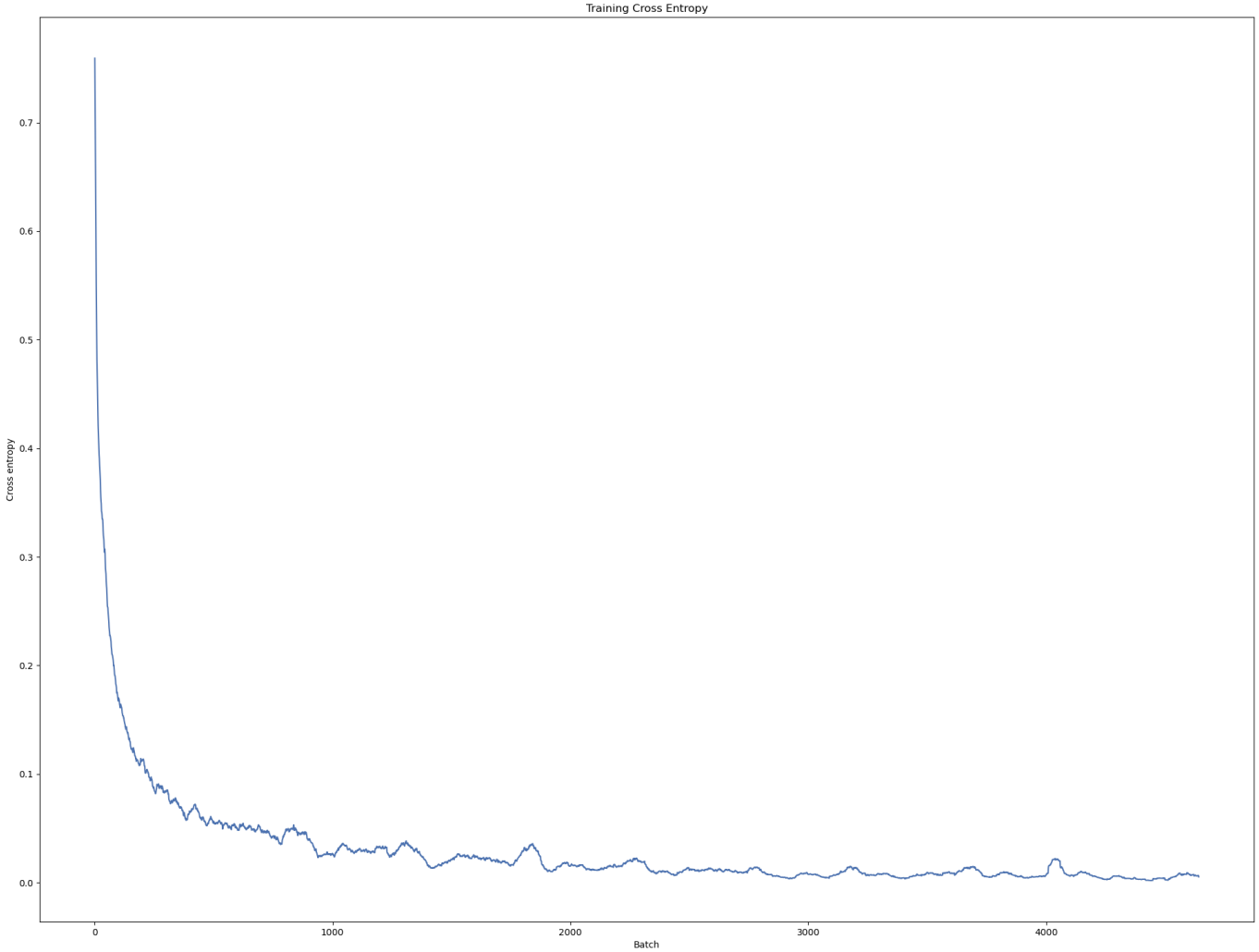
Parseval - Training cross entropy



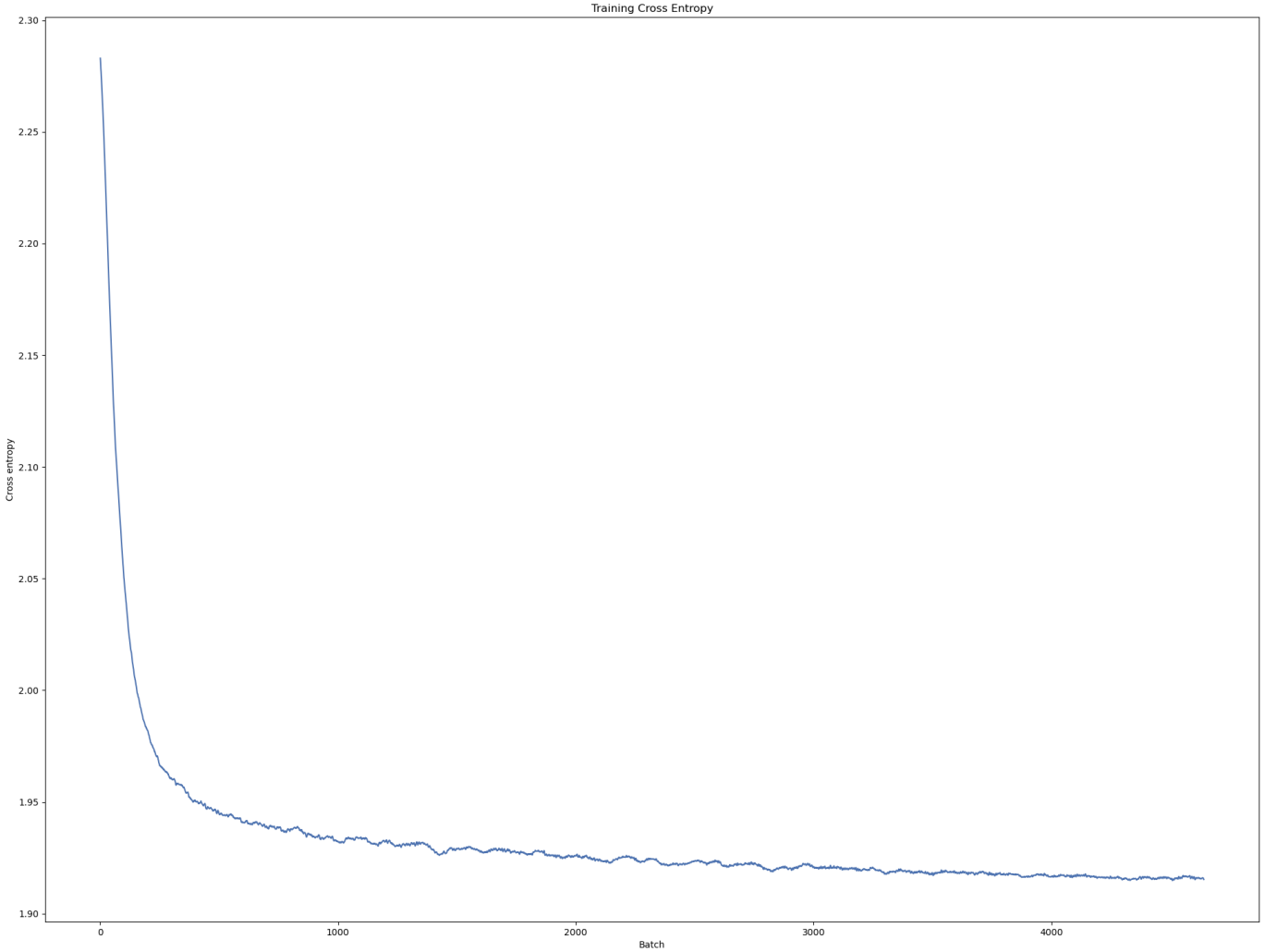
Distillation - Training cross entropy



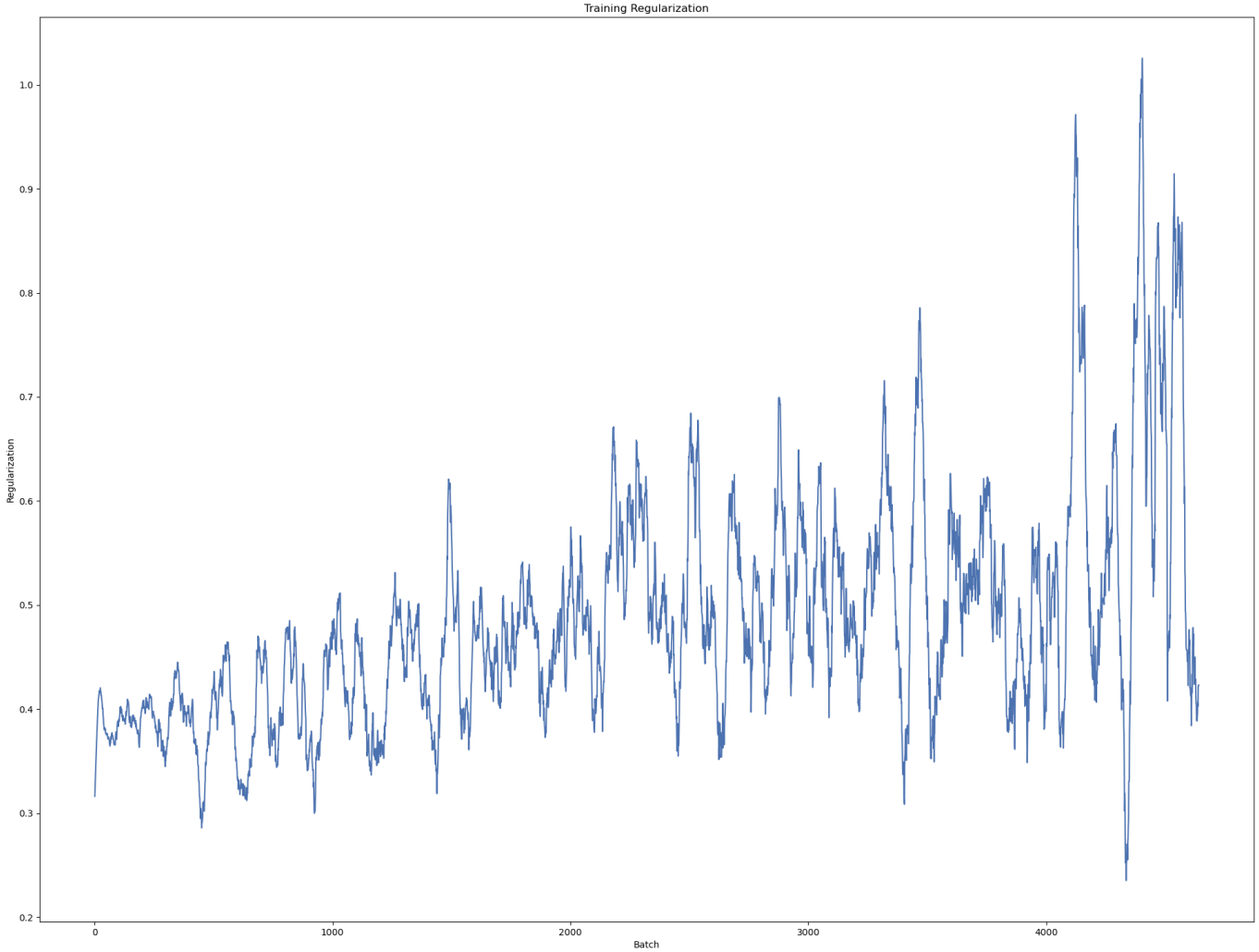
Jacobian regularization only - Training cross entropy



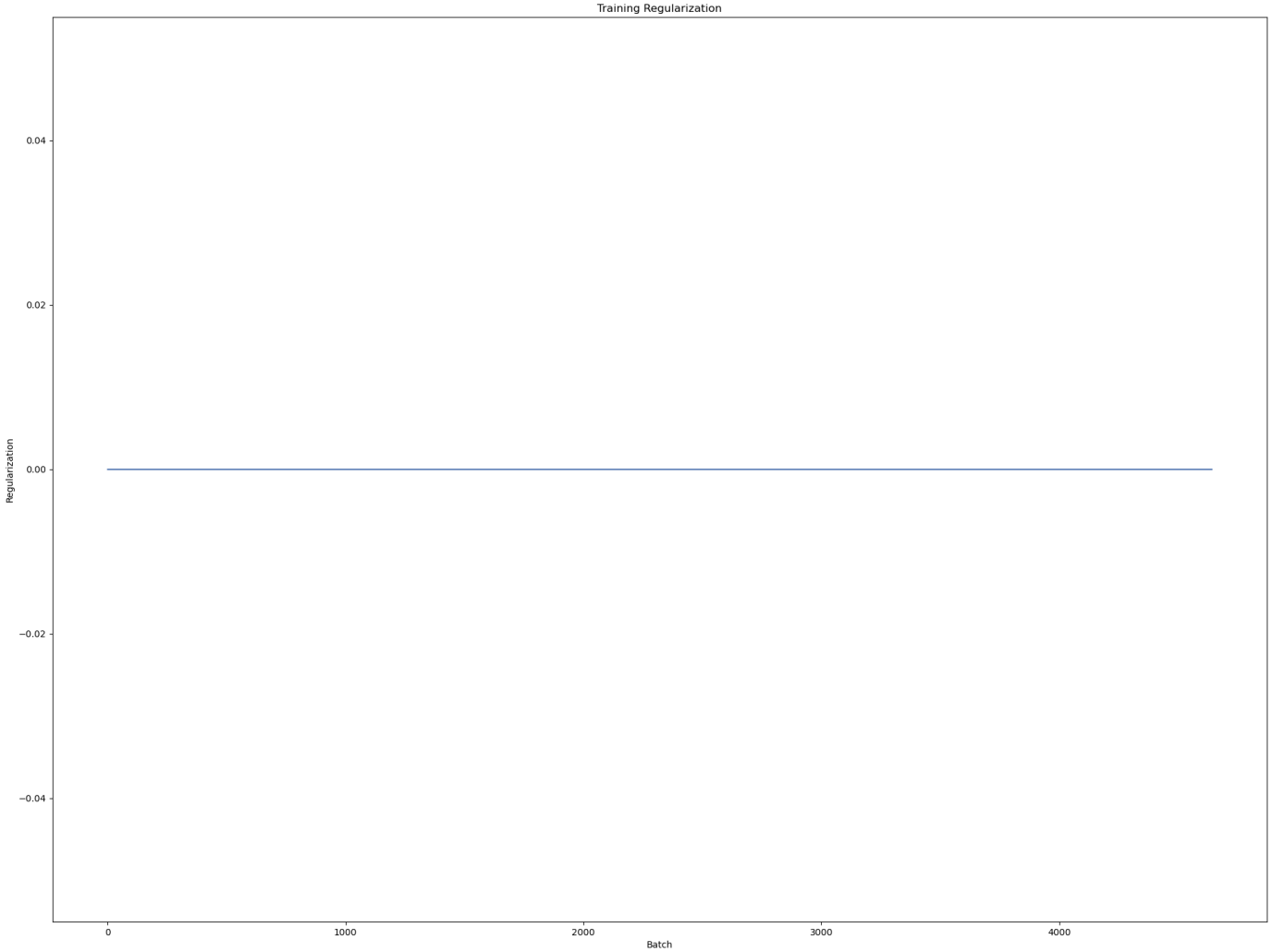
Suppress max eigenvalue - Training cross entropy



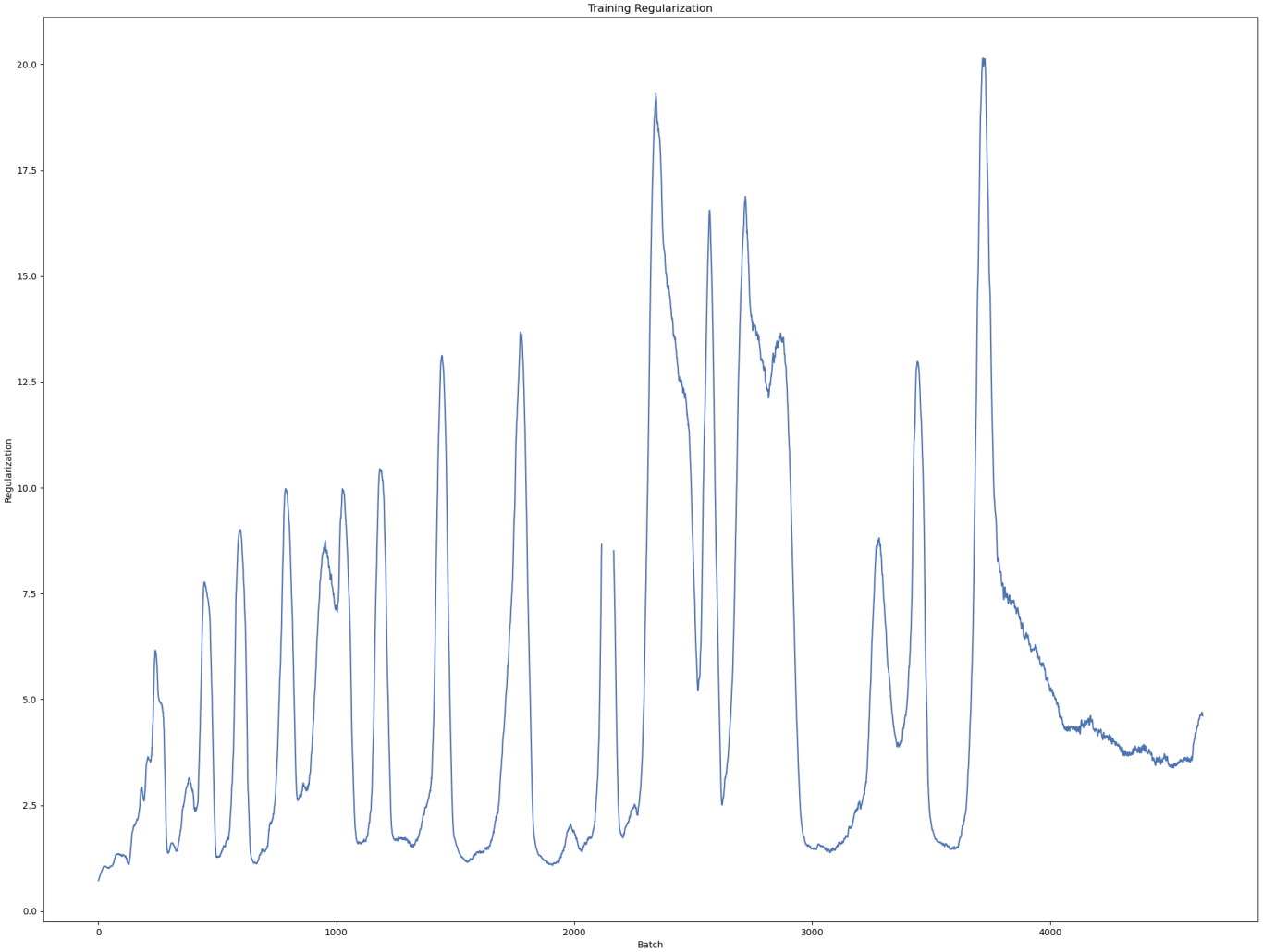
Baseline 1 - Jacobian regularization



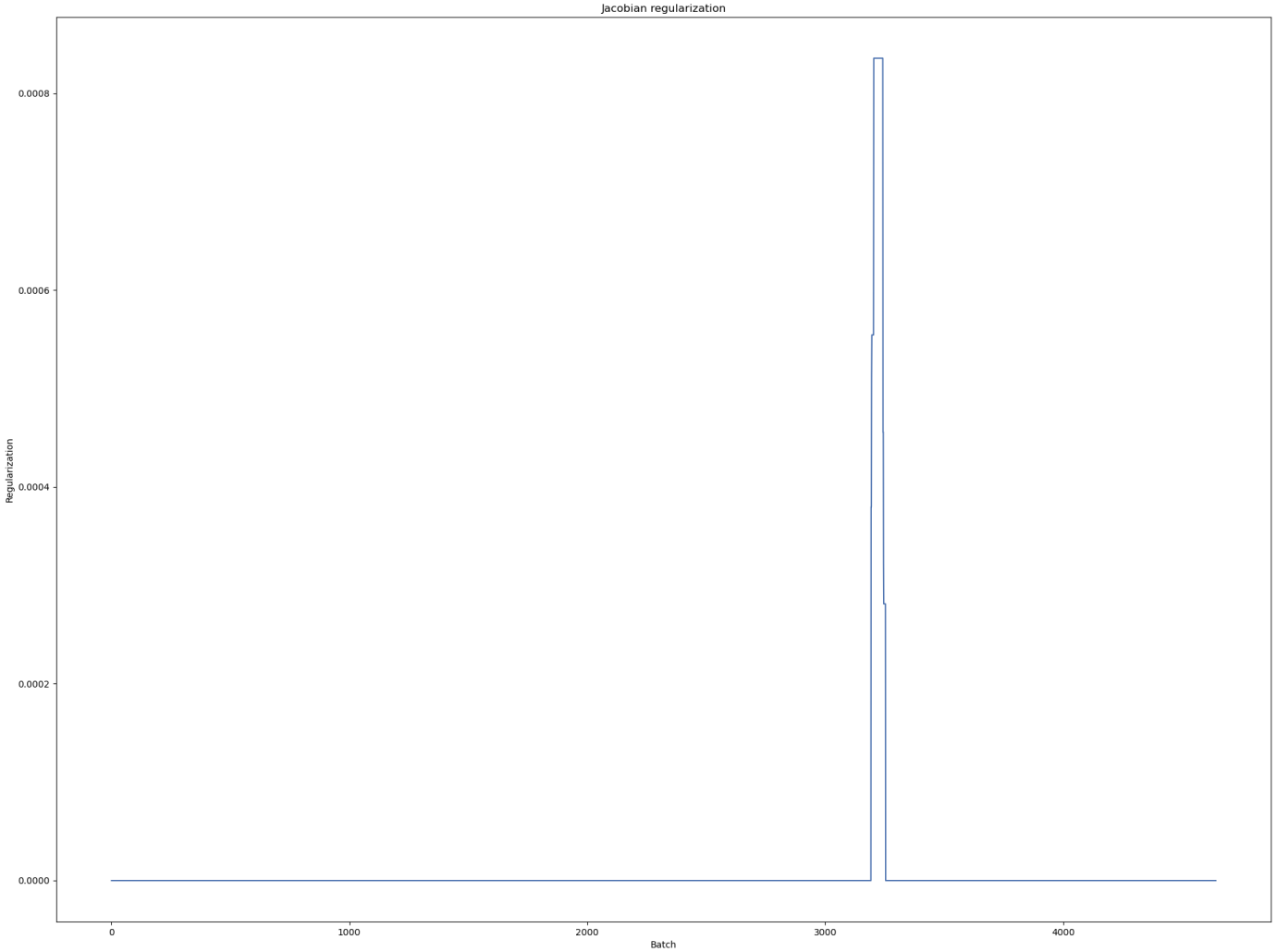
Jacobian 0.1 - Jacobian regularization



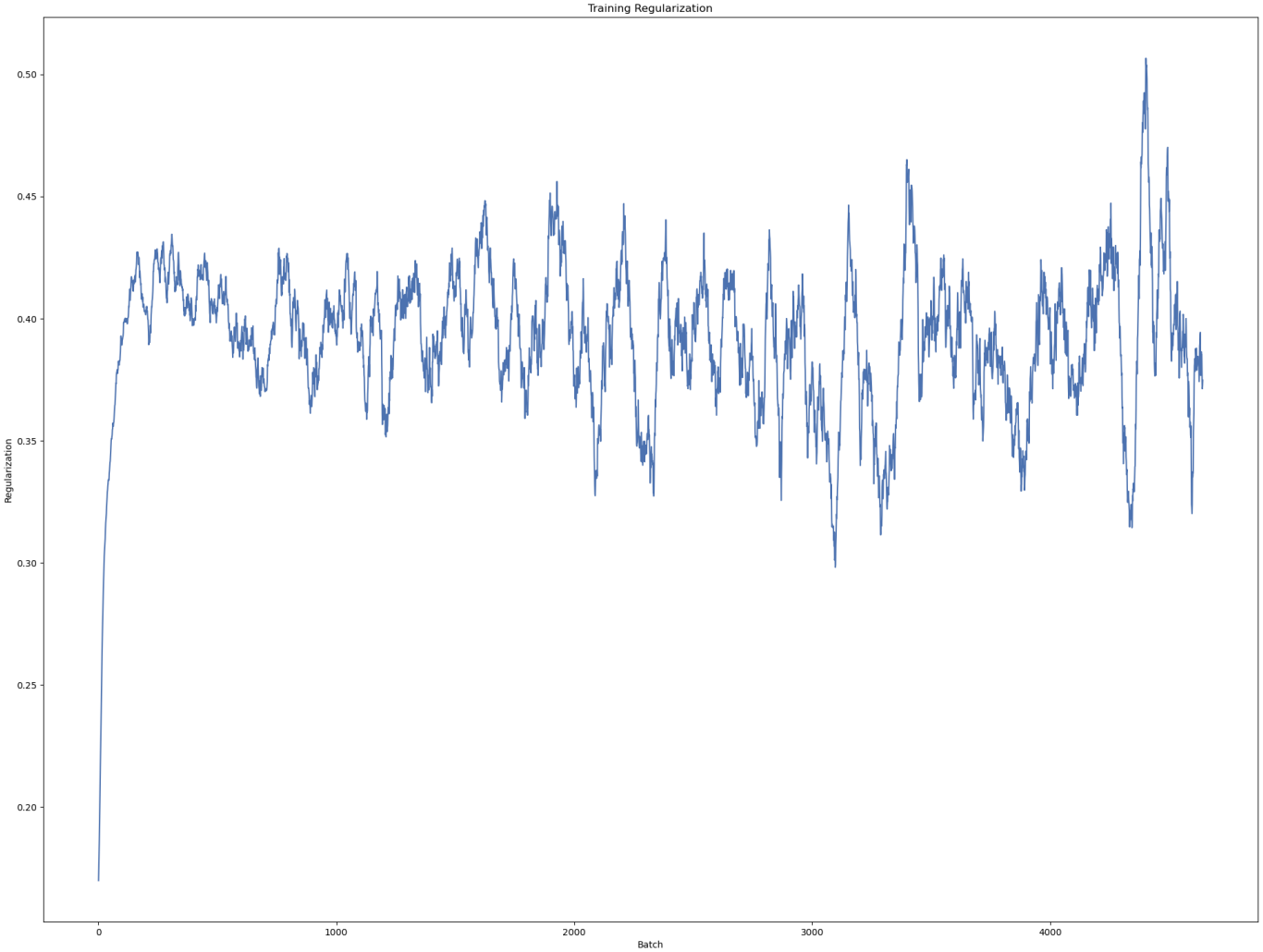
Jacobian 8.4 - Jacobian regularization



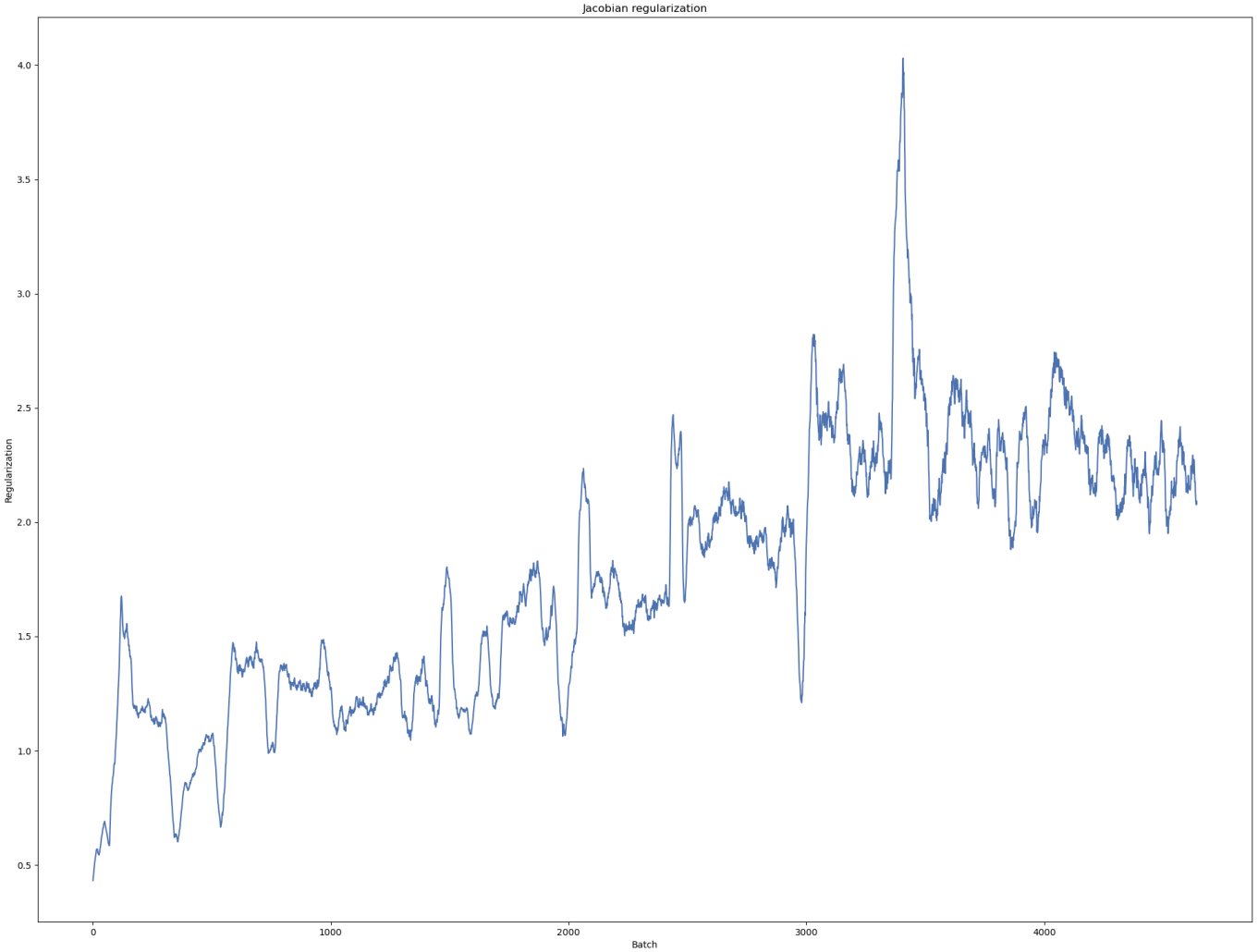
Isometry 0.1 - Jacobian regularization



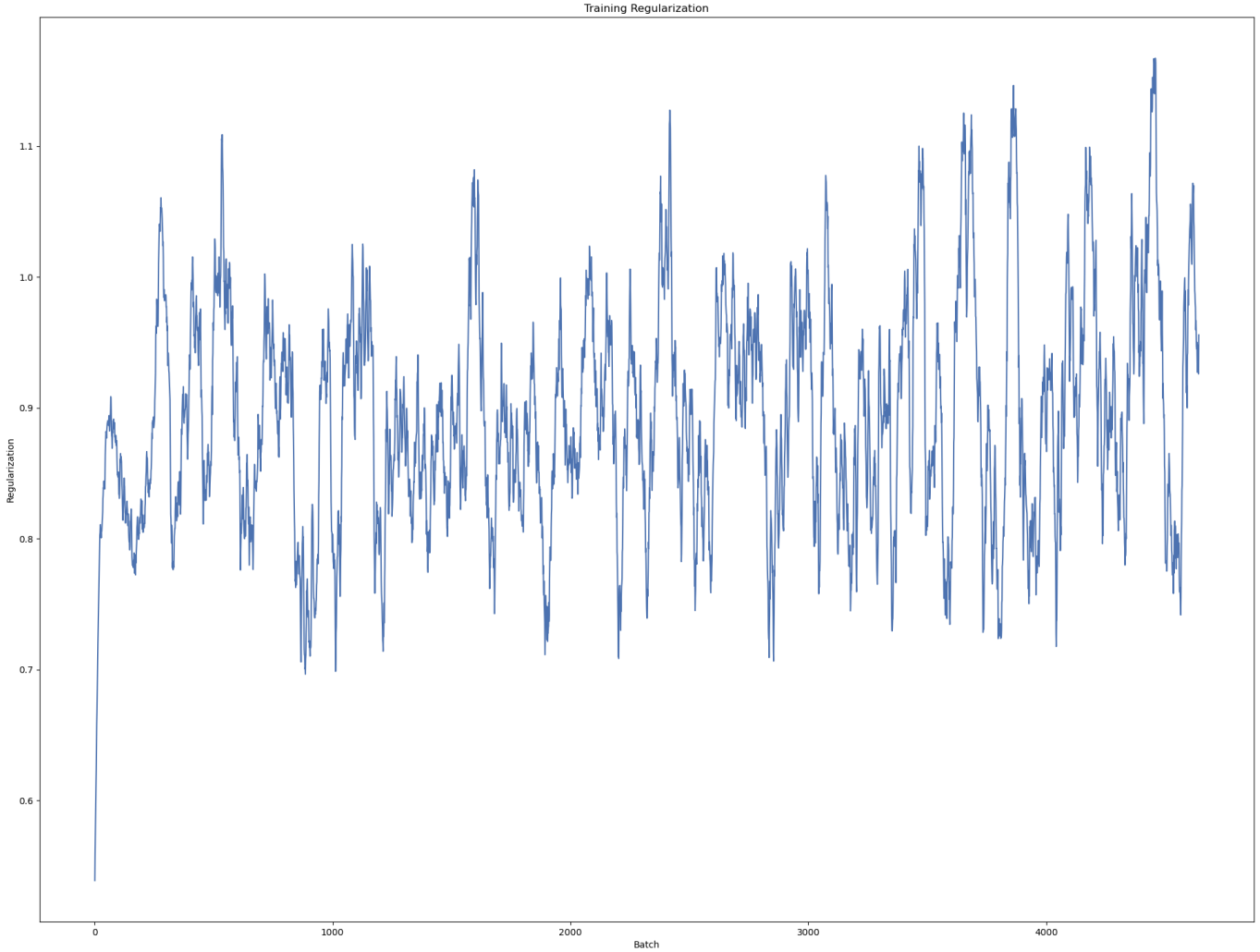
Adversarial training - Jacobian regularization



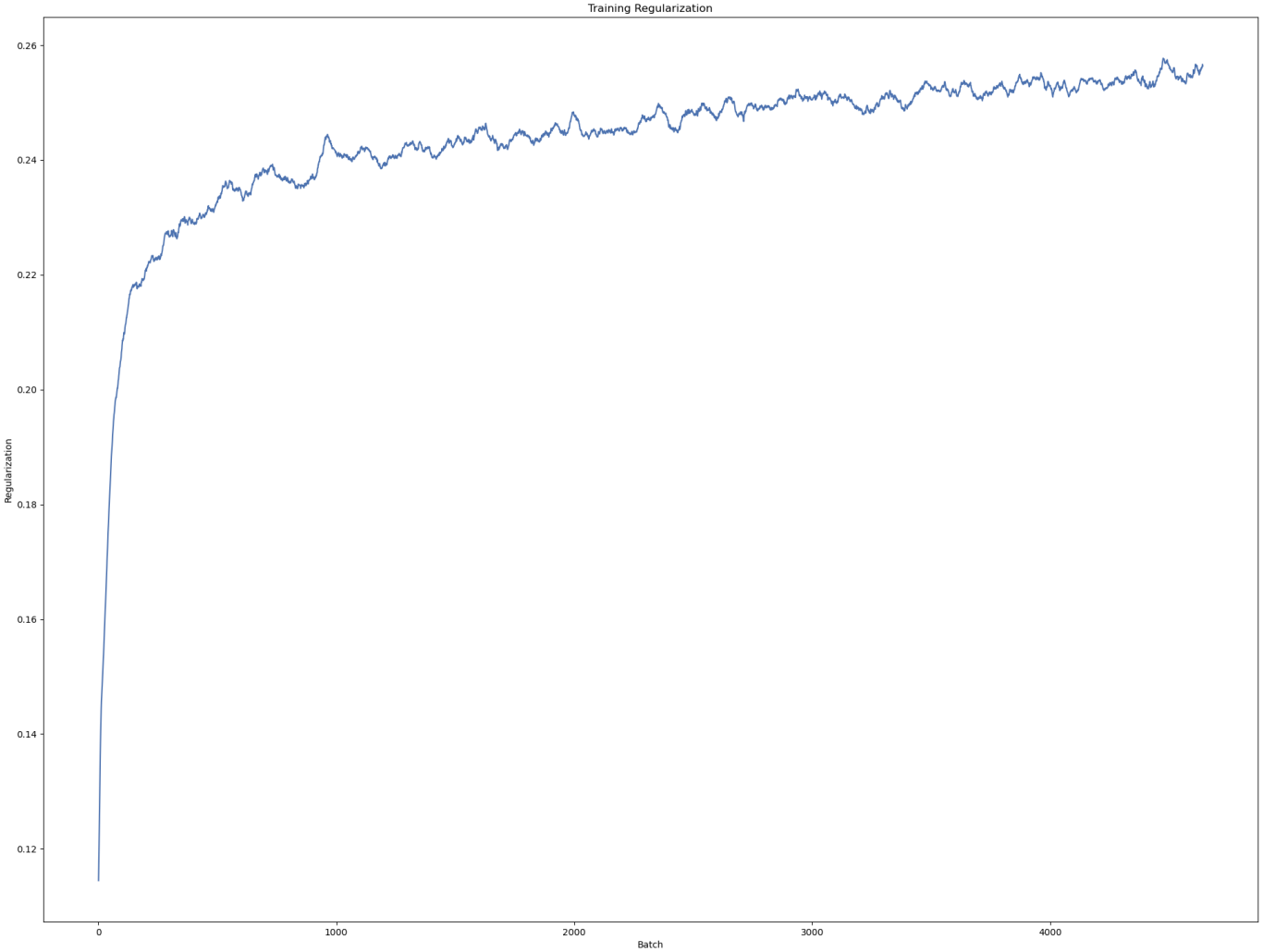
Isometry 8.4 - Jacobian regularization



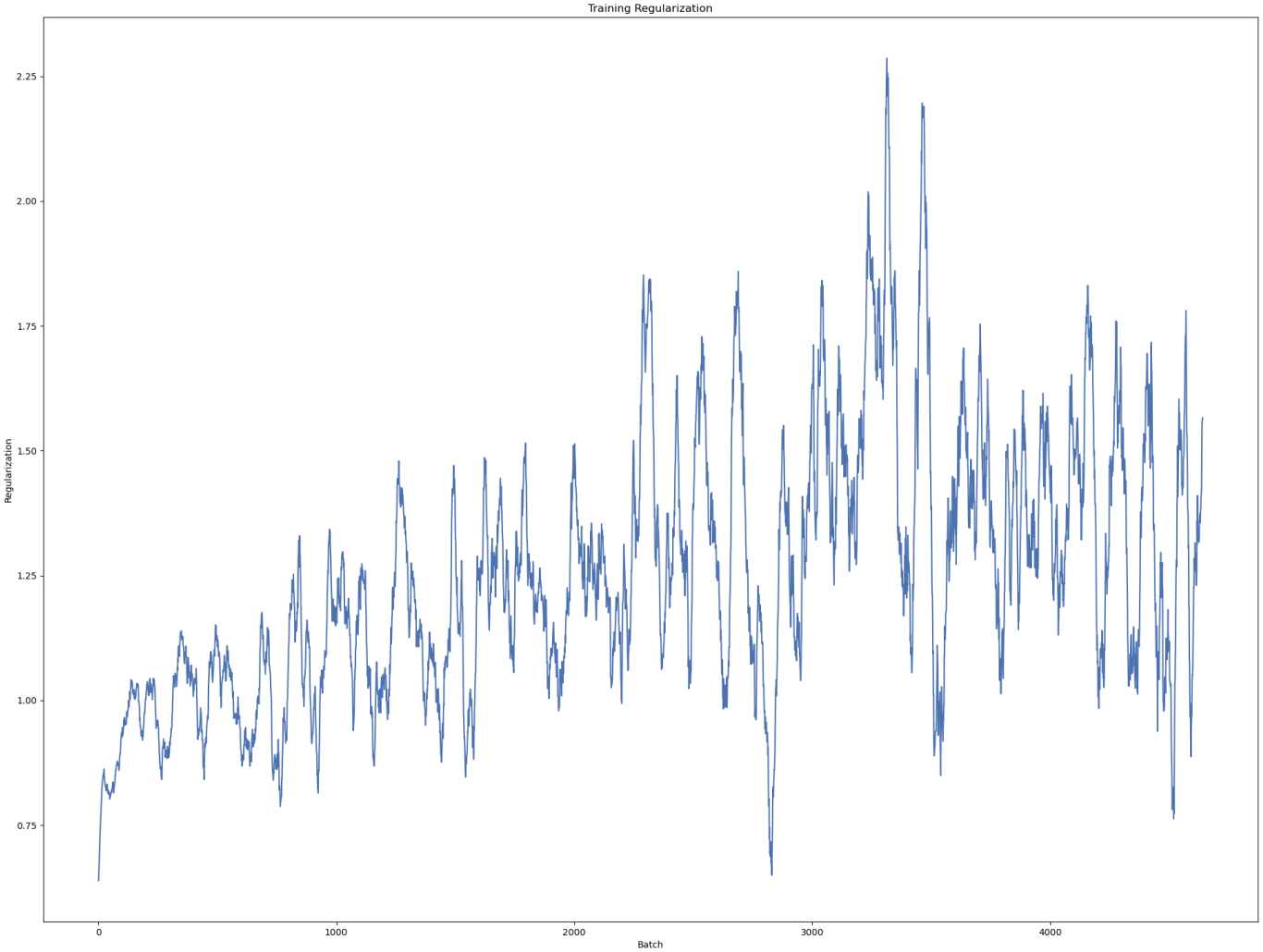
Parseval - Jacobian regularization



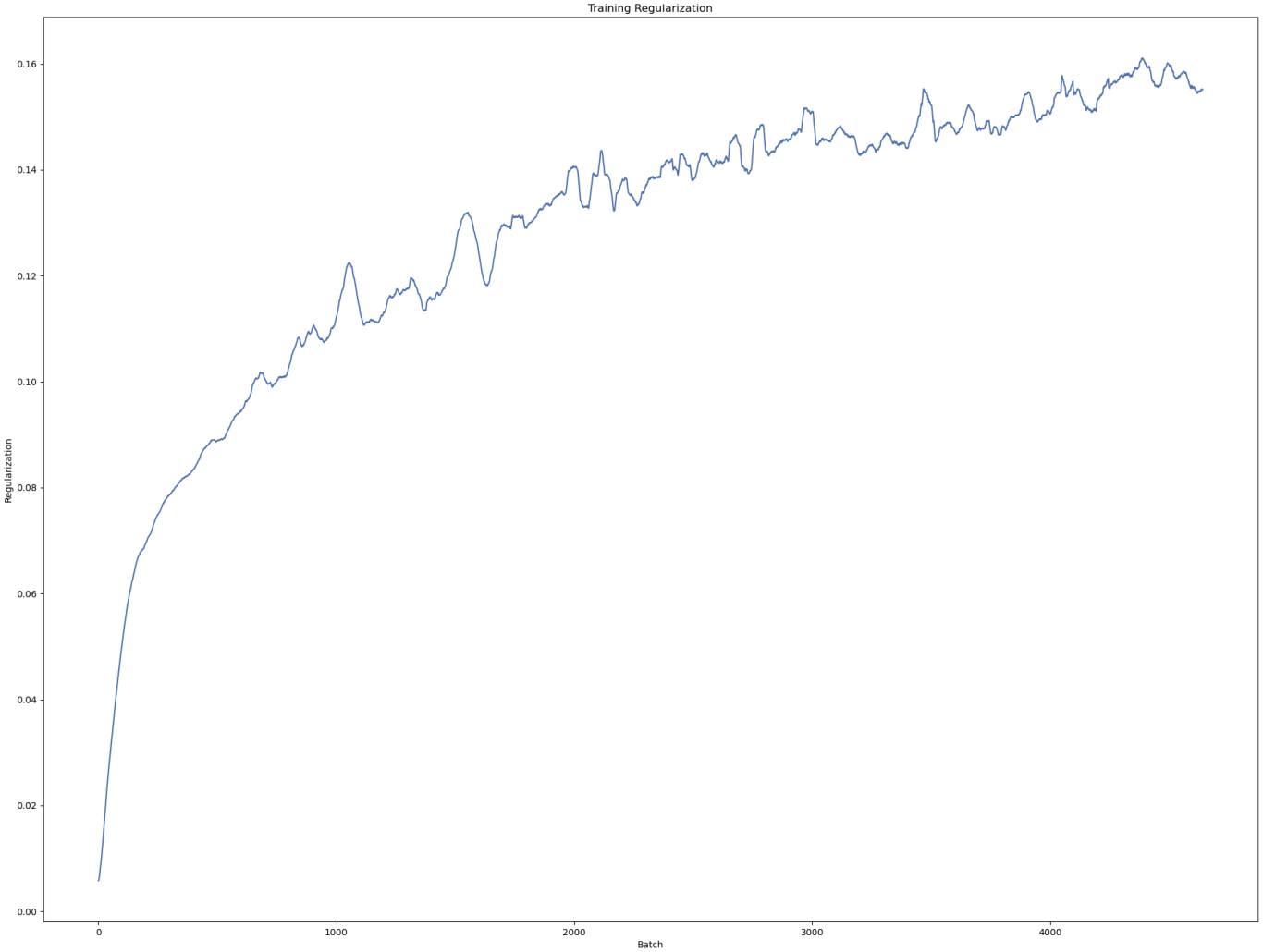
Distillation - Jacobian regularization



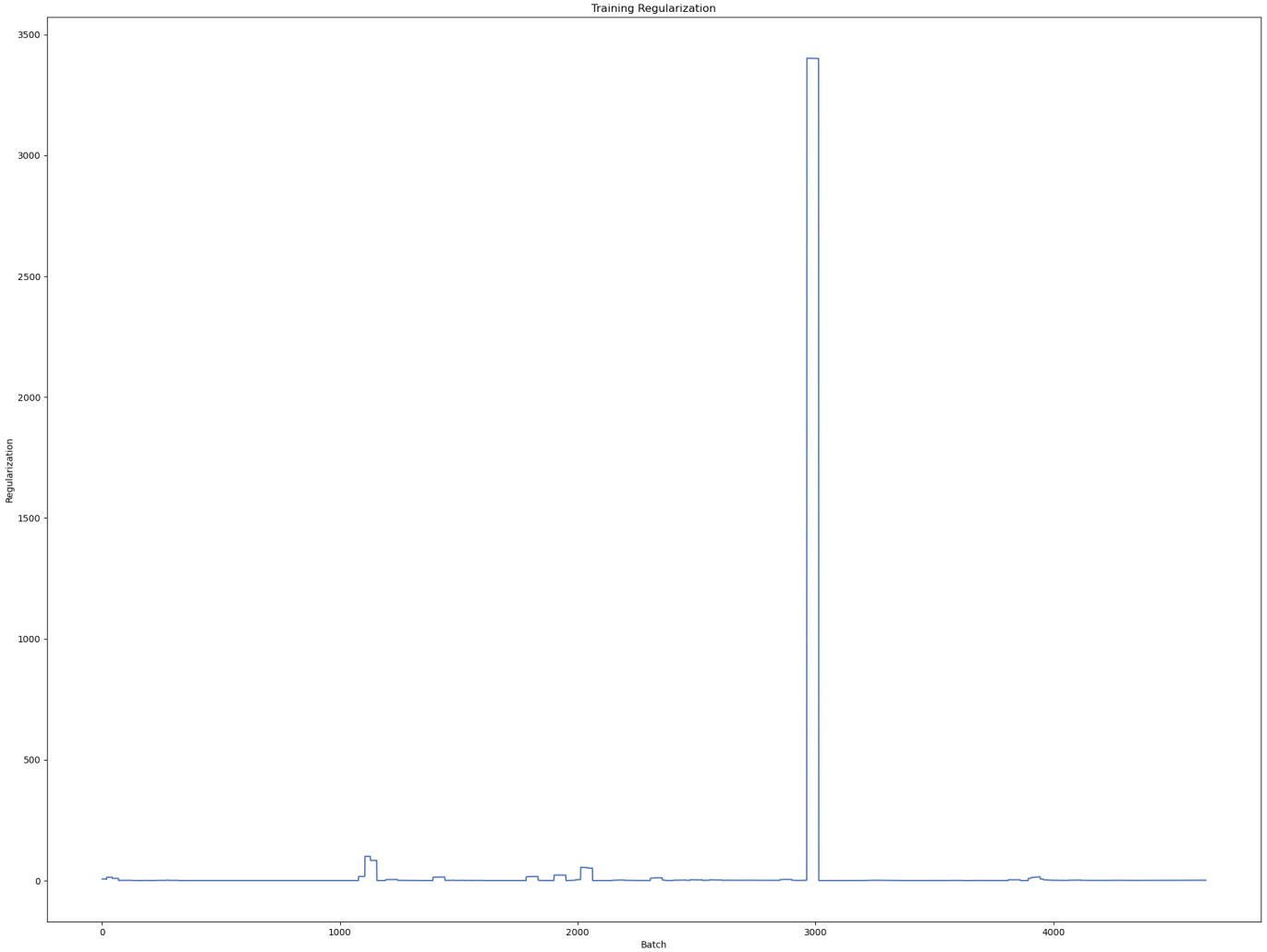
Jacobian regularization only - Jacobian regularization



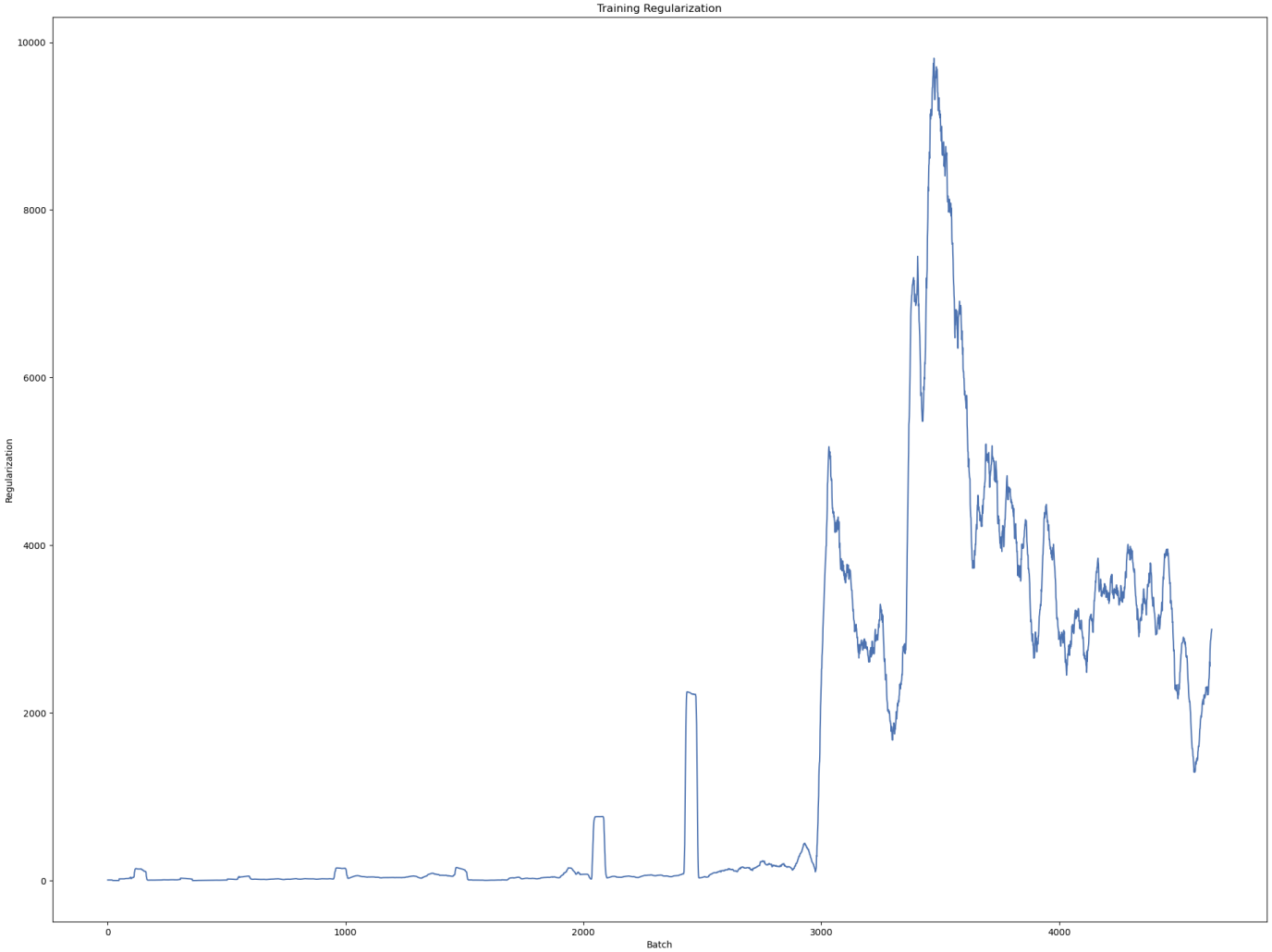
Suppress max eigenvalue - Jacobian regularization



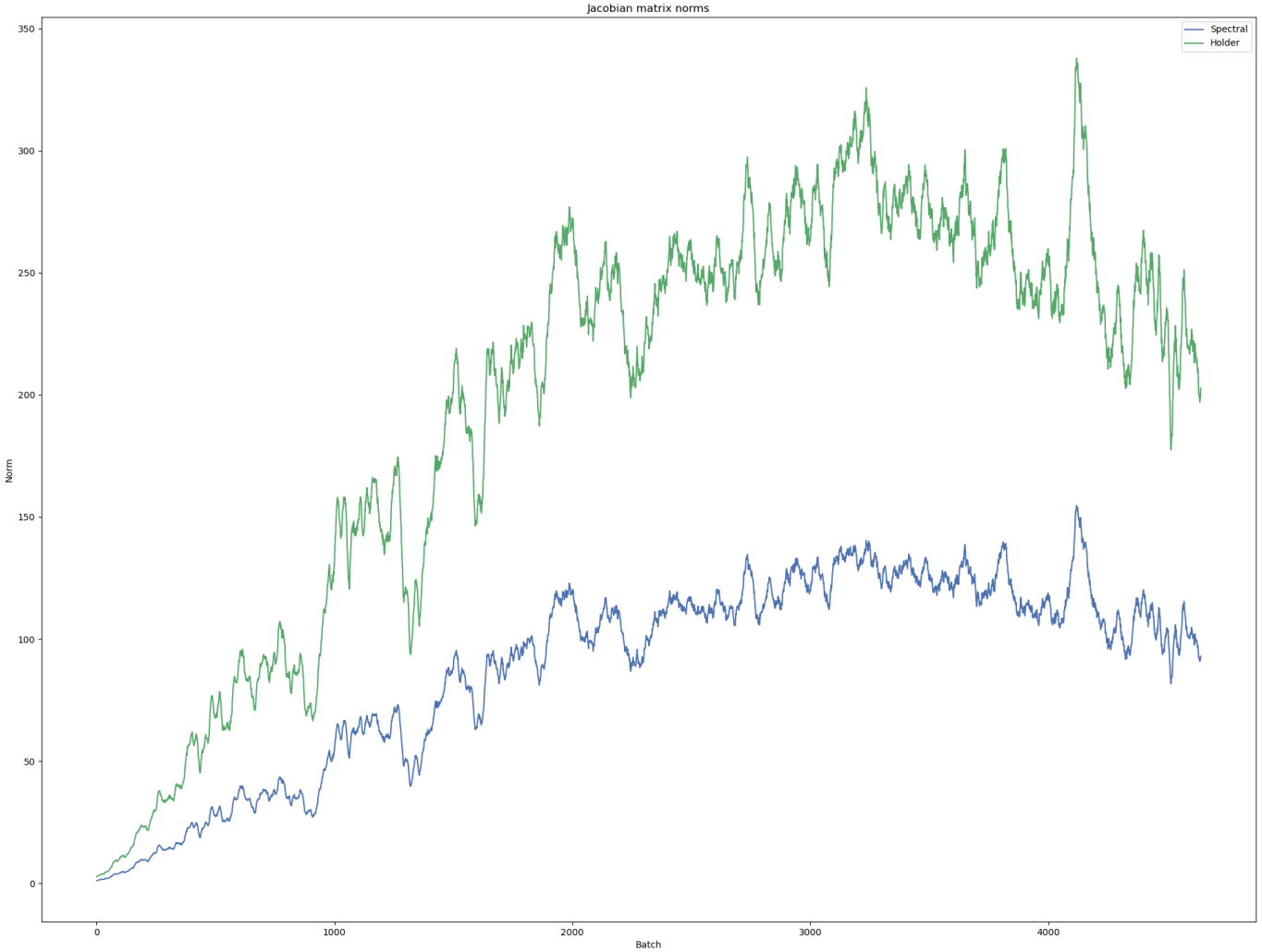
Isometry 0.1 - Isometry regularization



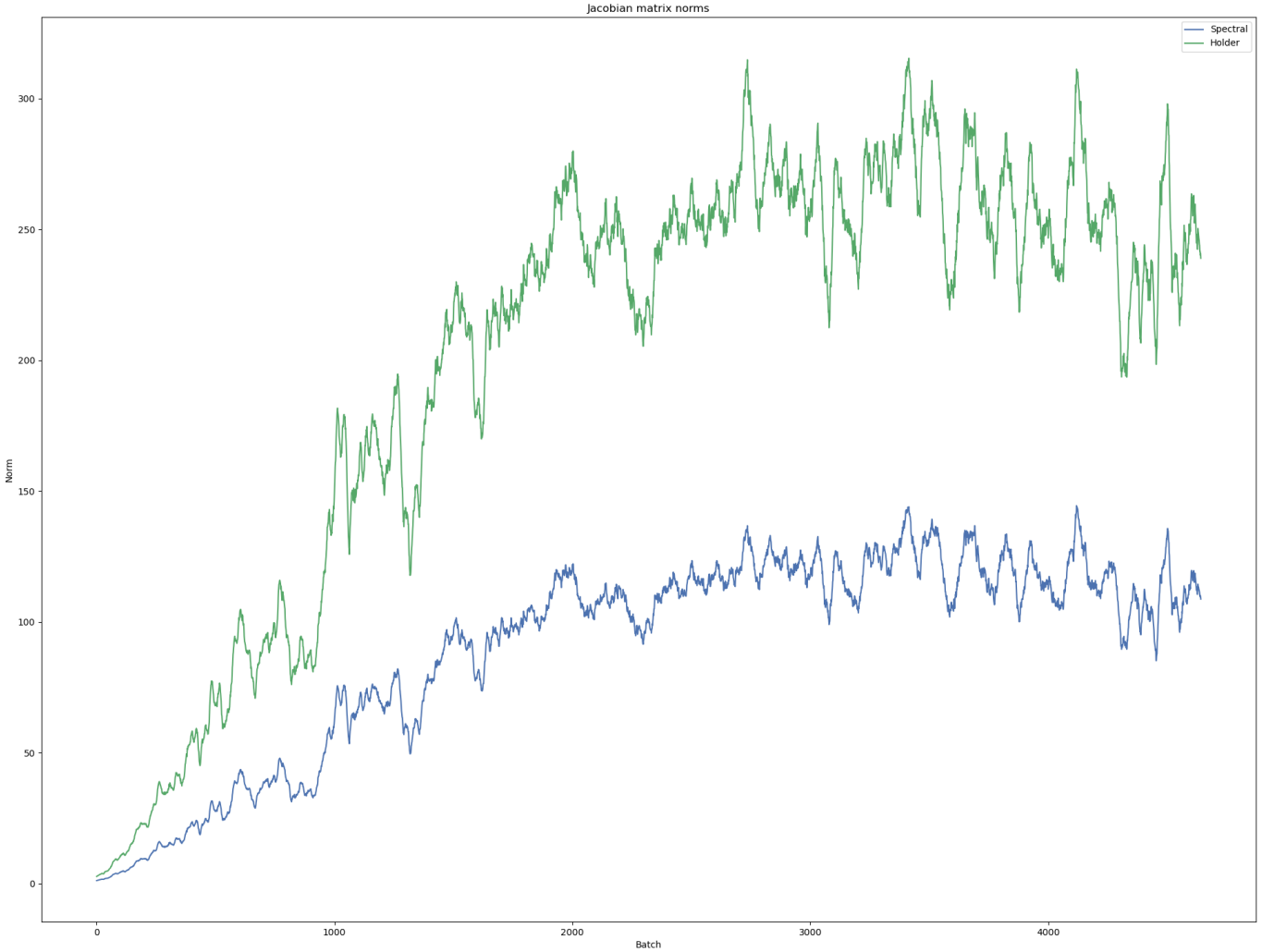
Isometry 8.4 - Isometry regularization



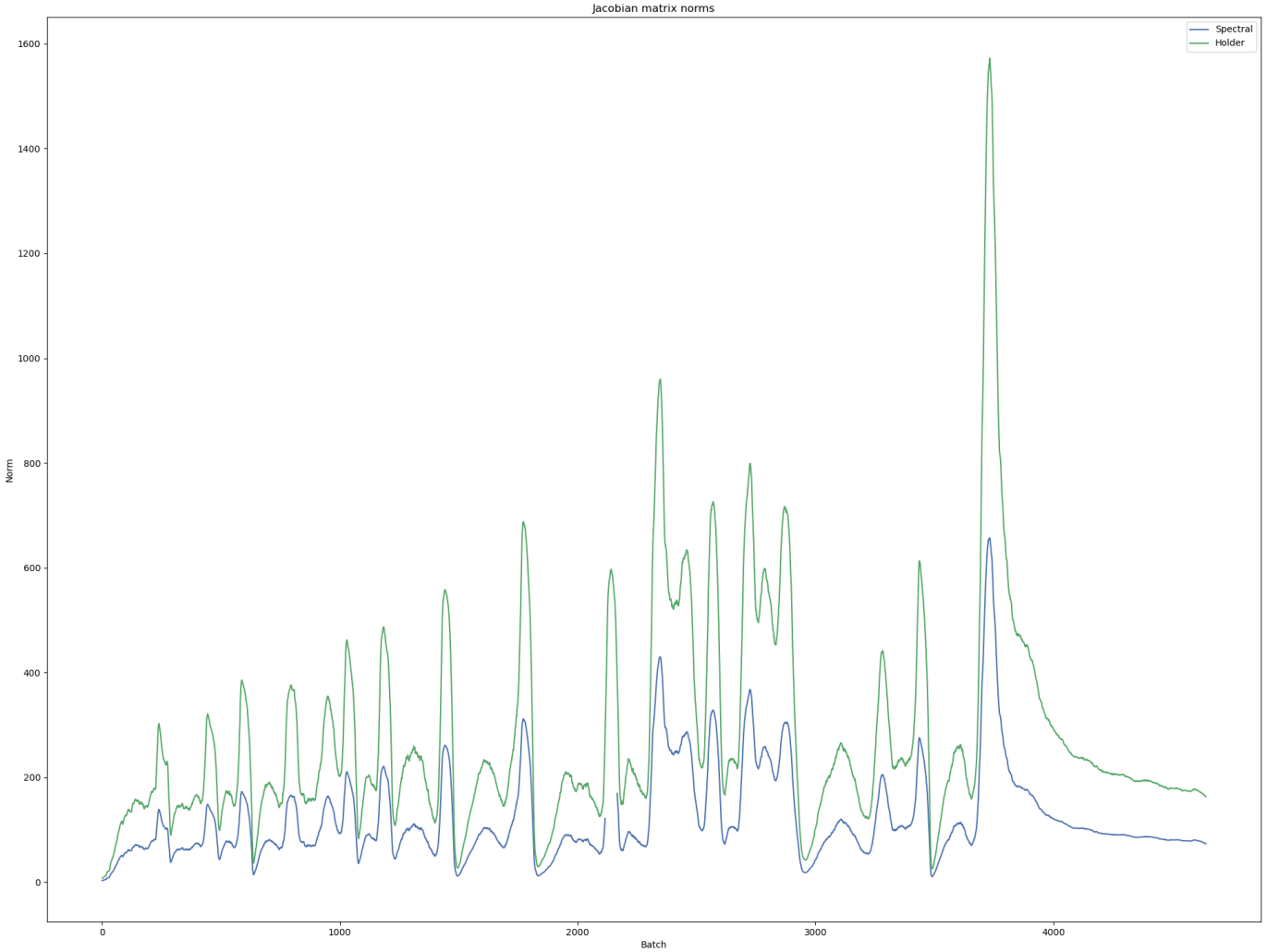
Baseline 1 - Spectral norm and Hölder upper bound



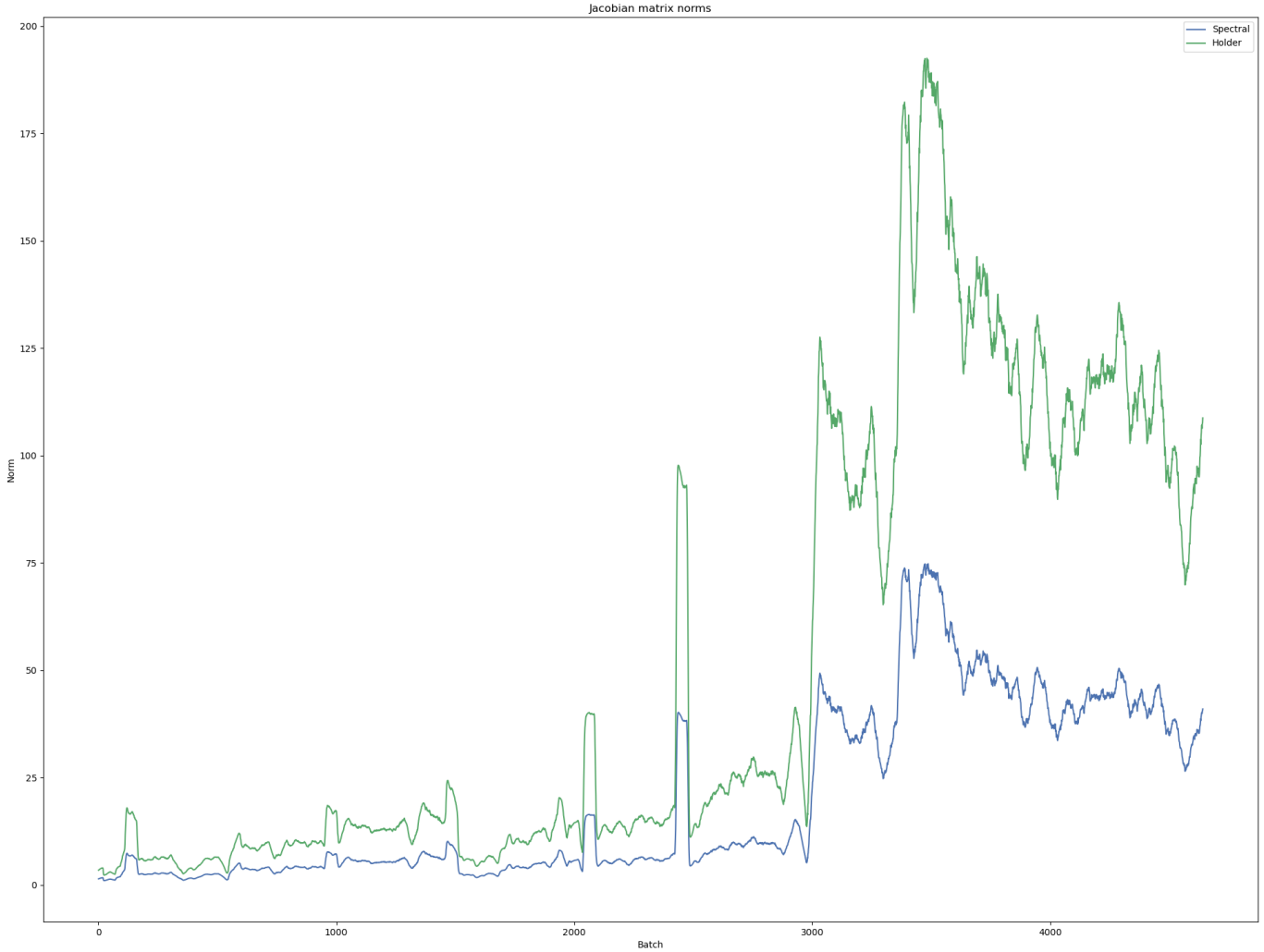
Jacobian 0.1 - Spectral norm and Hölder upper bound



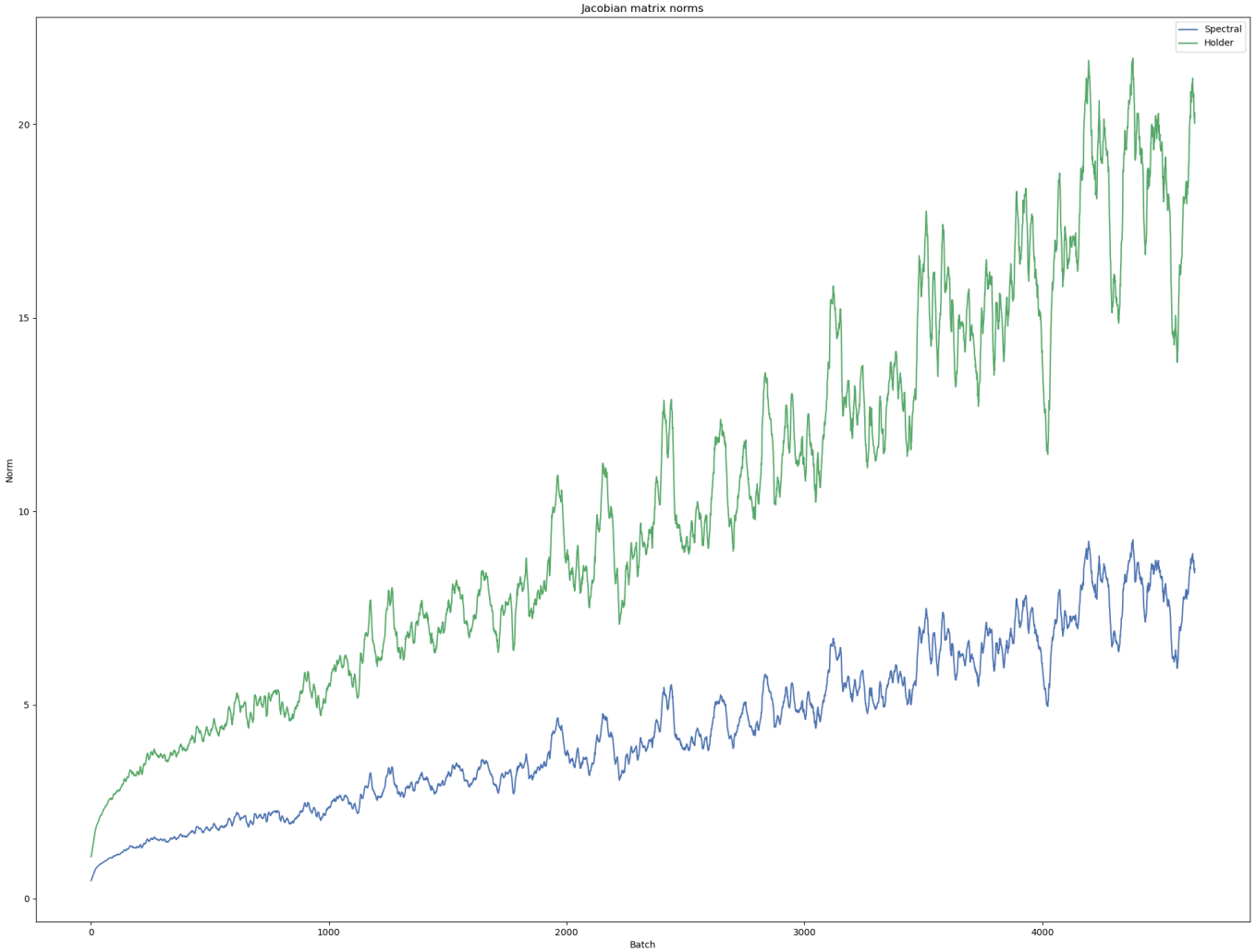
Jacobian 8.4 - Spectral norm and Hölder upper bound



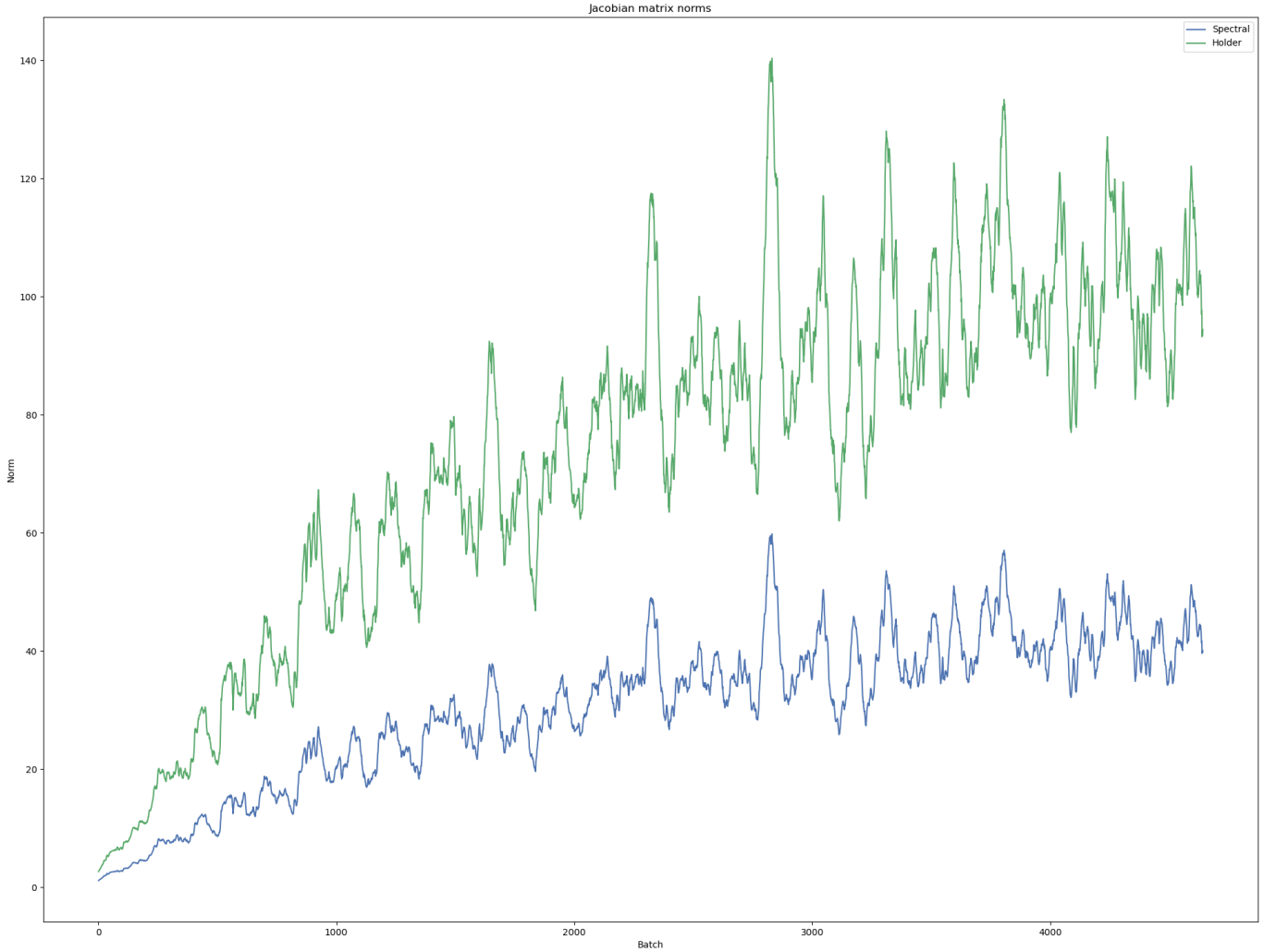
Isometry 8.4 - Spectral norm and Hölder upper bound



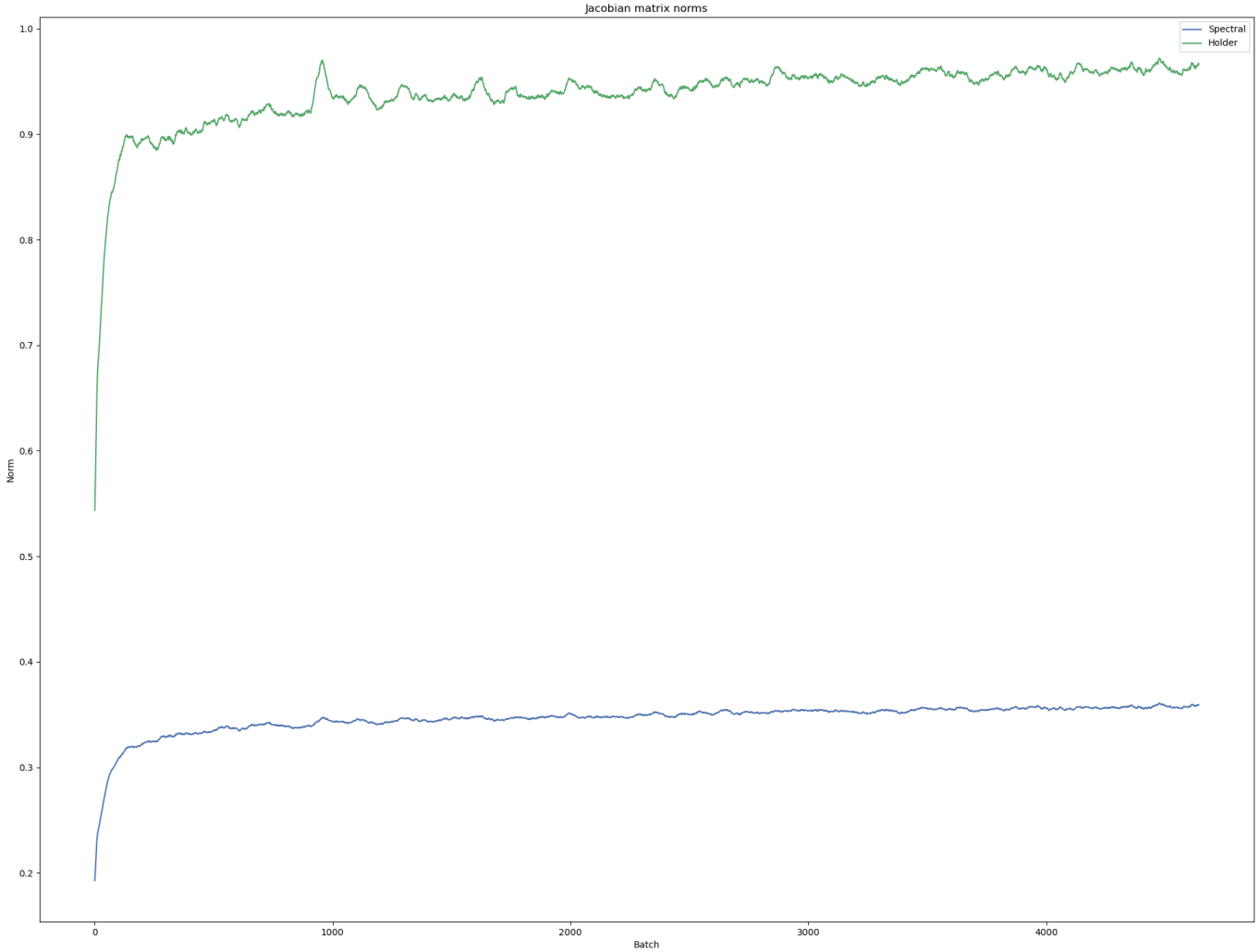
Adversarial training - Spectral norm and Hölder upper bound



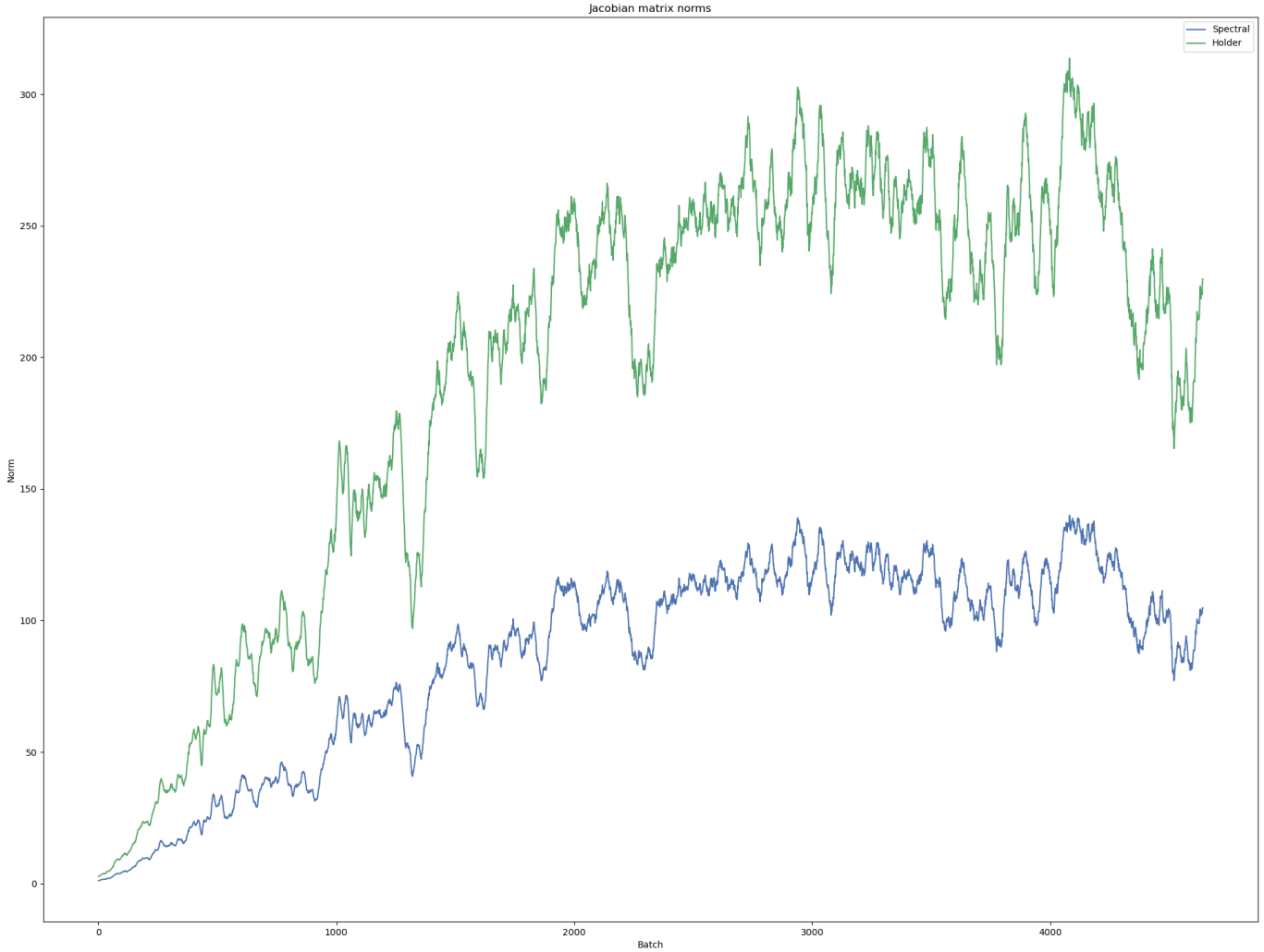
Parseval - Spectral norm and Hölder upper bound



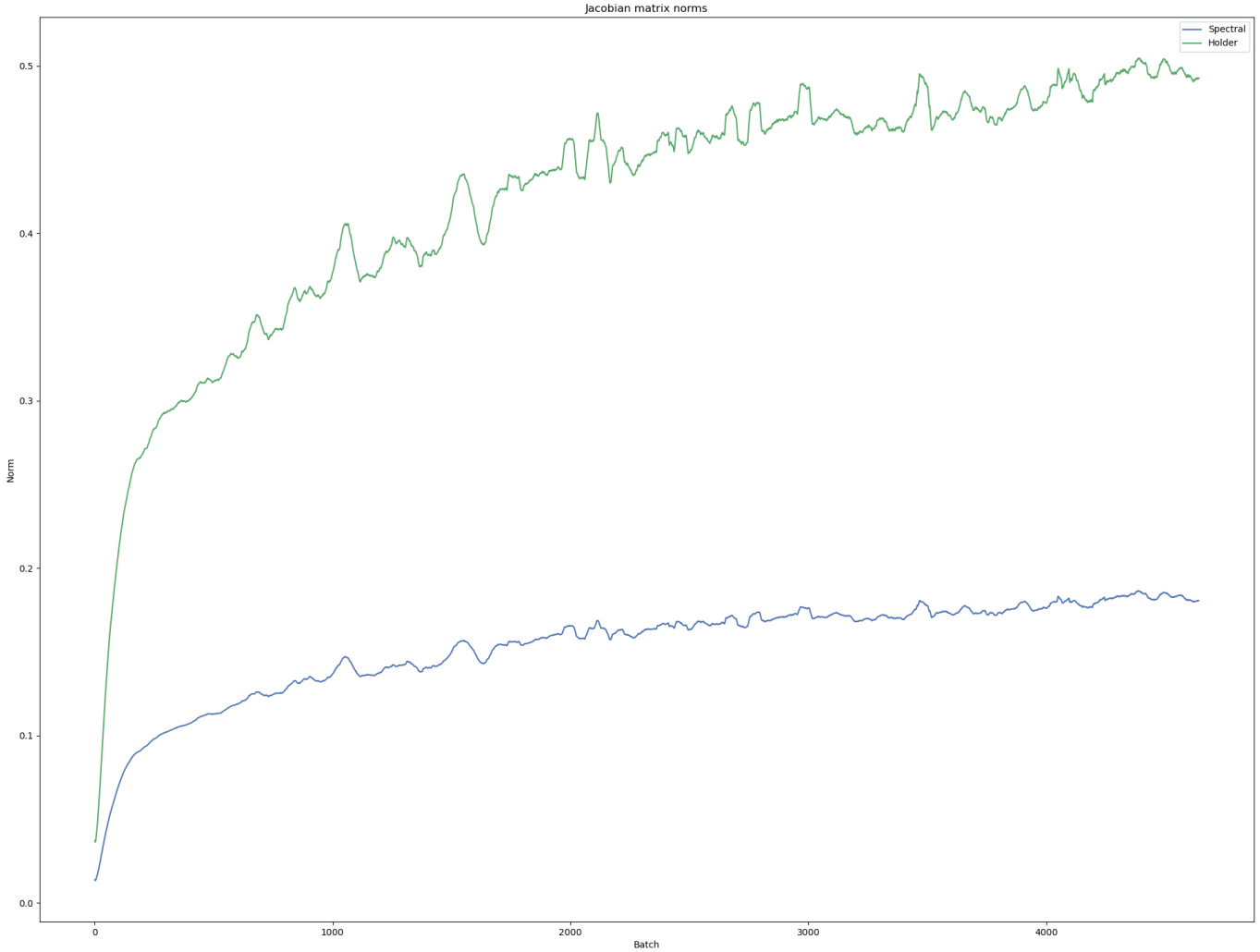
Distillation - Spectral norm and Hölder upper bound



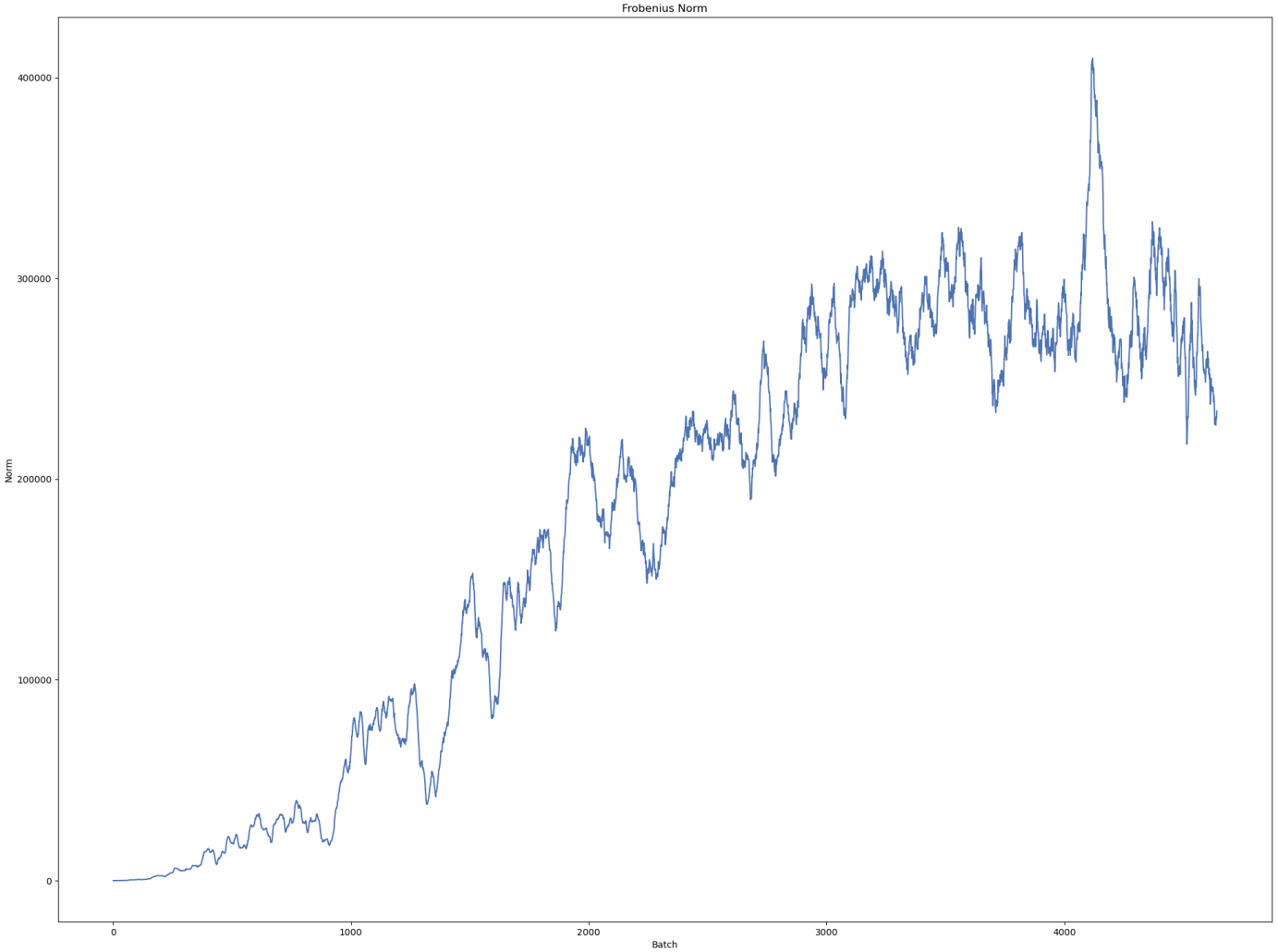
Jacobian regularization only - Spectral norm and Hölder upper bound



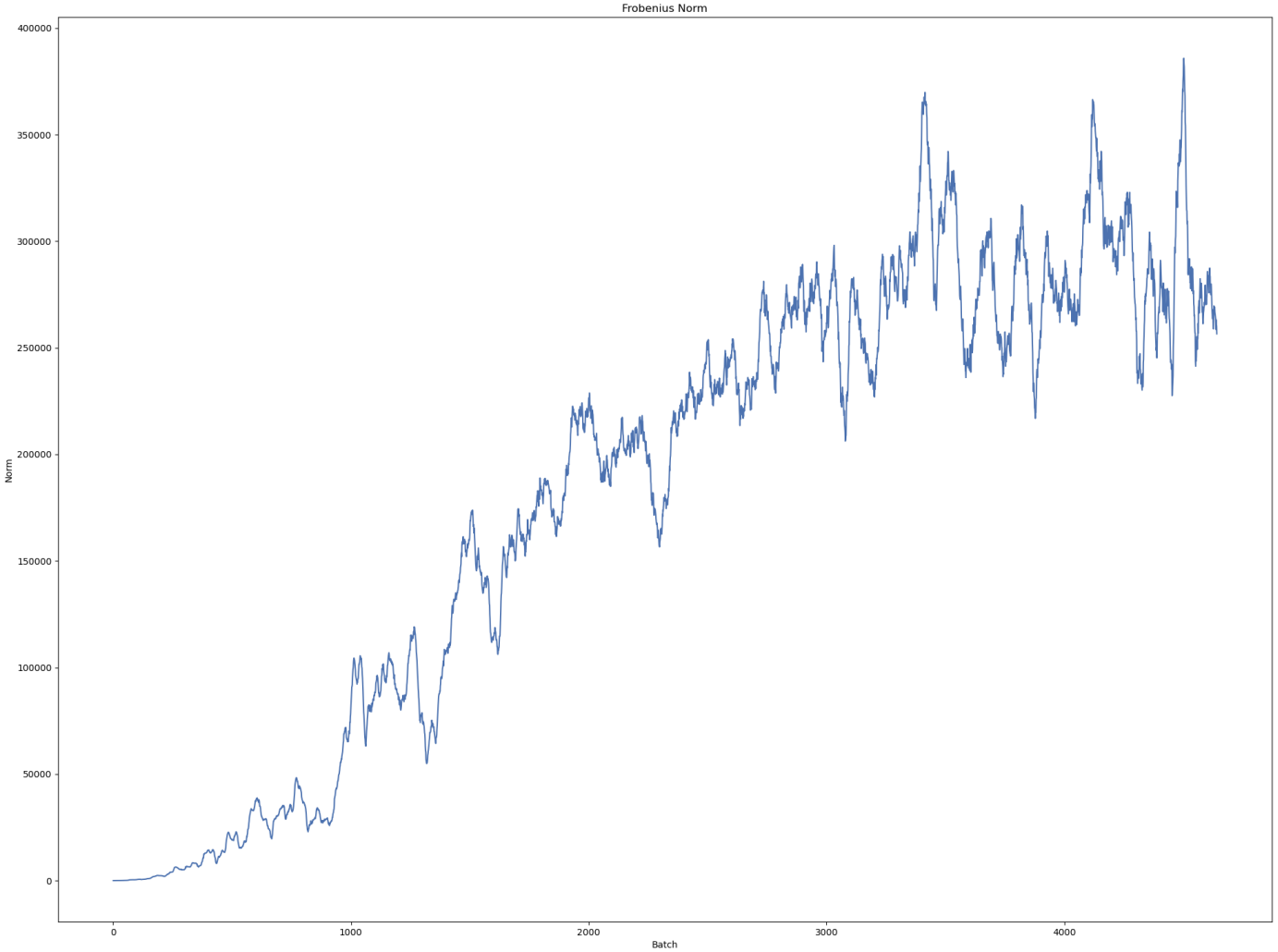
Suppress max eigenvalue - Spectral norm and Hölder upper bound



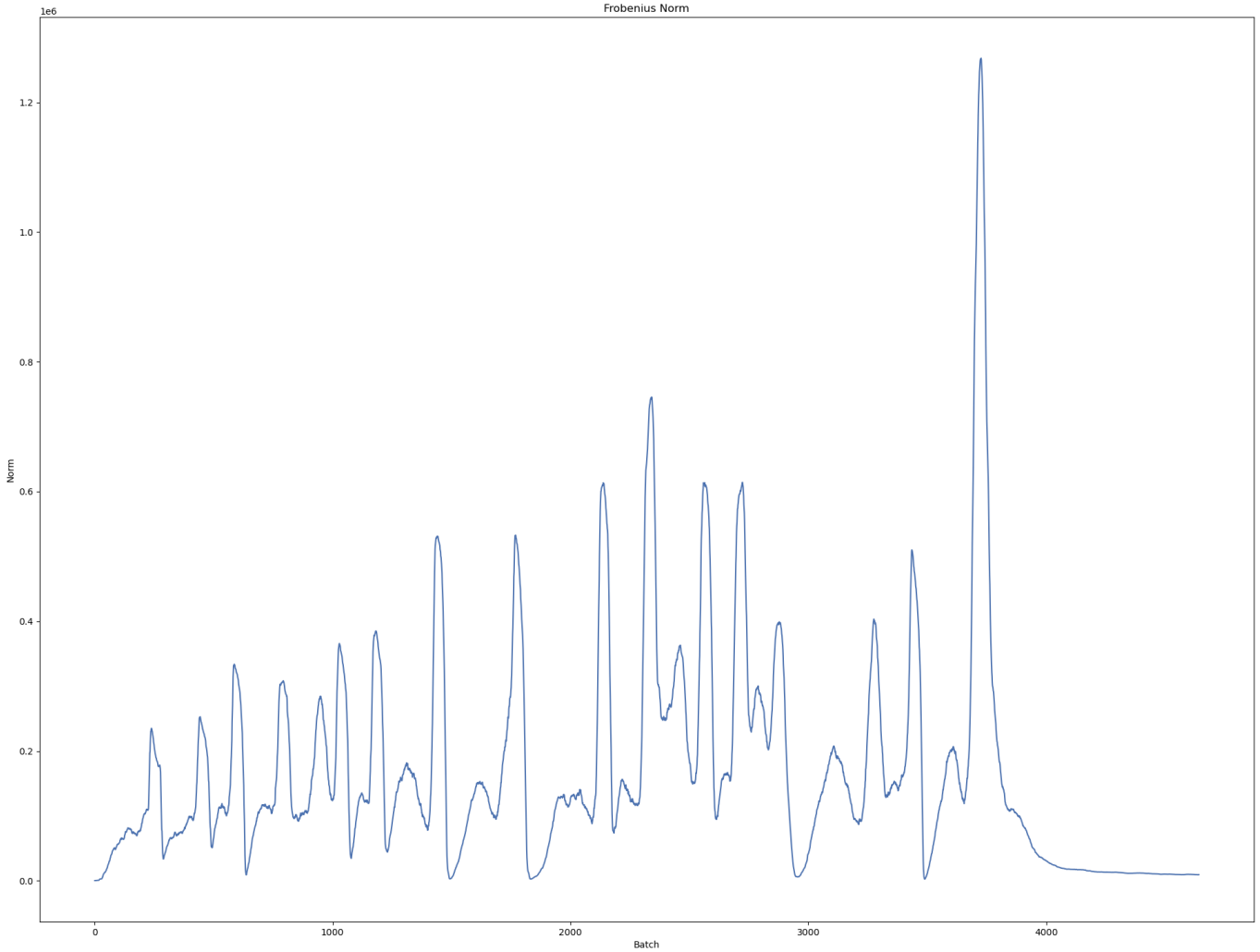
Baseline 1 - Frobenius norm



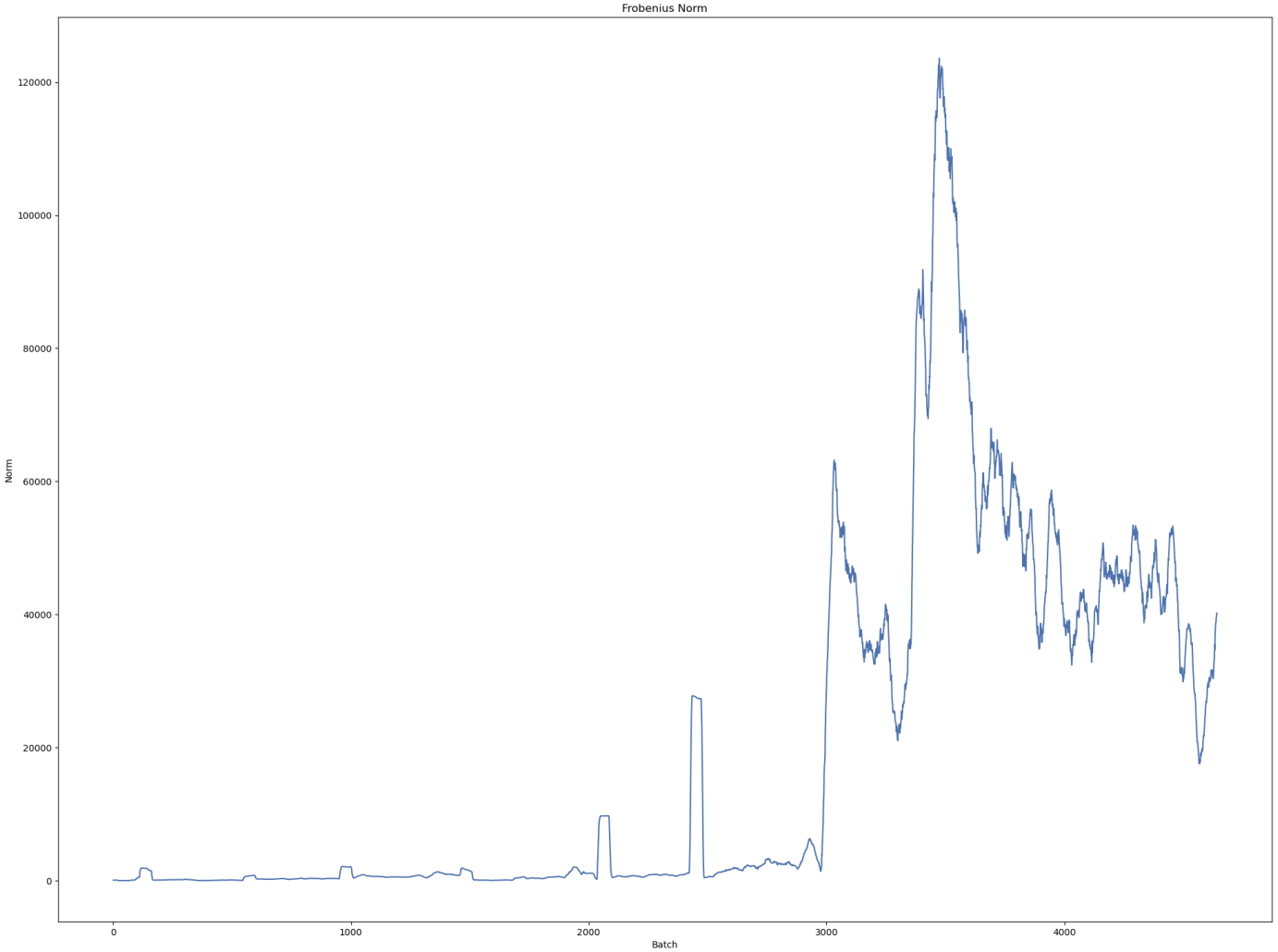
Jacobian 0.1 - Frobenius norm



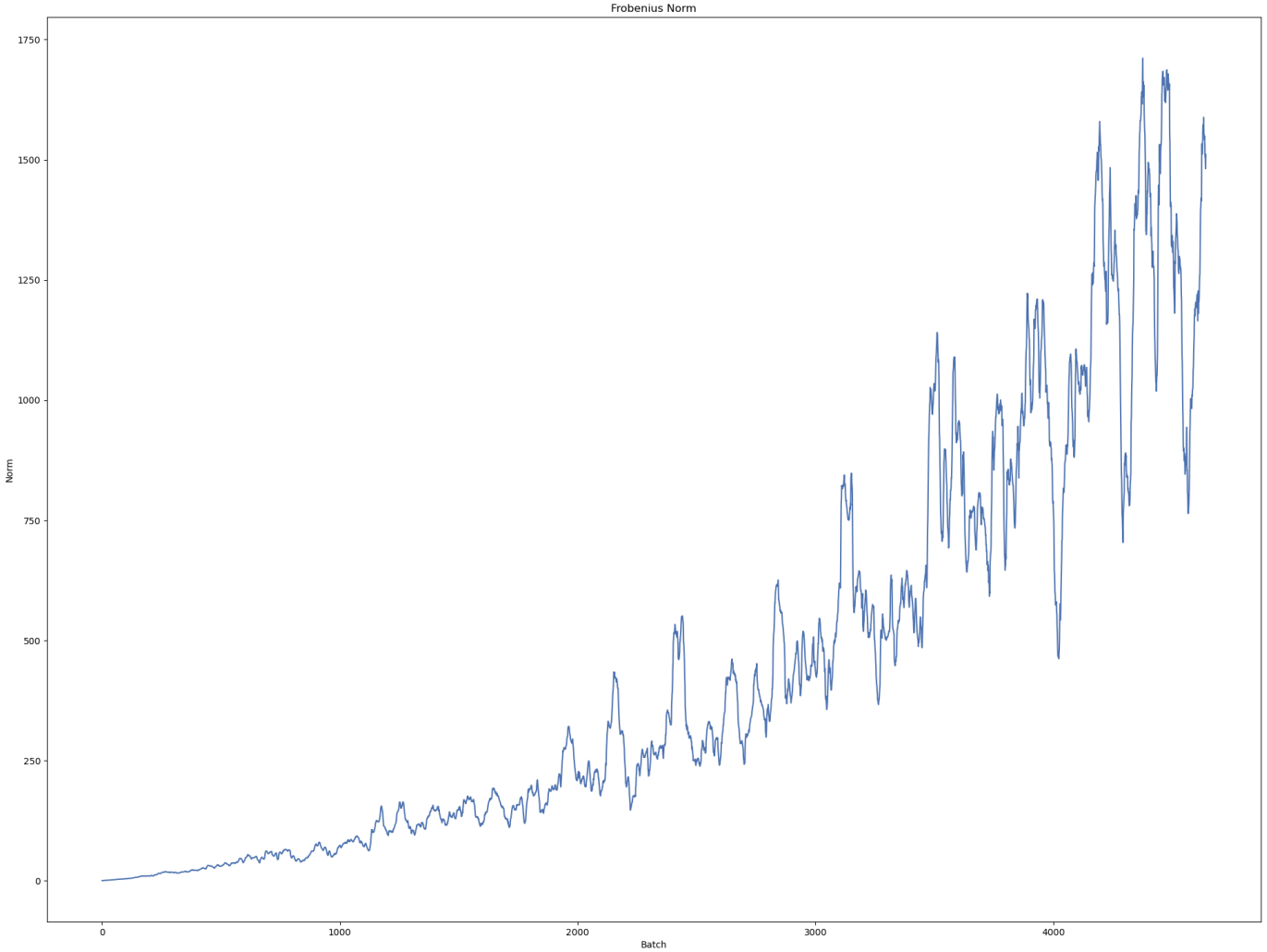
Jacobian 8.4 - Frobenius norm



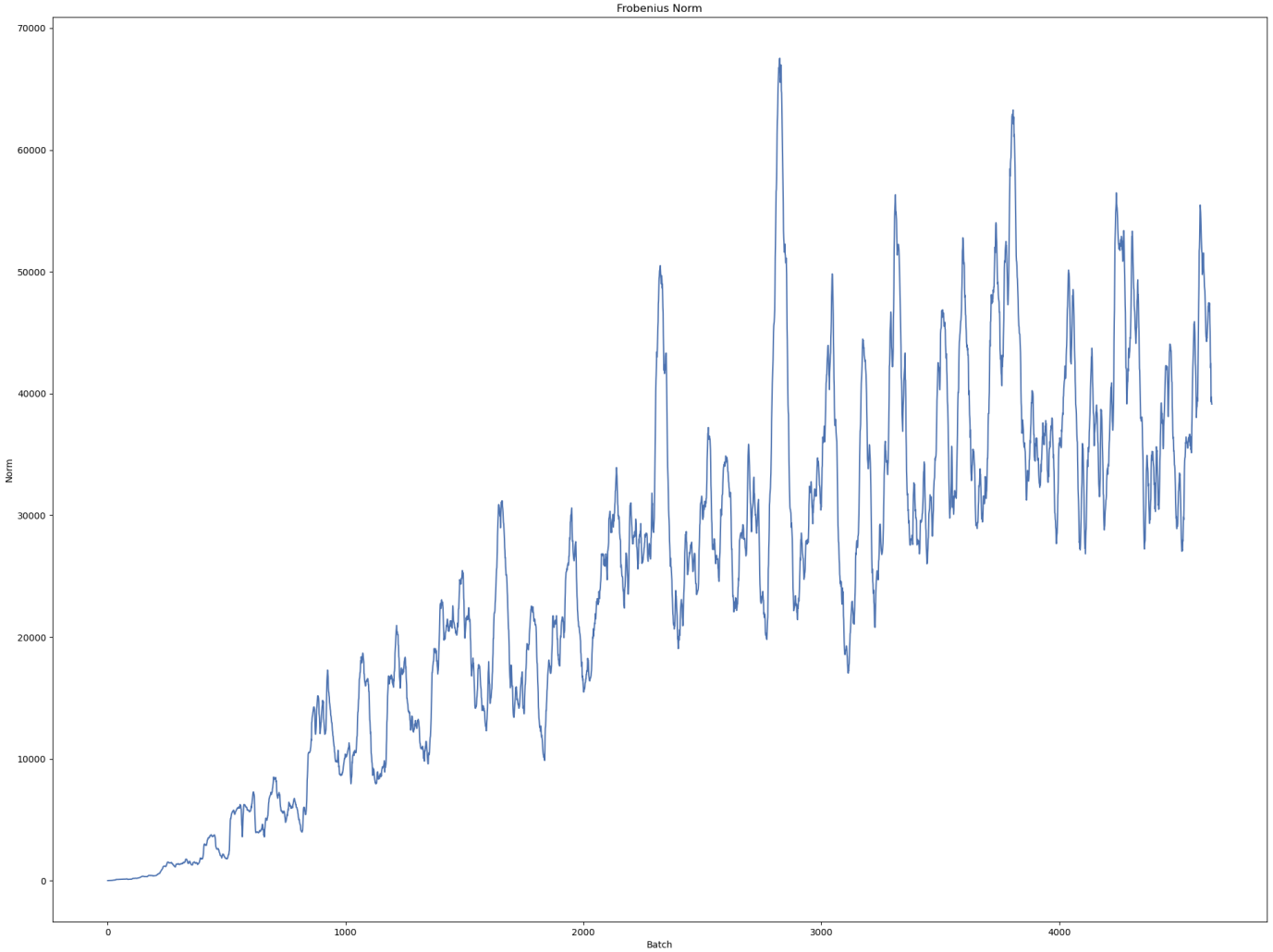
Isometry 8.4 - Frobenius norm



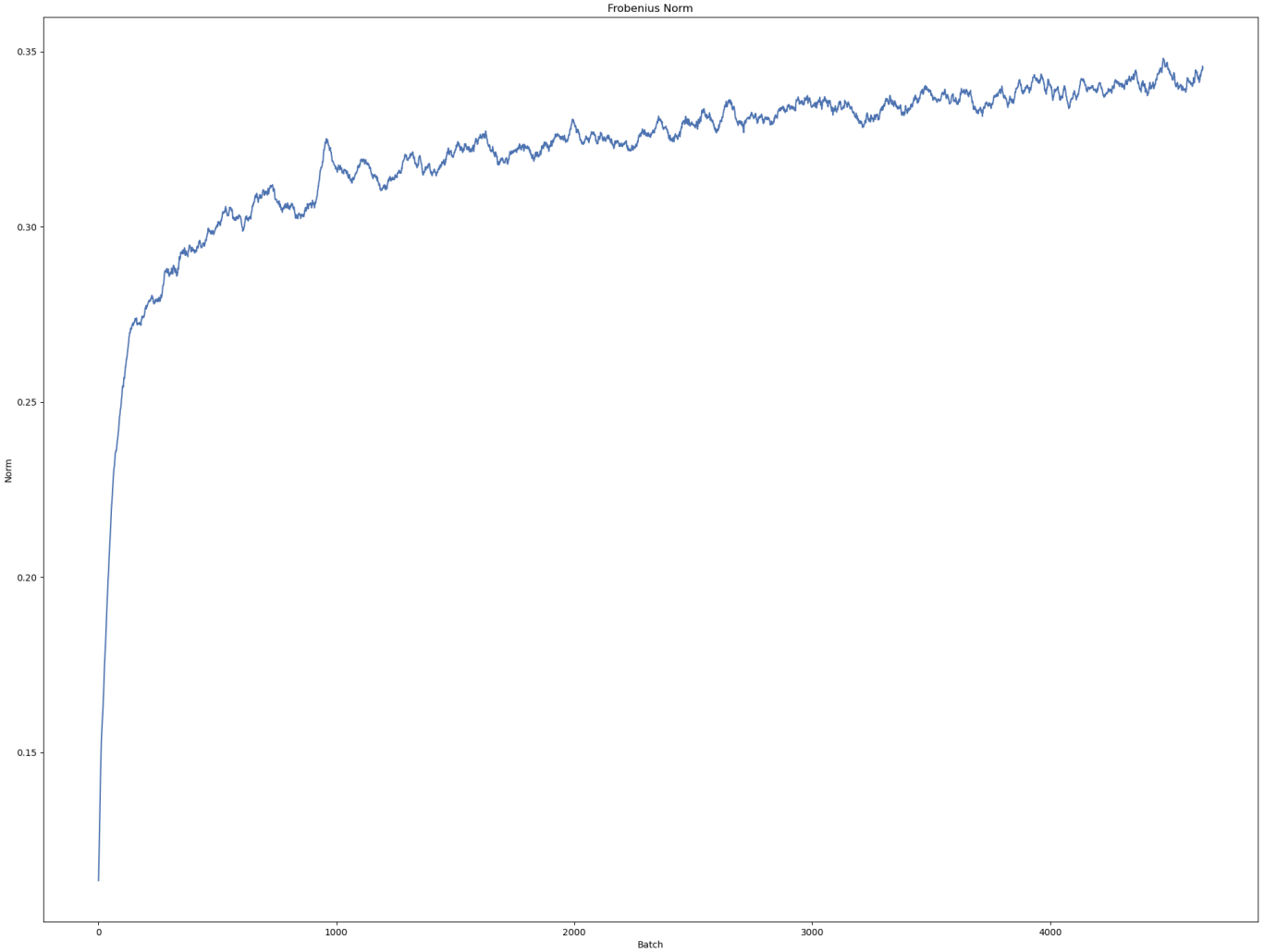
Adversarial training - Frobenius norm



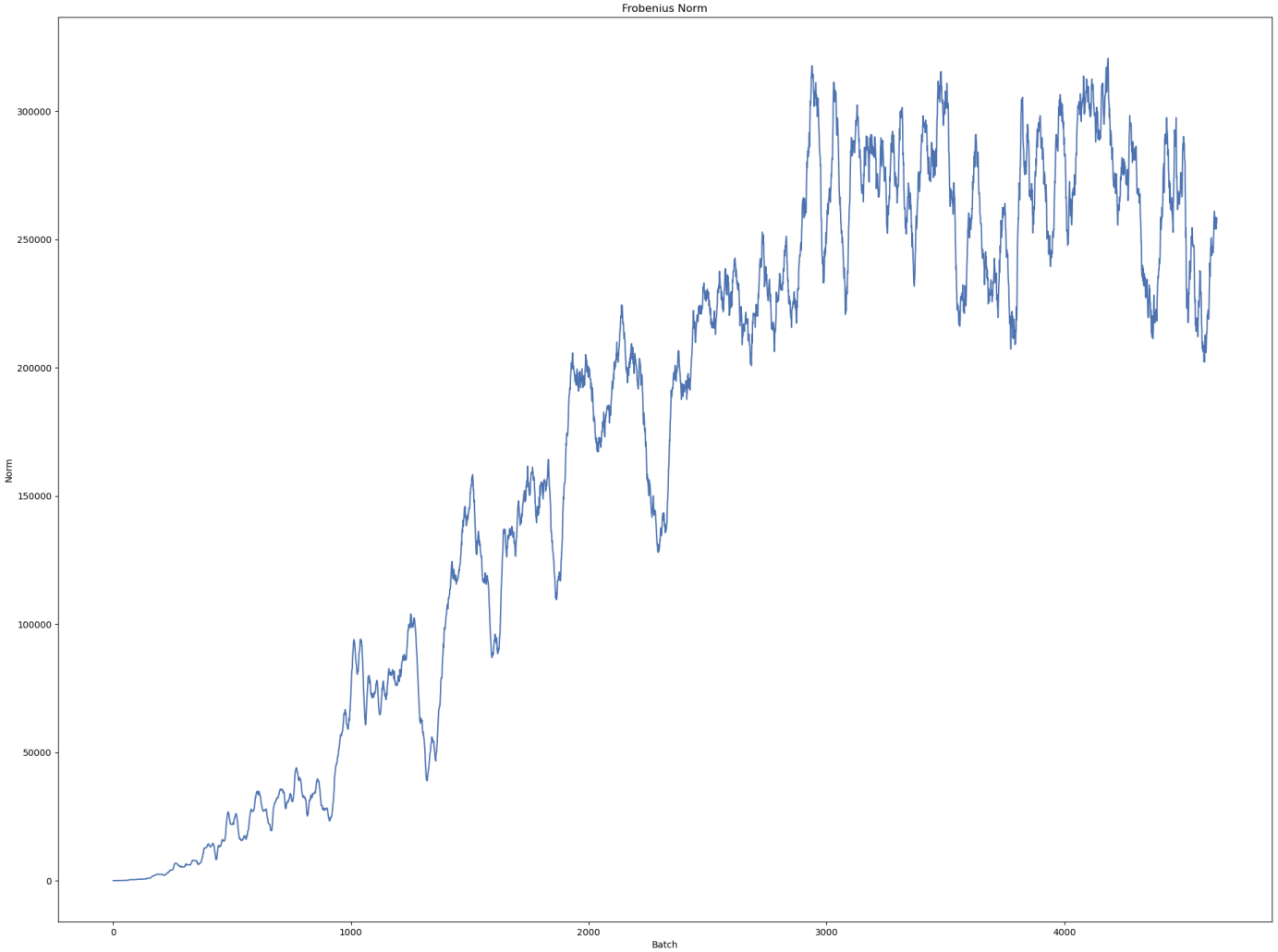
Parseval - Frobenius norm



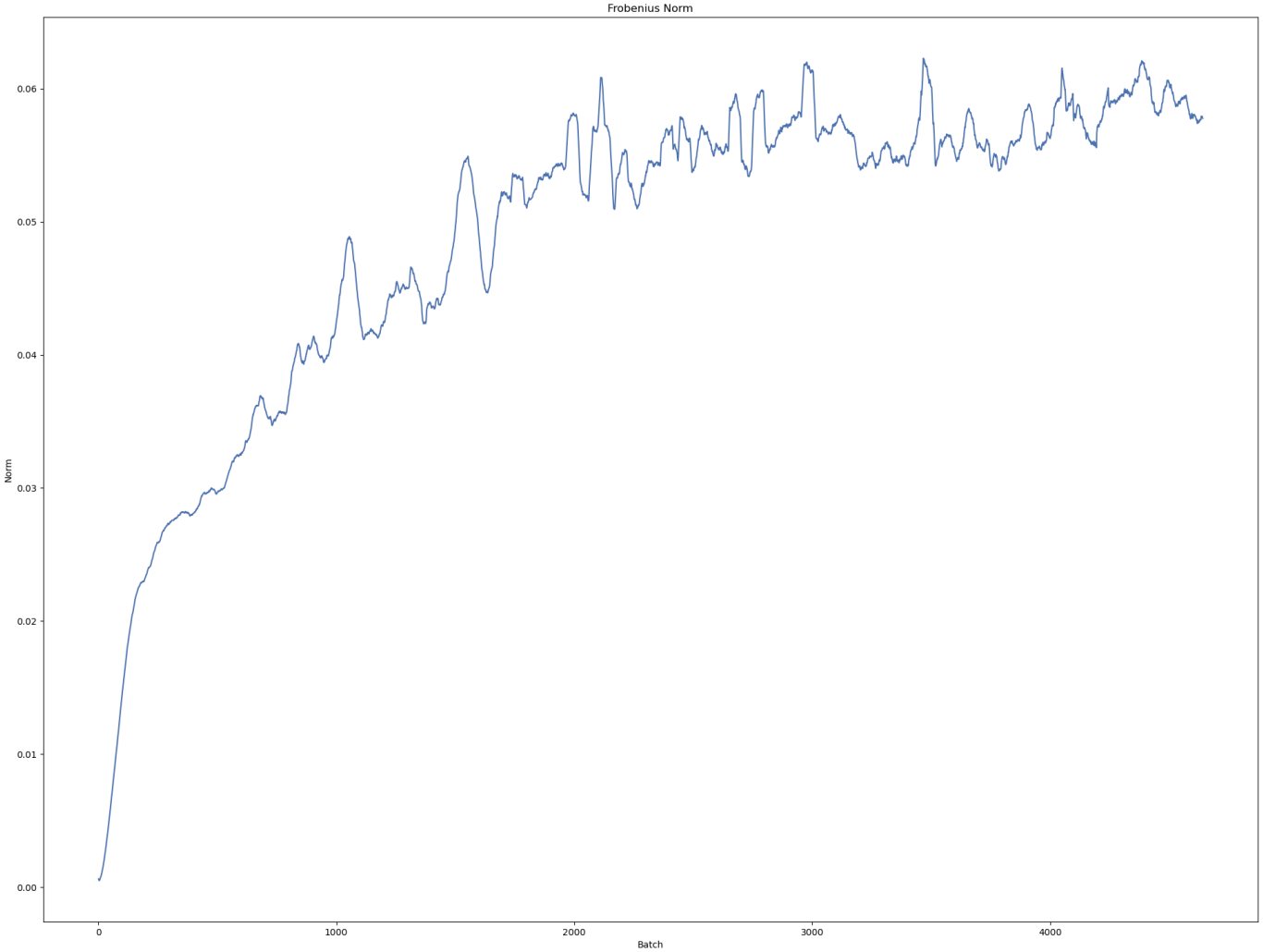
Distillation - Frobenius norm



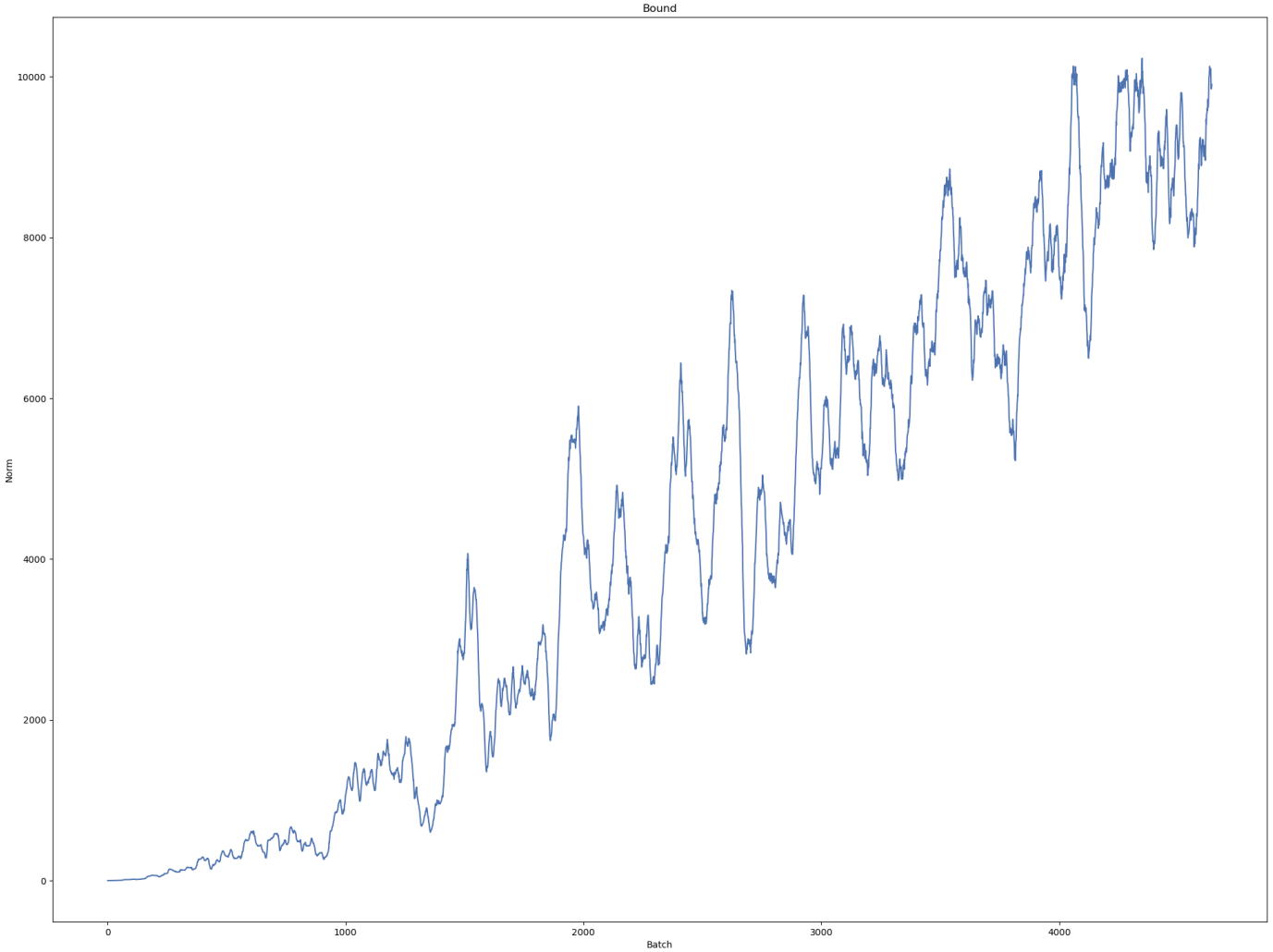
Jacobian regularization only - Frobenius norm



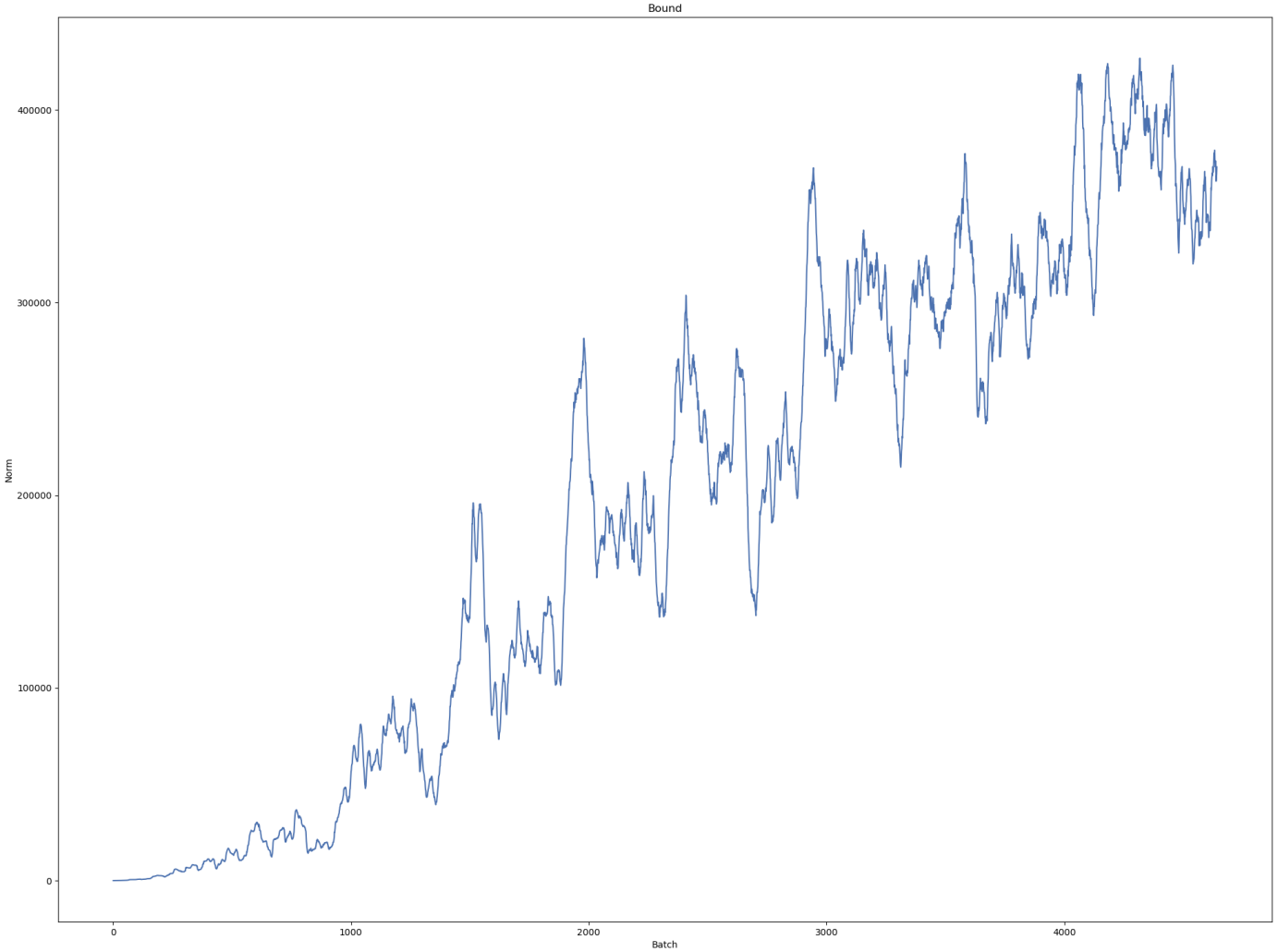
Suppress max eigenvalue - Frobenius norm



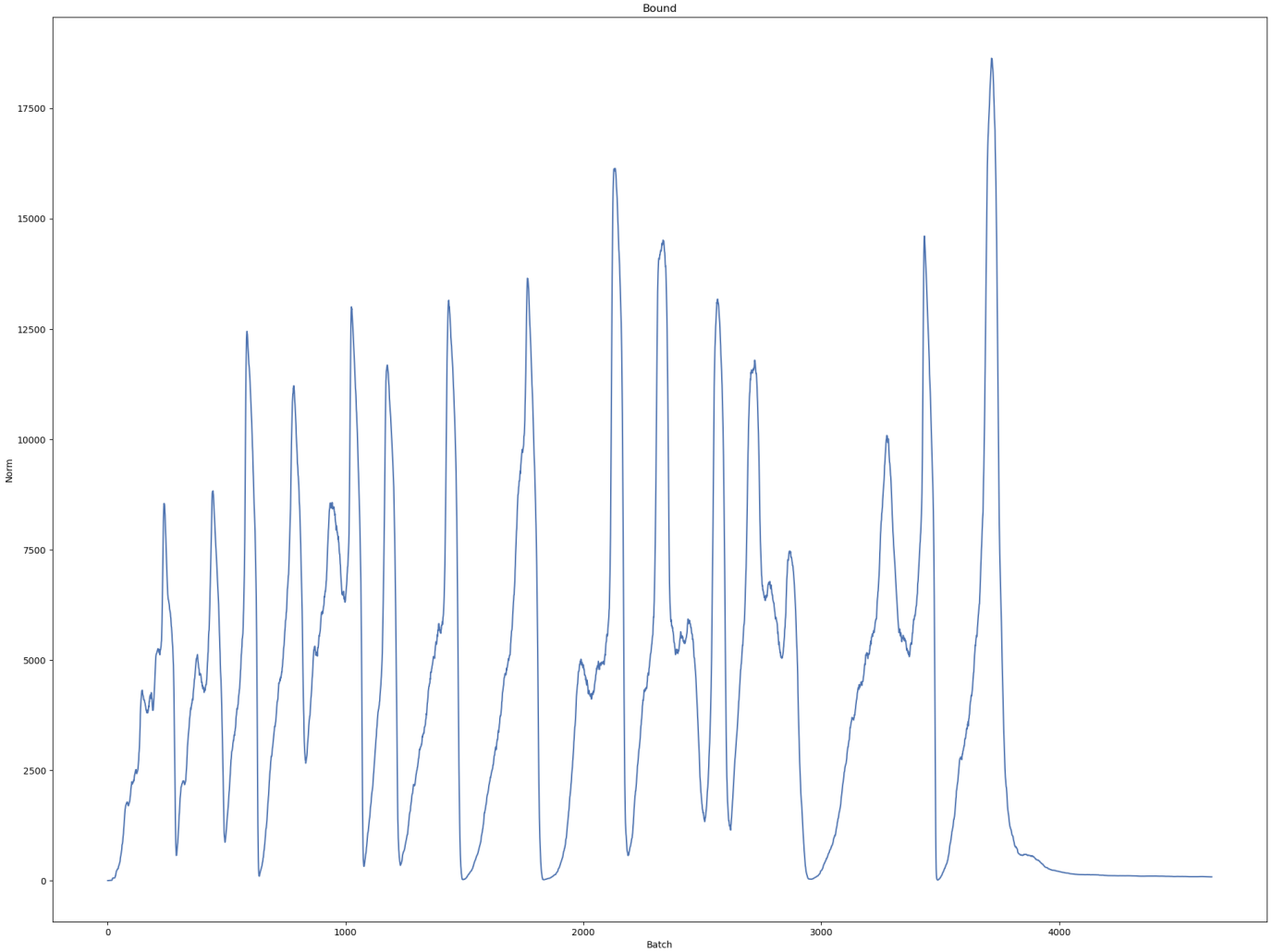
Baseline 1 - Bound



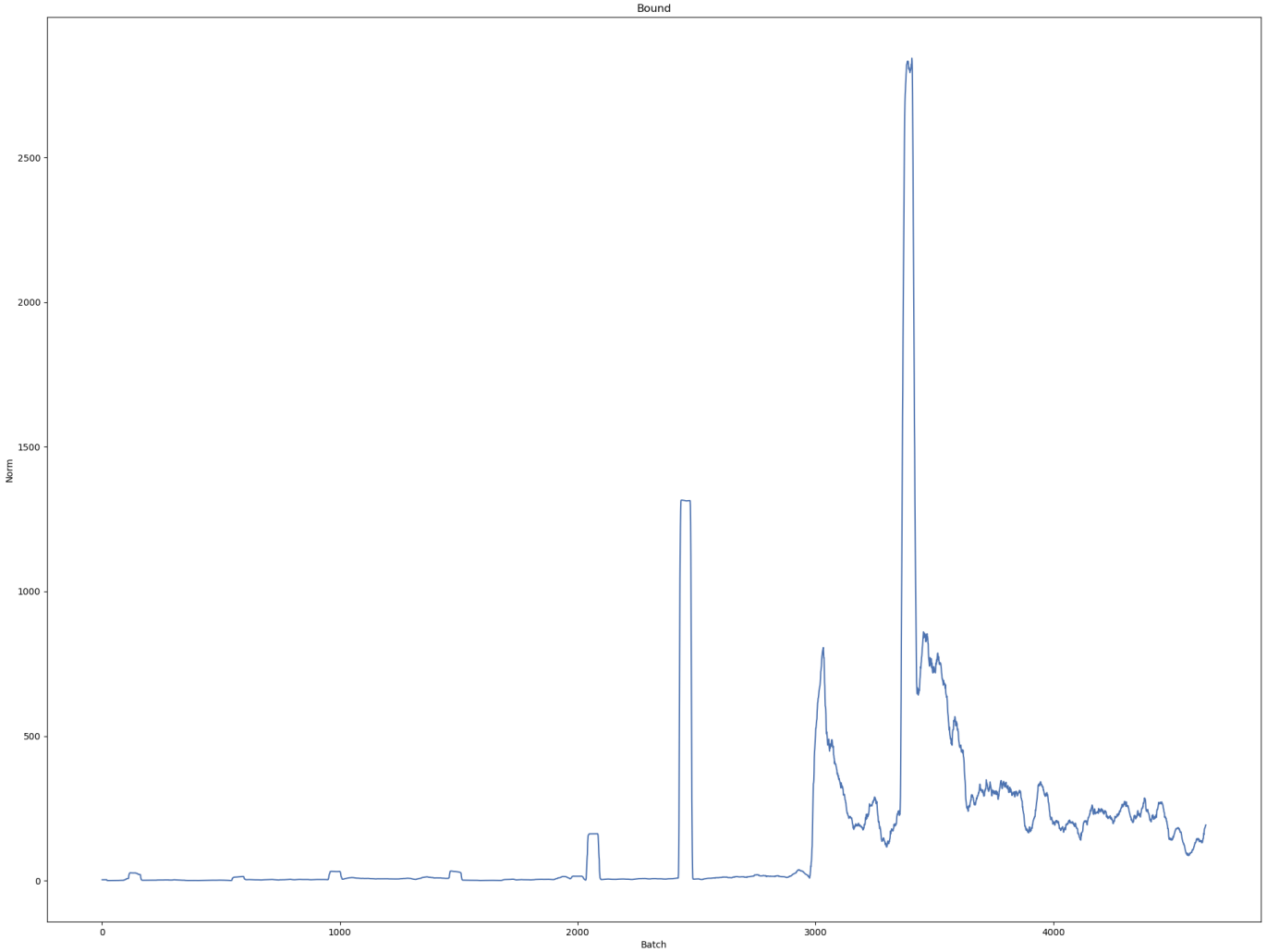
Jacobian 0.1 - Bound



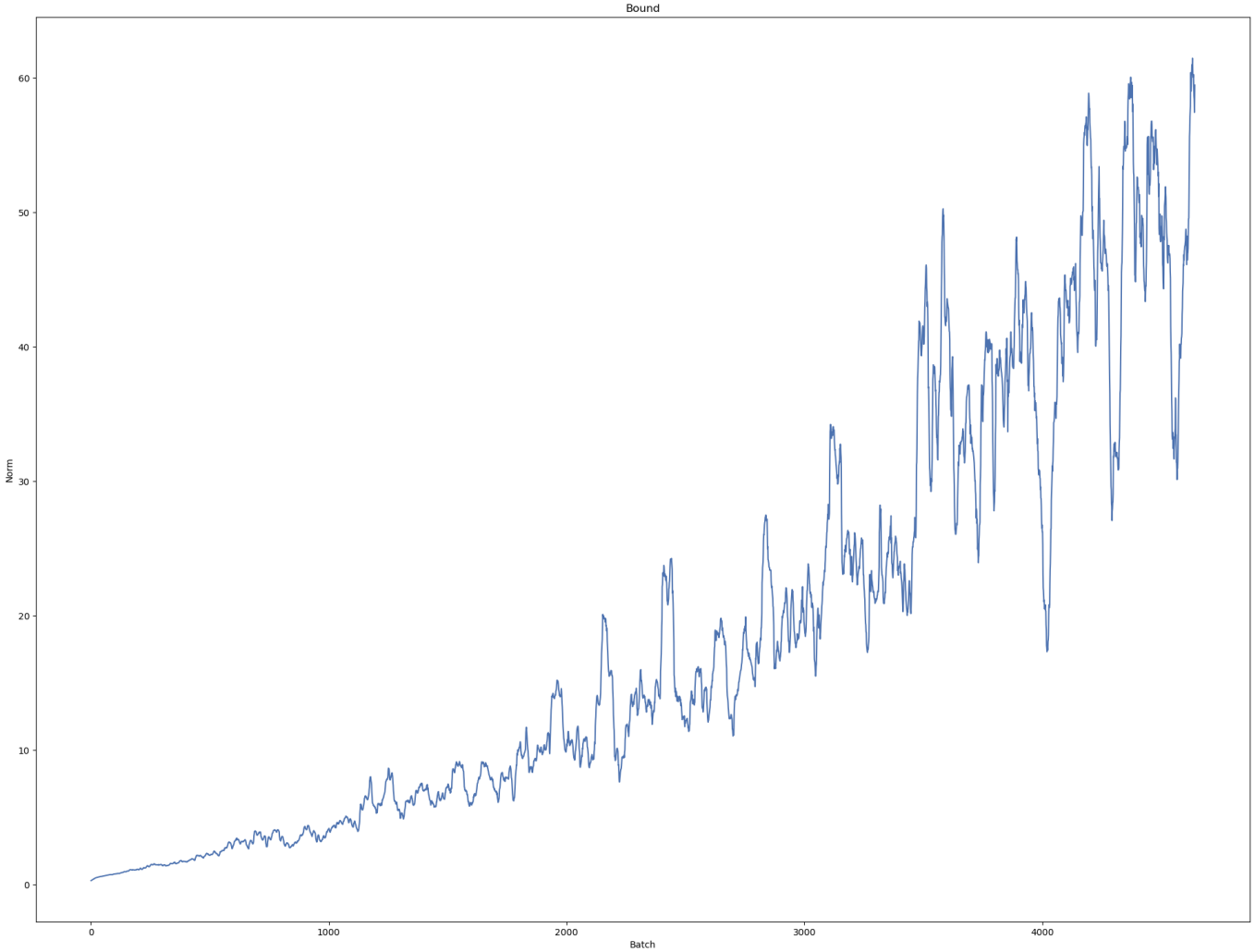
Jacobian 8.4 - Bound



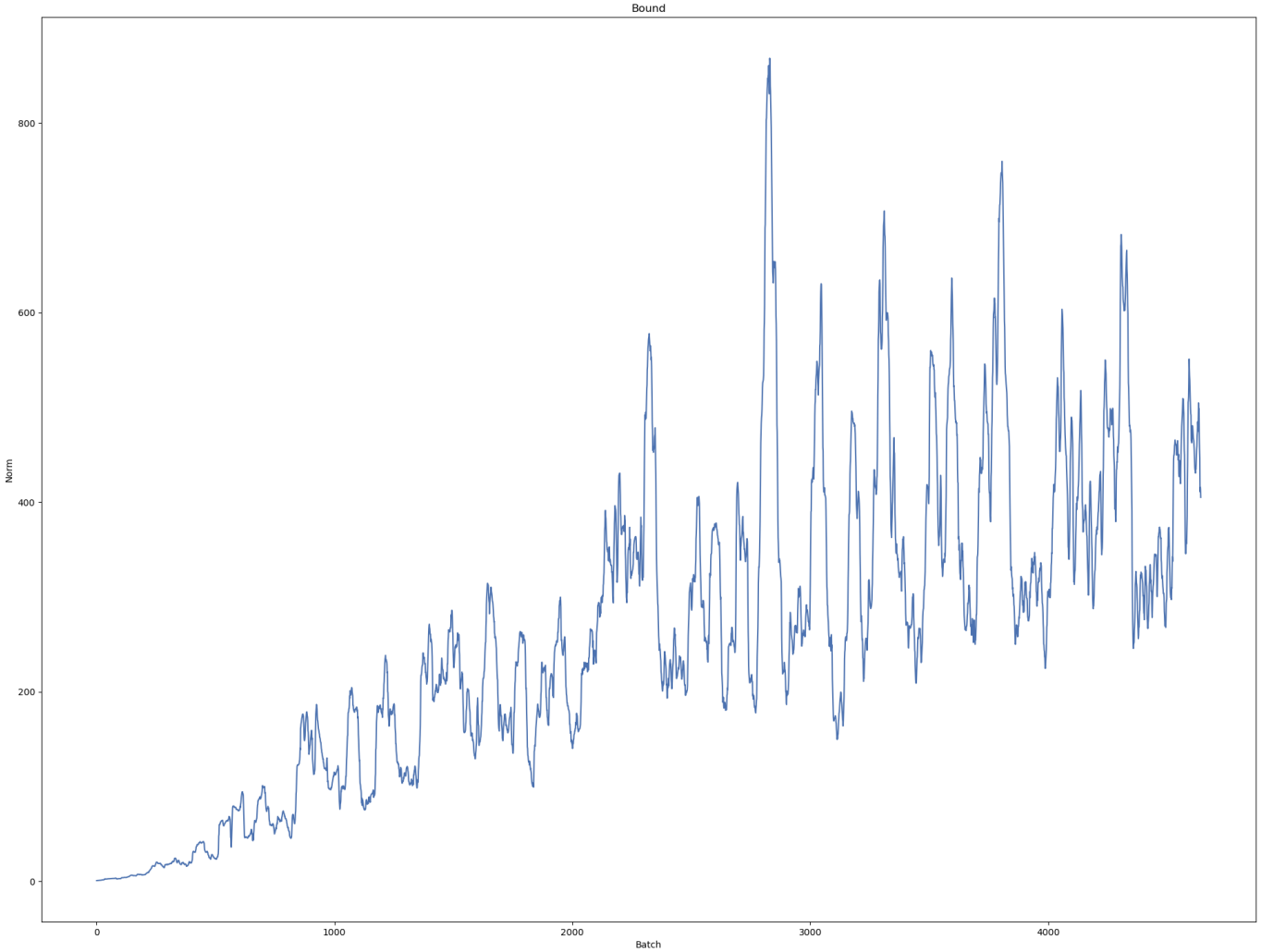
Isometry 8.4 - Bound



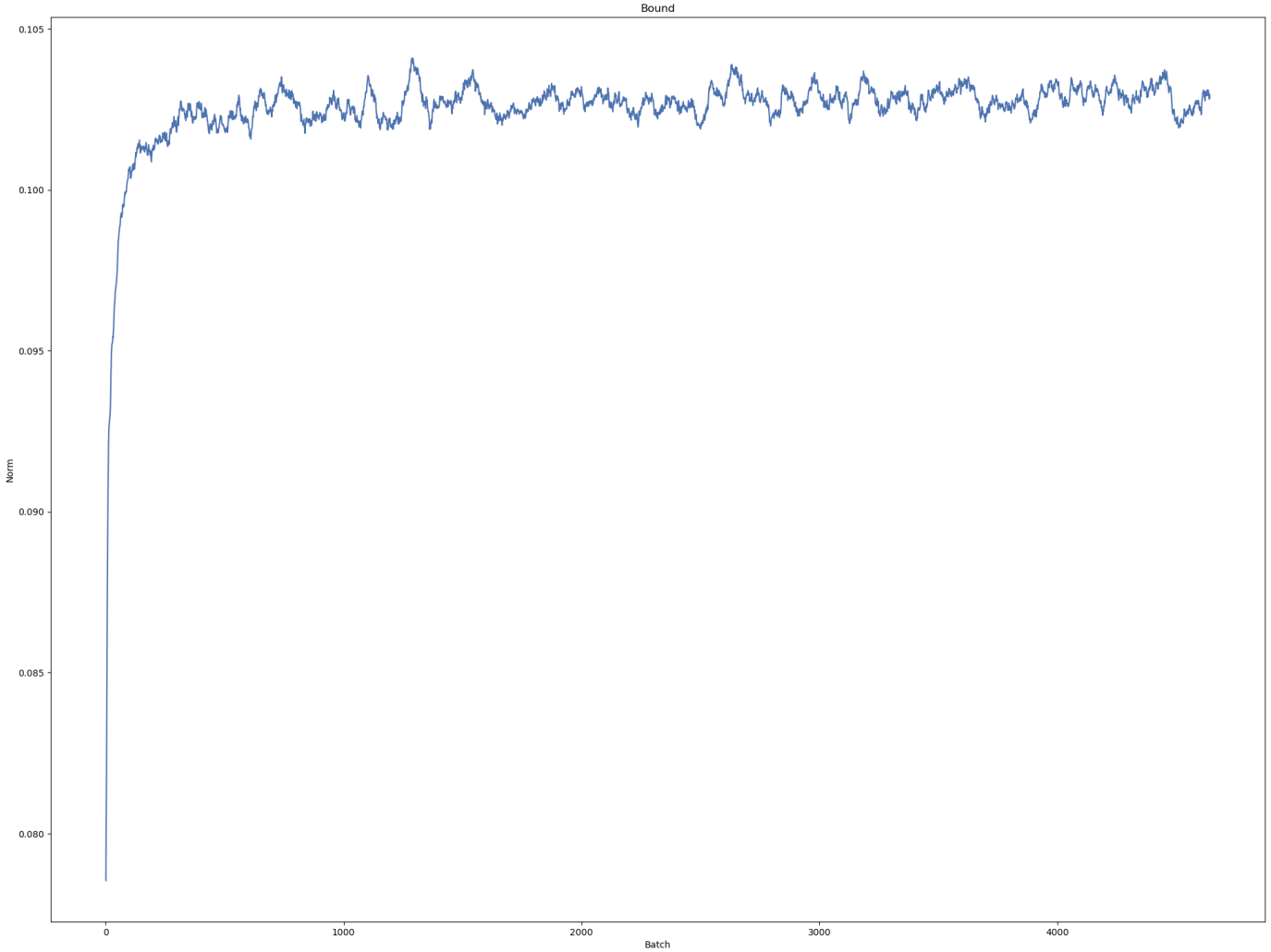
Adversarial training - Bound



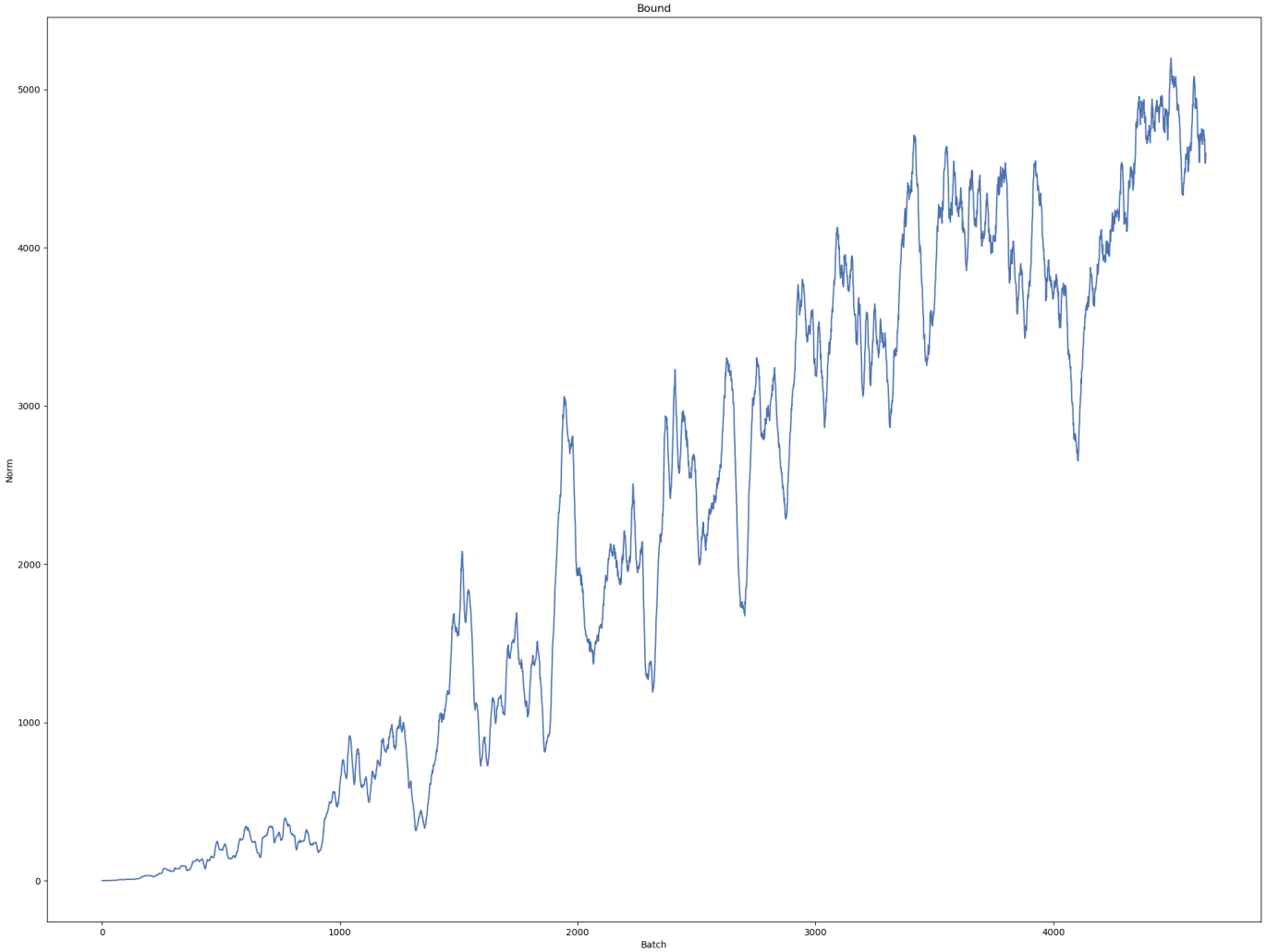
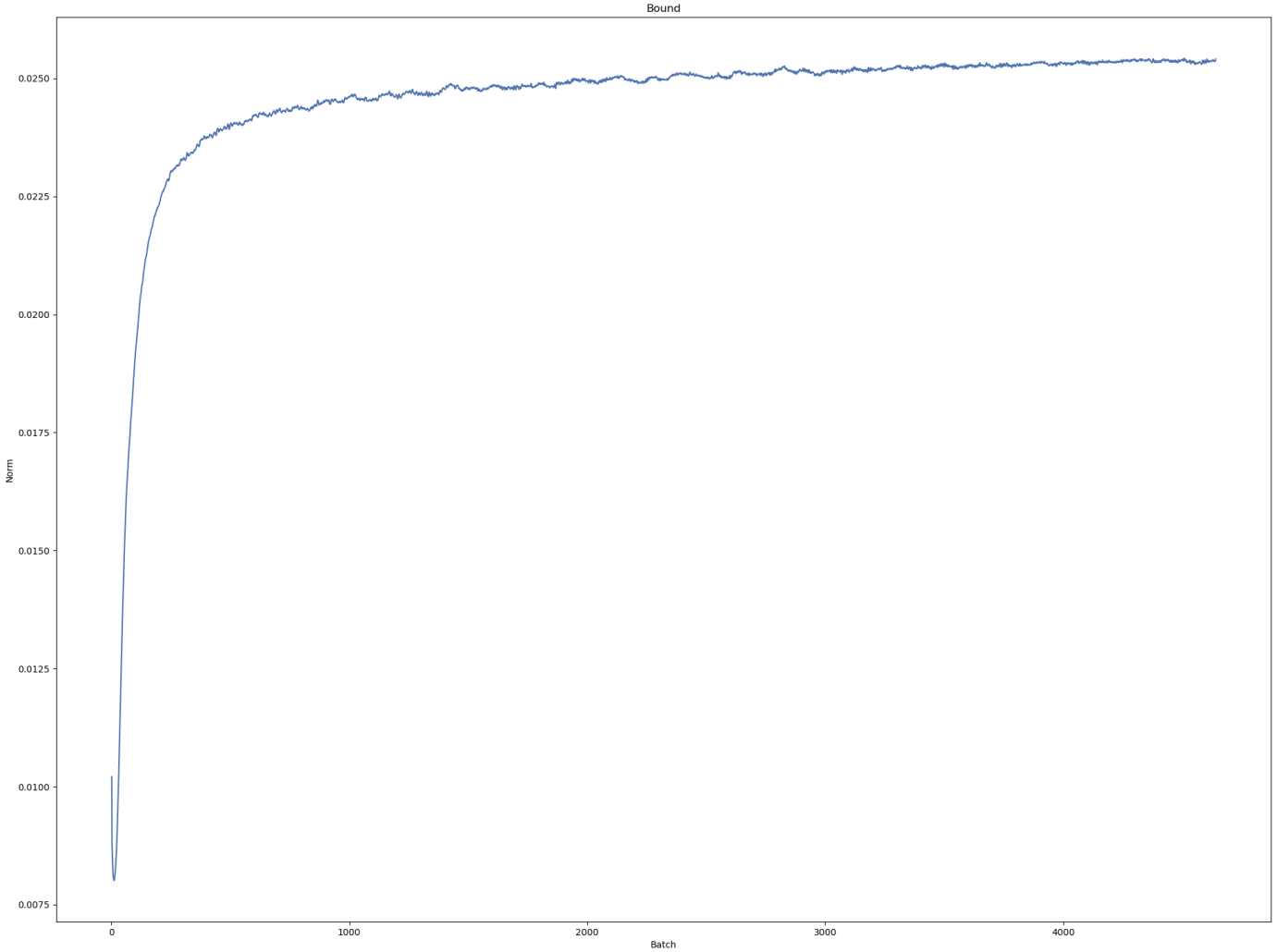
Parseval - Bound



Distillation - Bound



Jacobian regularization only - Bound



Suppress max eigenvalue - Bound