1. **Statistical Arbitrage Trading with Implementation of Machine Learning, Hakon Andersen & Hakon Tronvoll**

* Look for arbitrage opportunities in the Norwegian Market.
  + We consider the U.S Russell 3000
* PCA and density-based clustering to cluster stocks (DBSCAN).
* Use cointegration to identify mean-reversion and weak stationarity
* Conclusion: Pairs trading does not provide excess return or favorable Sharpe ratio.
* Compare to unsupervised machine learning model

1. **Pair Trading: Clustering Based on Principal Component, Rafael Govin Cardoso**

* PCA for clustering compared to clustering by industry groups.
* Data from 3 emerging markets: Brazil, South Africa, and India.
* Use AIC to determine the number of lag terms

1. **Pairs Trading, Convergence Trading, Cointegration, Daniel Herlemont**

* Co-integration
* Dickey-Fuller test for mean reversion
* Only consider pairs in the same sector
* Boundaries are 2-rolling standard deviations, position is opened when the boundary is hit twice. Close position when ratio hits the mean.

1. **Cluster-Based Statistical Arbitrage Strategy, Anran Lu, Atharva Parulekar, Huanzhong Xu**

* Assign stock-ETF pairs a score based on cointegration test (Johansen’s test).
* PCA/K-means for clustering, but cointegration statistics seem to outperform.
* Use LSTM to predict trading signals. Compare performance to AR-1.
* 40-day trading window
* Data from Quantopian and Yahoo Finance

1. **Pairs Trading Using Machine Learning: An Empirical Study, R.W.J. van der Have**

* Pair selection using Cointegration
* Pairs Trading using Neural Network
* Performance Metrics used: Sharpe Ratio, Sortino Ratio, Max-Drawdown
* Data, all ETFS on the NYSE from Datastream database.
* Restrict pairs within sectors