Exercise Sheet 7

Kurtosis, negentropy,
and the independent components of image patches

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Jens Krenzin - 319308
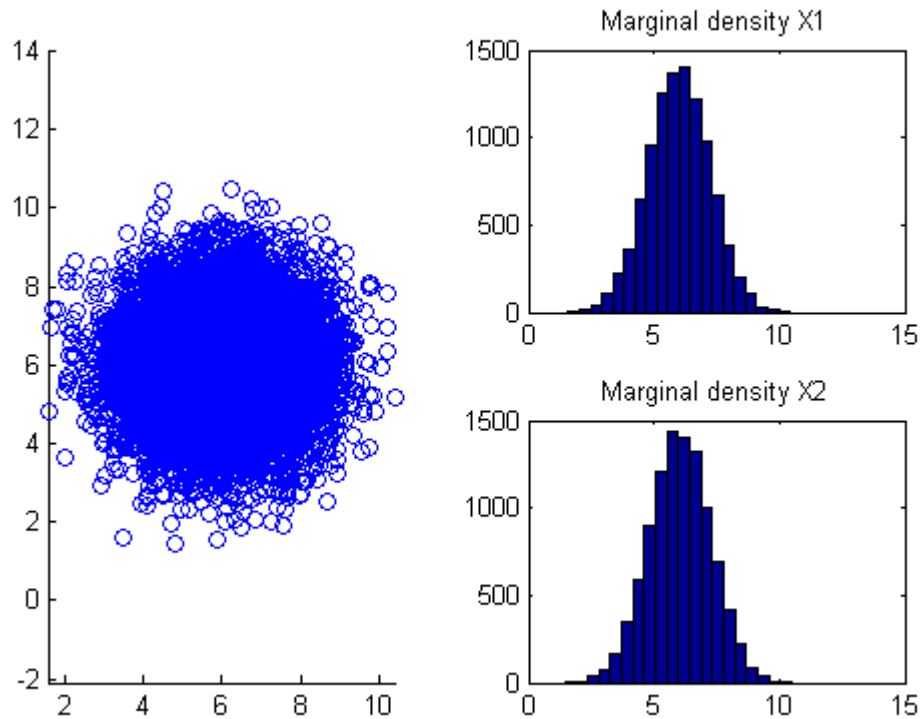
Problem 7.1
Kurtosis Toy Data

Problem 7.1 Kurtosis Toy Data
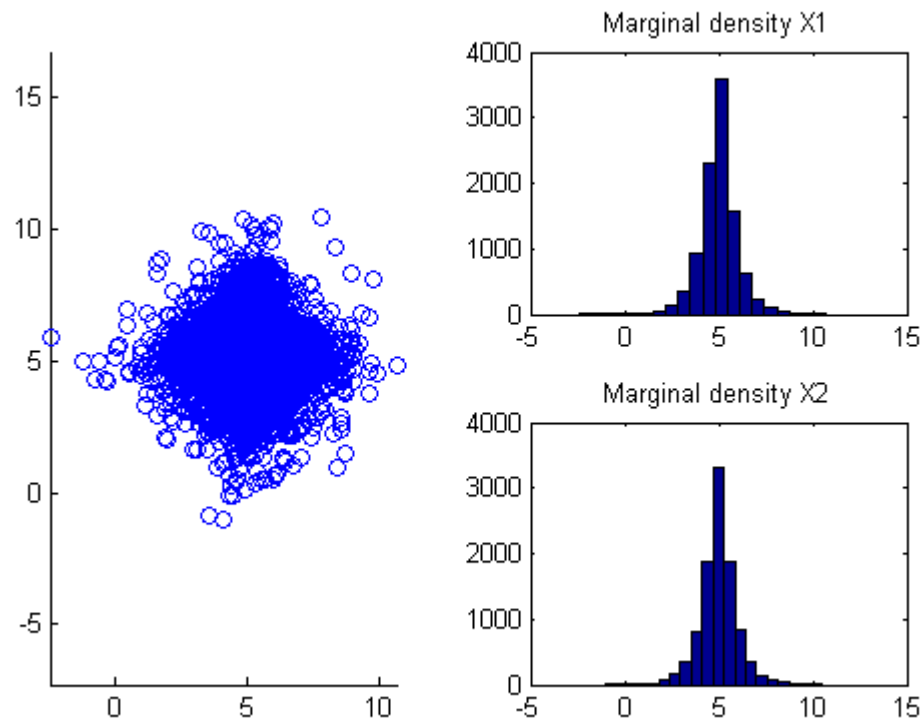
Loaded datasets

Normal distribution

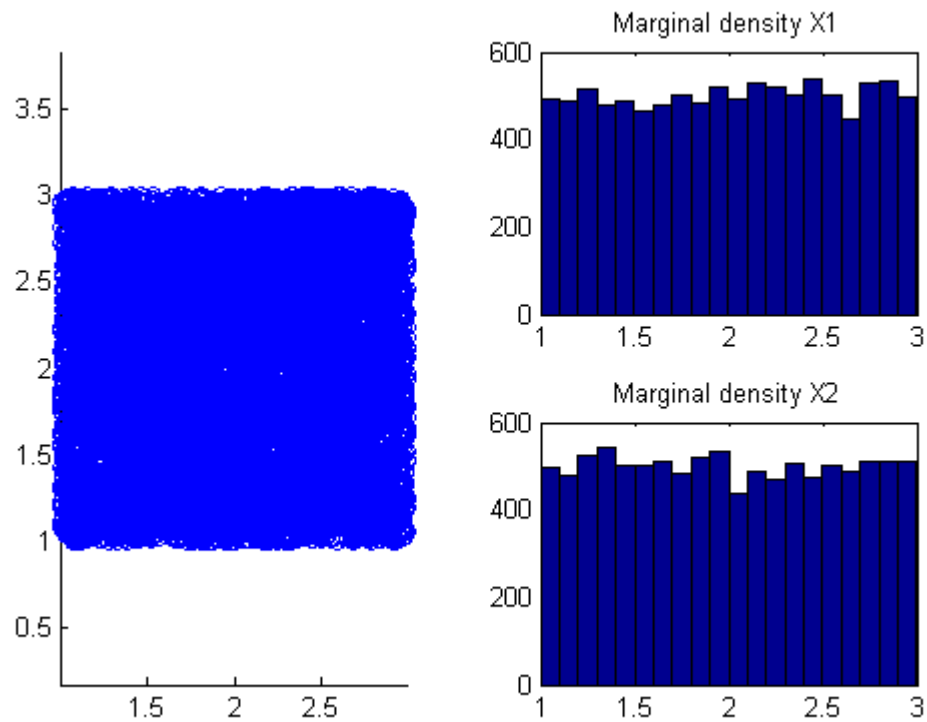# Problem 7.1 Kurtosis Toy Data

Loaded datasets

Laplacian distribution

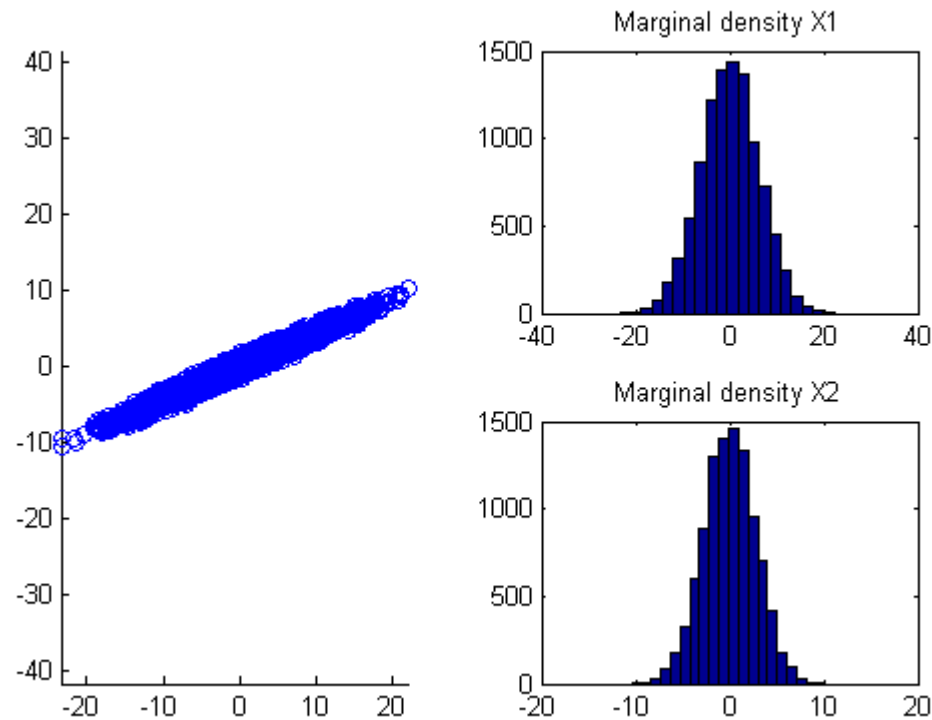# Problem 7.1 Kurtosis Toy Data

Loaded datasets

Uniform distribution

Problem 7.1 Kurtosis Toy Data
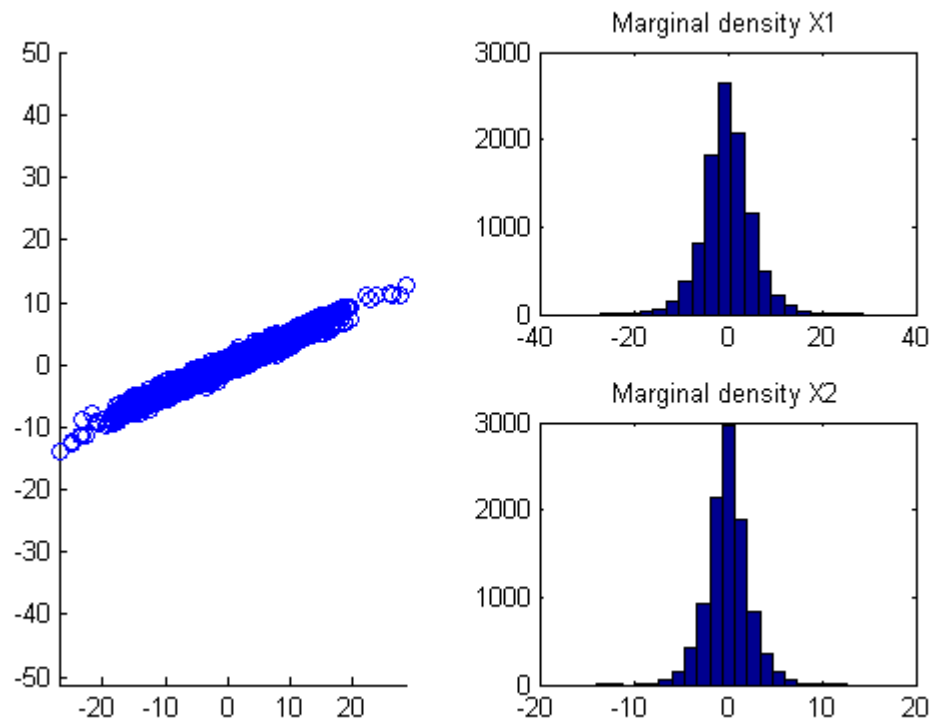
Mixed data

Mixed centered normal distribution

Problem 7.1 Kurtosis Toy Data
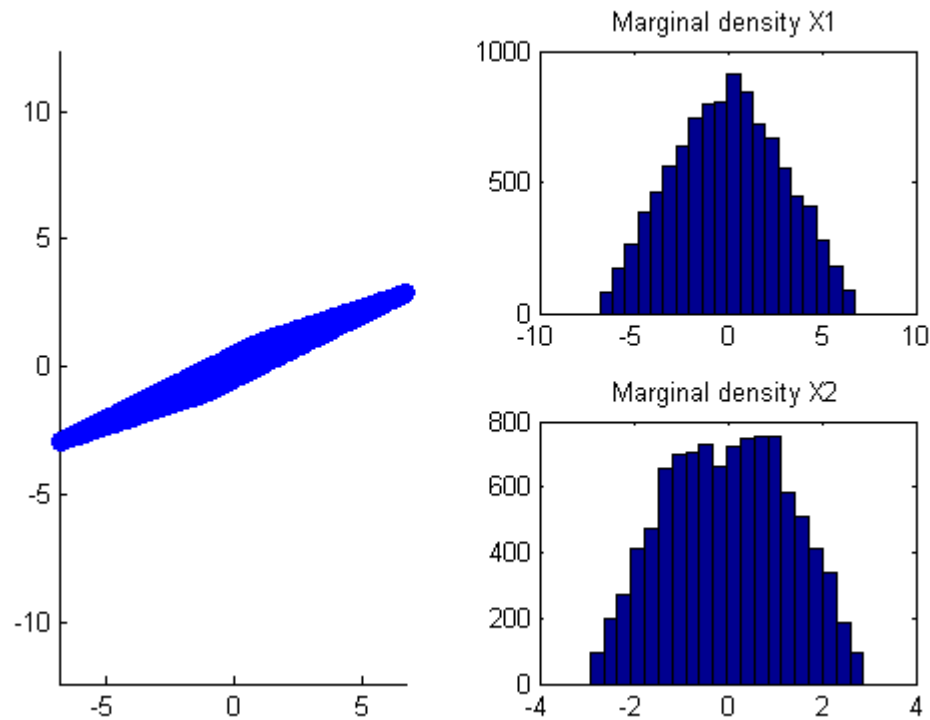
Mixed data

Mixed centered laplacian distribution

Problem 7.1 Kurtosis Toy Data
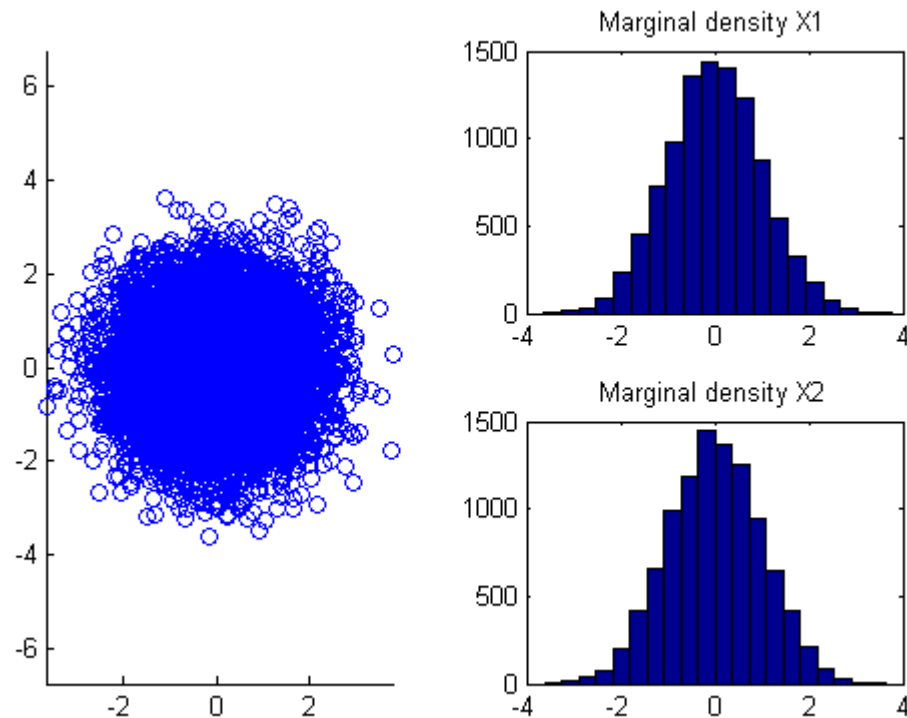
Mixed data

Mixed centered uniform distribution

Problem 7.1 Kurtosis Toy Data
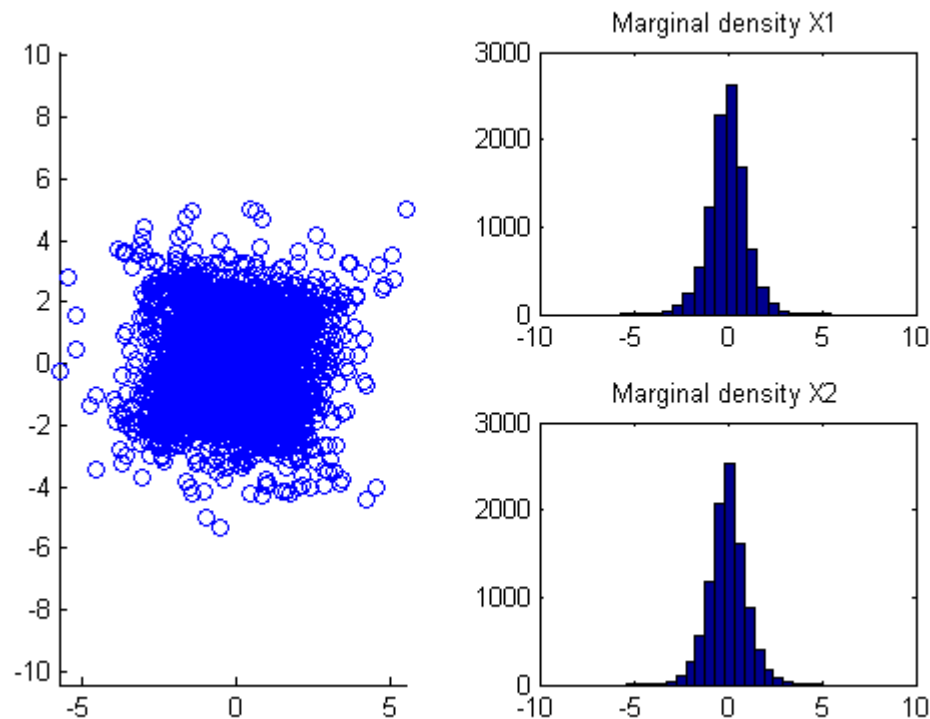
Whitened mixed data in PC space

Whitened proj. mixed normal distribution

Problem 7.1 Kurtosis Toy Data
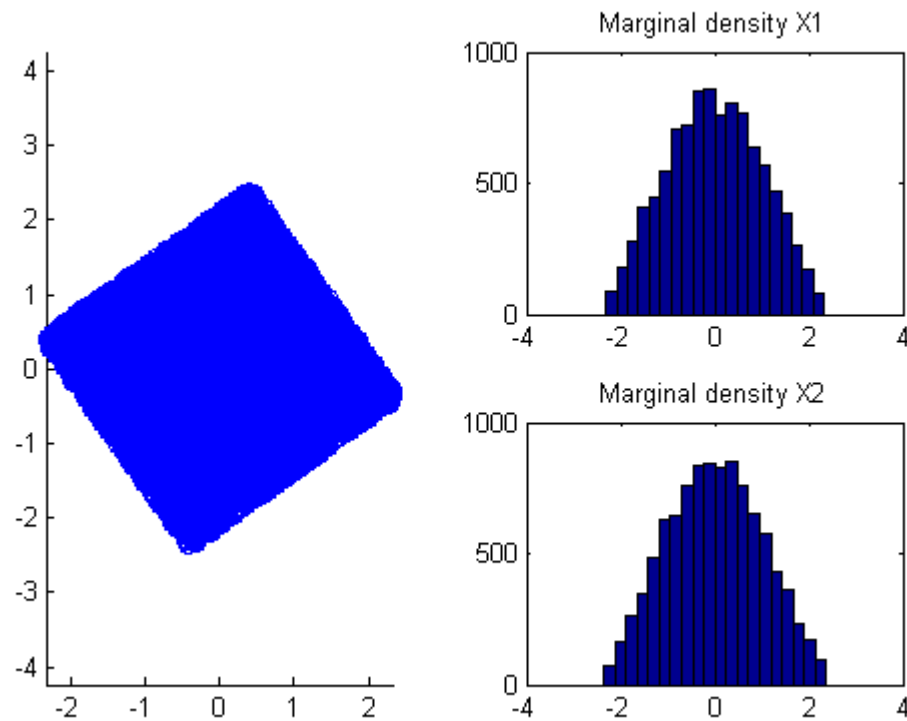
Whitened mixed data in PC space

Whitened proj. mixed laplacian distribution
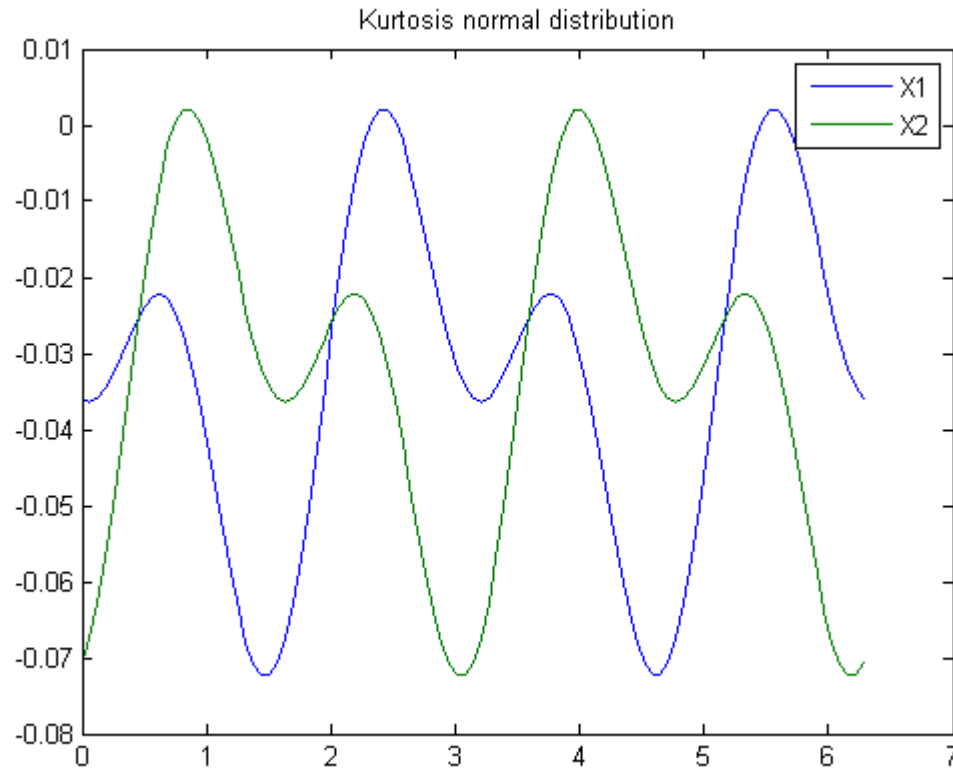
Problem 7.1 Kurtosis Toy Data

Whitened mixed data in PC space

Whitened proj. mixed uniform distribution
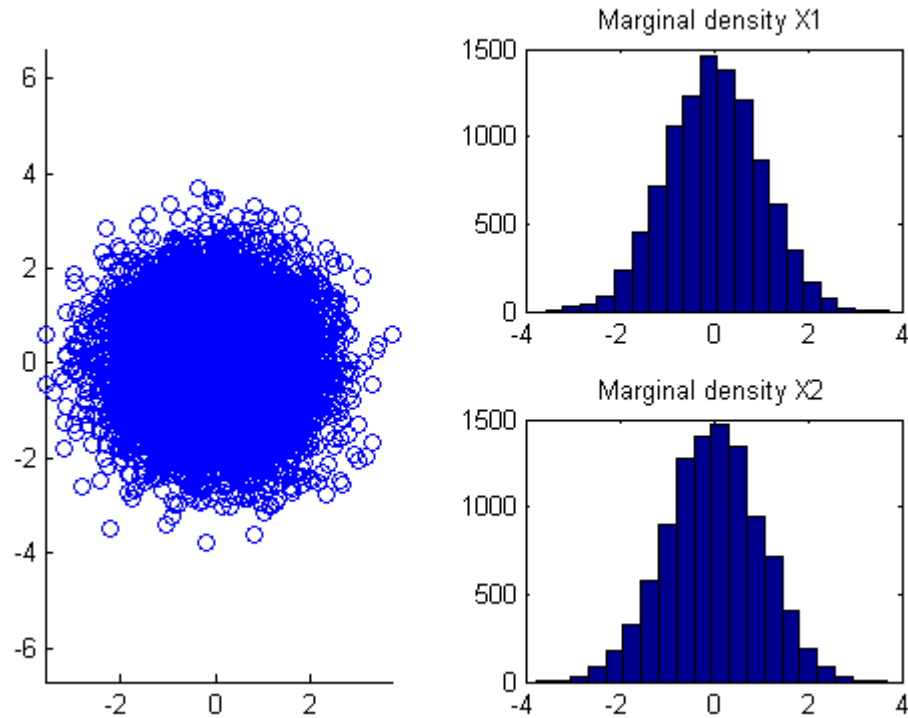
Problem 7.1 Kurtosis Toy Data

Kurtosis function – normal distribution

Problem 7.1 Kurtosis Toy Data

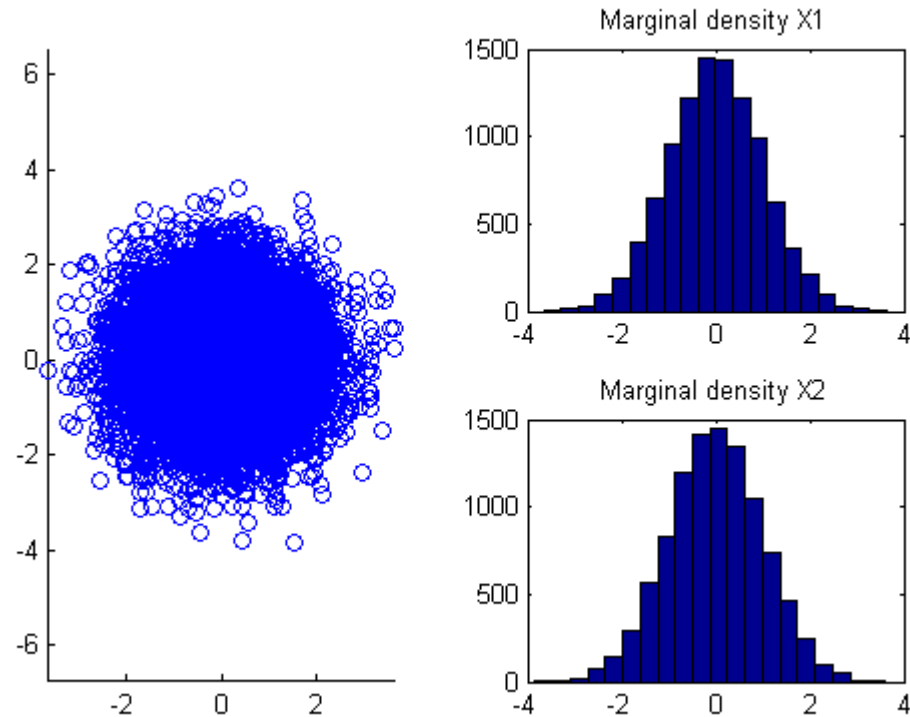**Kurtosis function – normal distribution**

Min kurtosis normal distribution
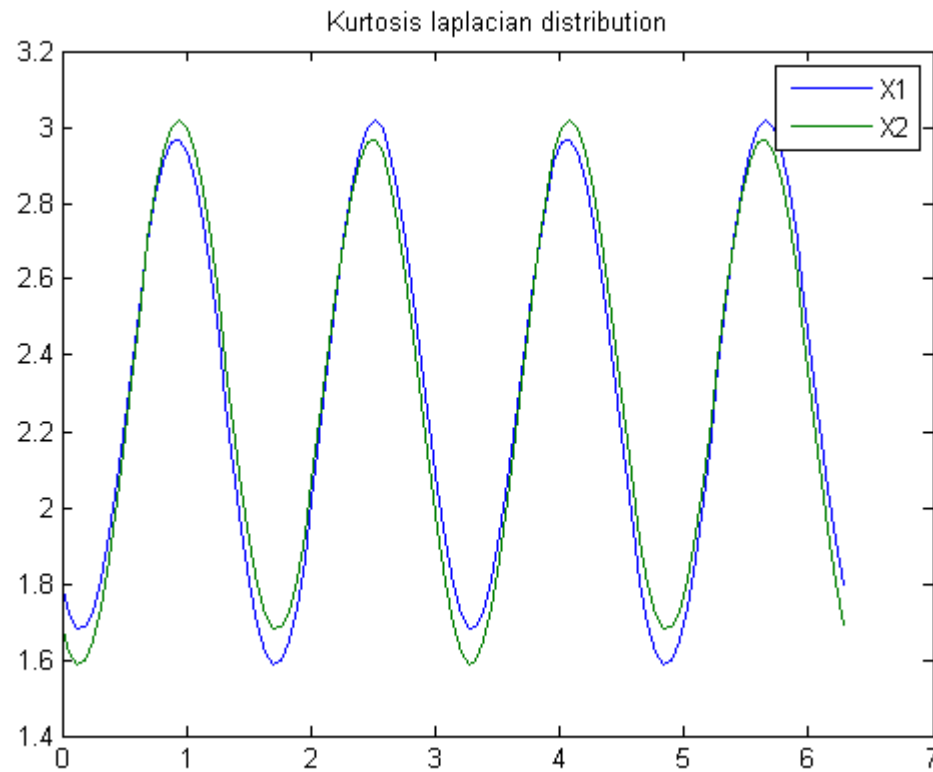
Problem 7.1 Kurtosis Toy Data

Kurtosis function – normal distribution

Max kurtosis normal distribution
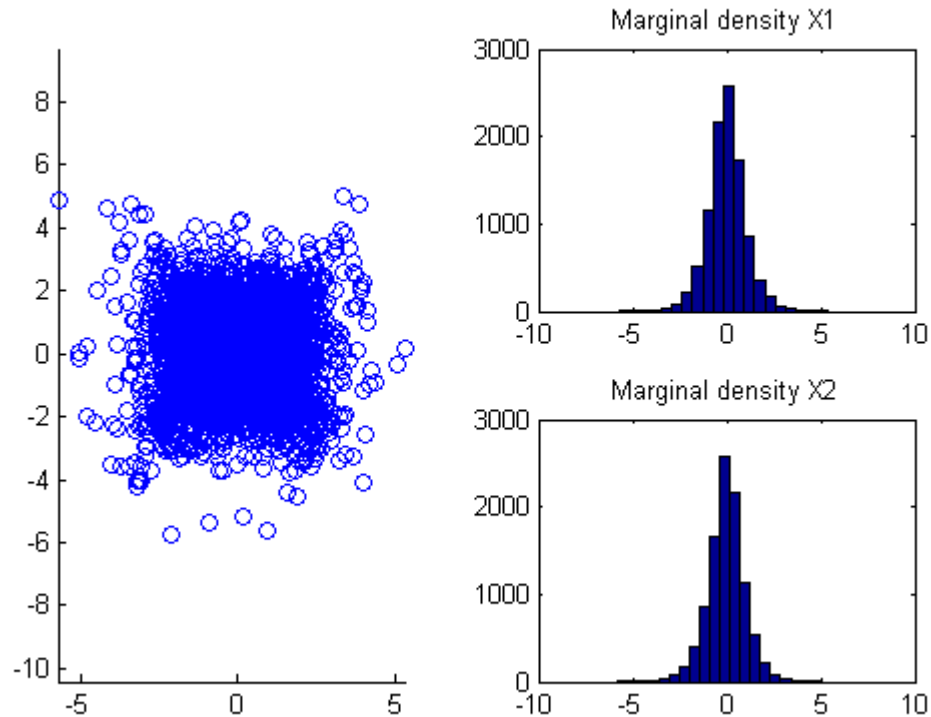
Problem 7.1 Kurtosis Toy Data

Kurtosis function – laplacian distribution

Kurtosis laplacian distribution

Problem 7.1 Kurtosis Toy Data

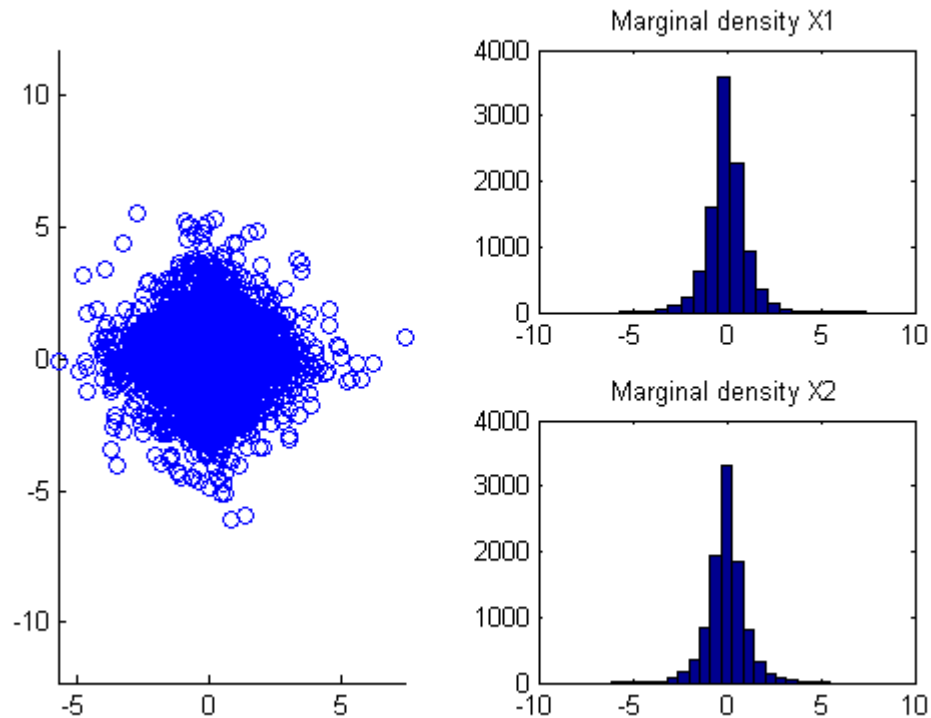**Kurtosis function – laplacian distribution**

Min kurtosis laplacian distribution
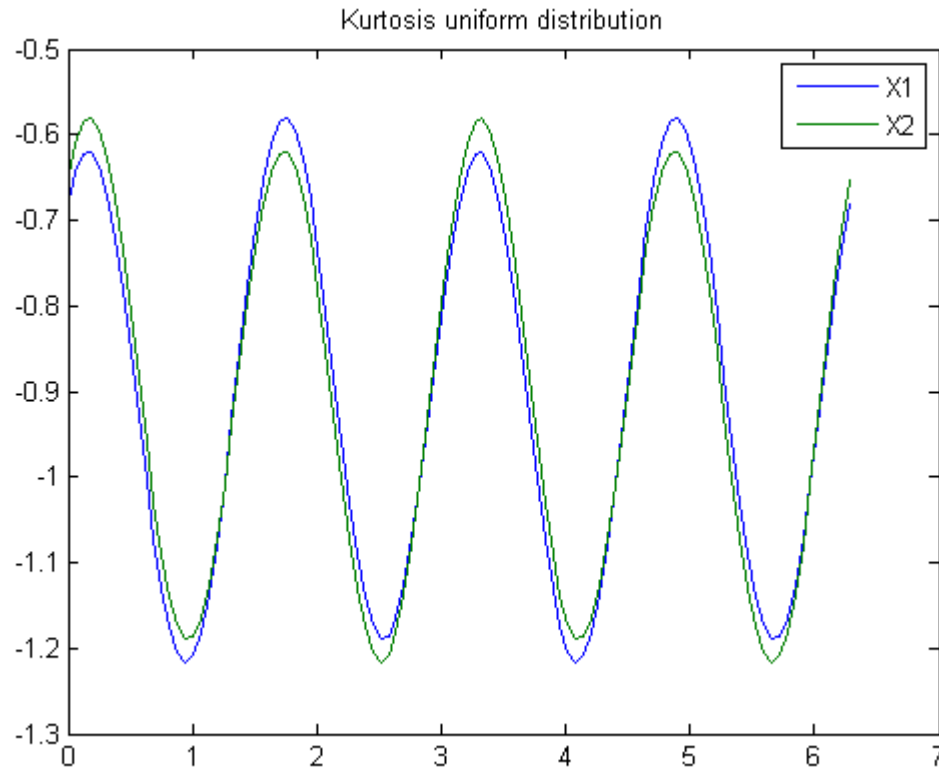
Problem 7.1 Kurtosis Toy Data

Kurtosis function – laplacian distribution

Max kurtosis laplacian distribution
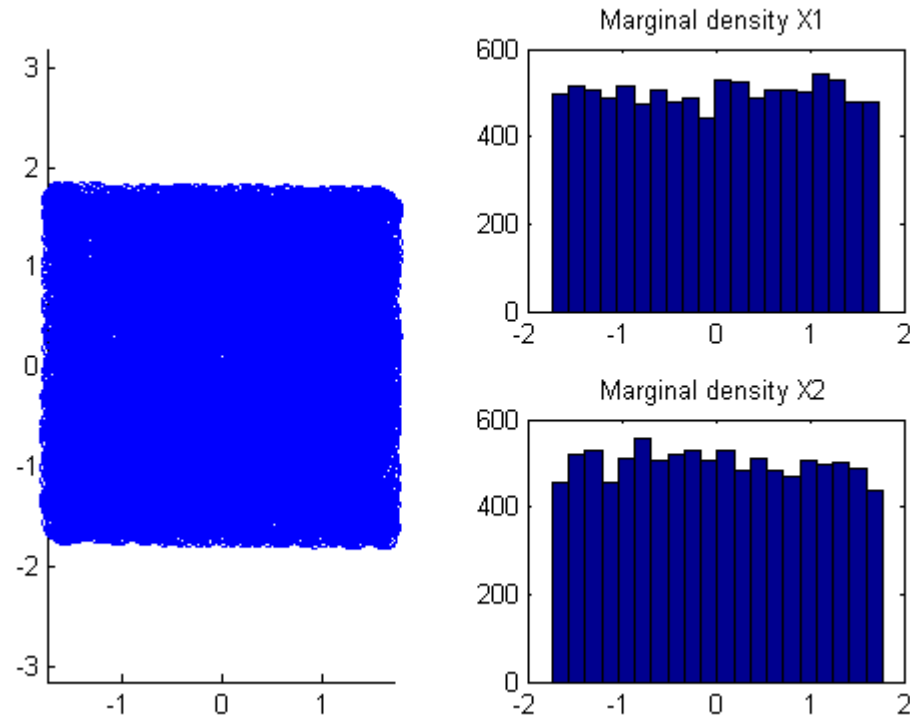
Problem 7.1 Kurtosis Toy Data

Kurtosis function – uniform distribution

Kurtosis uniform distribution

Problem 7.1 Kurtosis Toy Data
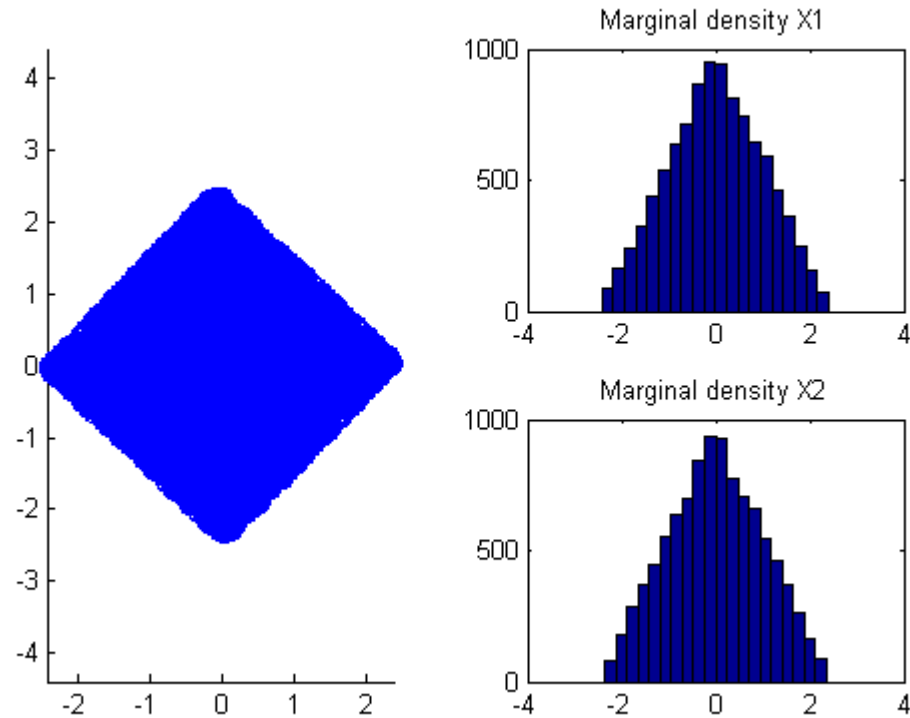
Kurtosis function – uniform distribution

Min kurtosis uniform distribution

Problem 7.1 Kurtosis Toy Data

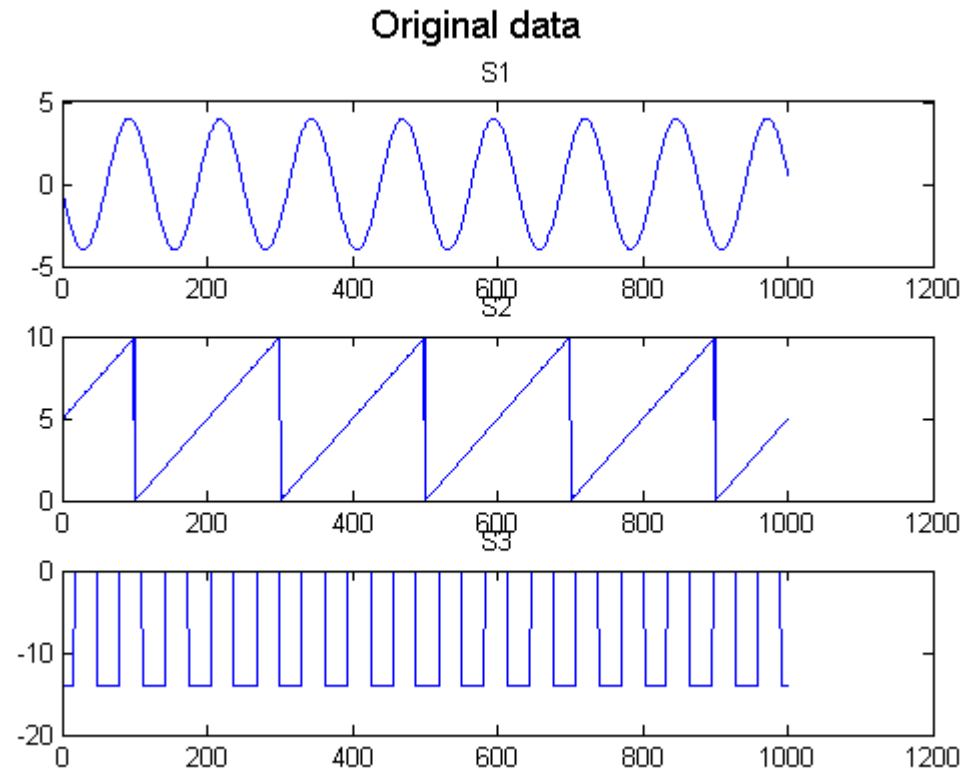**Kurtosis function – uniform distribution**

Max kurtosis uniform distribution
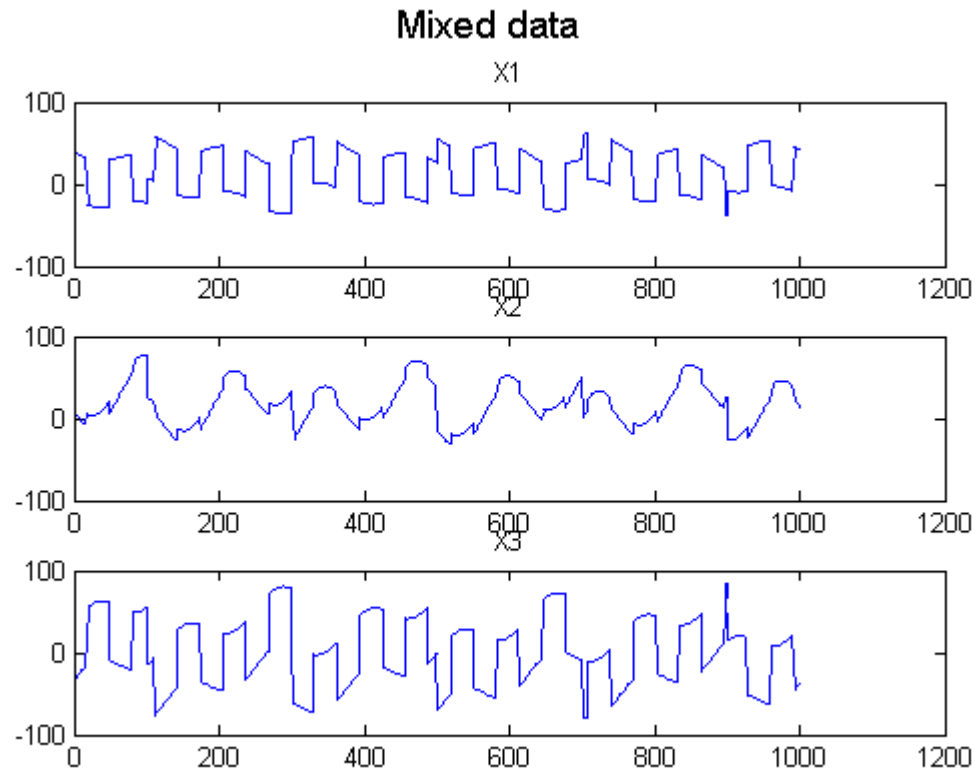
Problem 7.2
Toy Signal Seperation

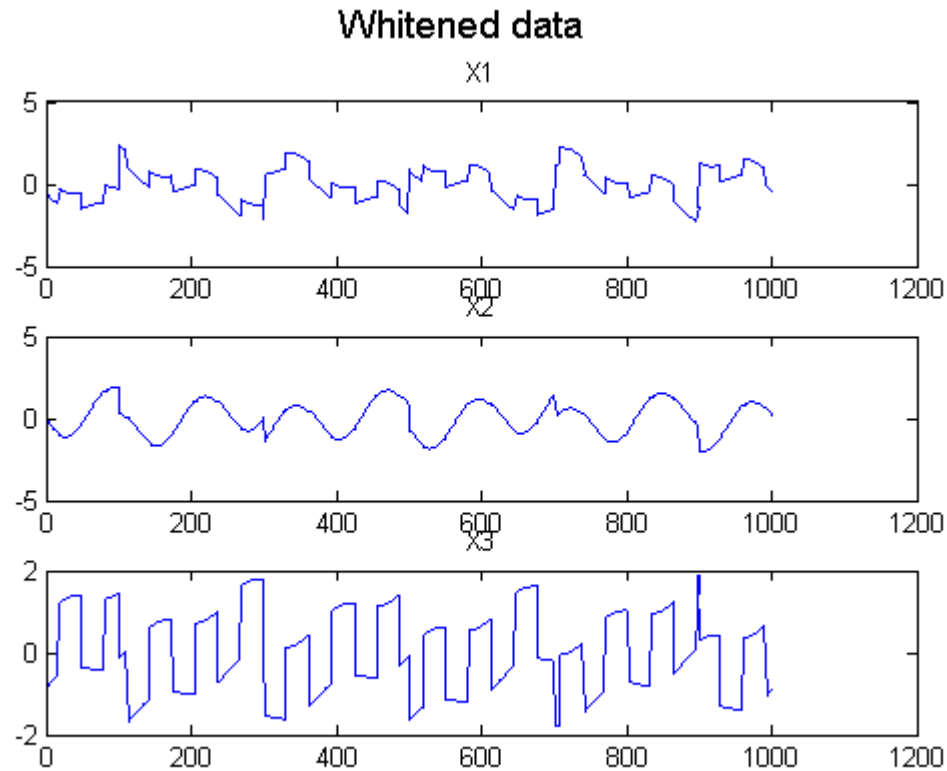# Problem 7.2 Toy Signal Seperation

Generated signals

Problem 7.2 Toy Signal Seperation
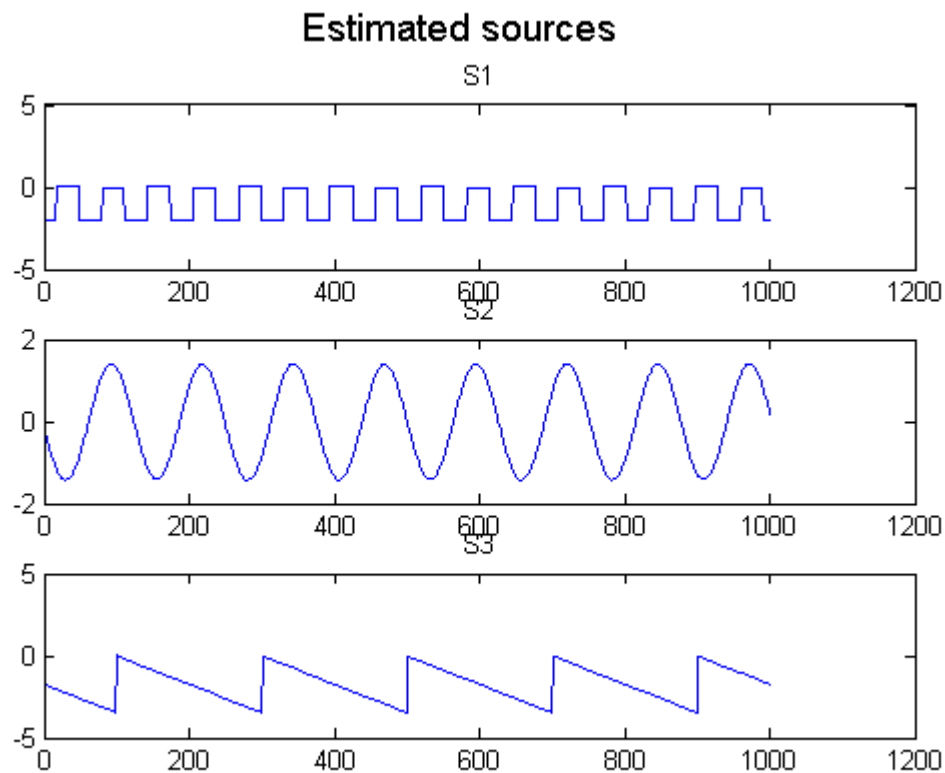
Mixed signals

Problem 7.2 Toy Signal Seperation

Whitened mixed signals
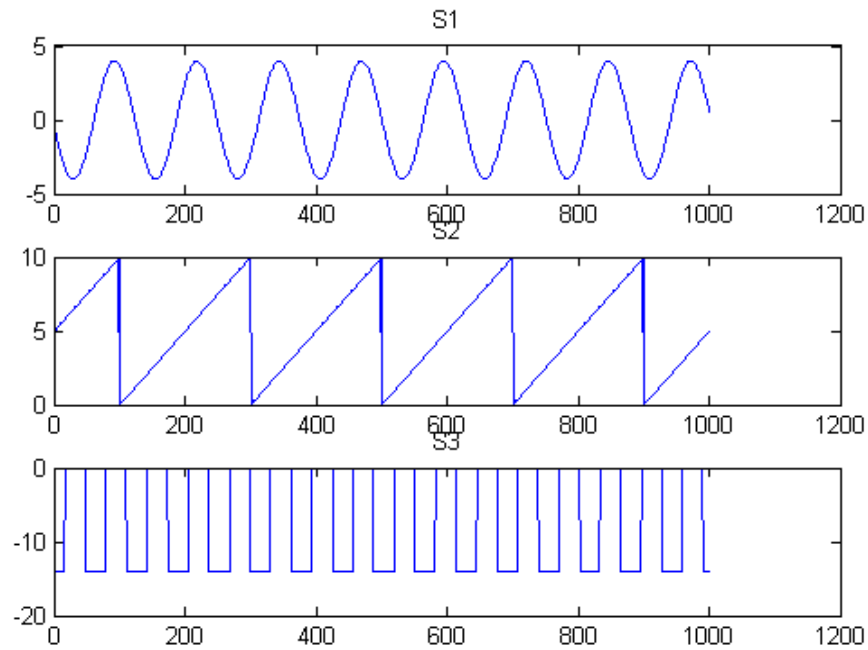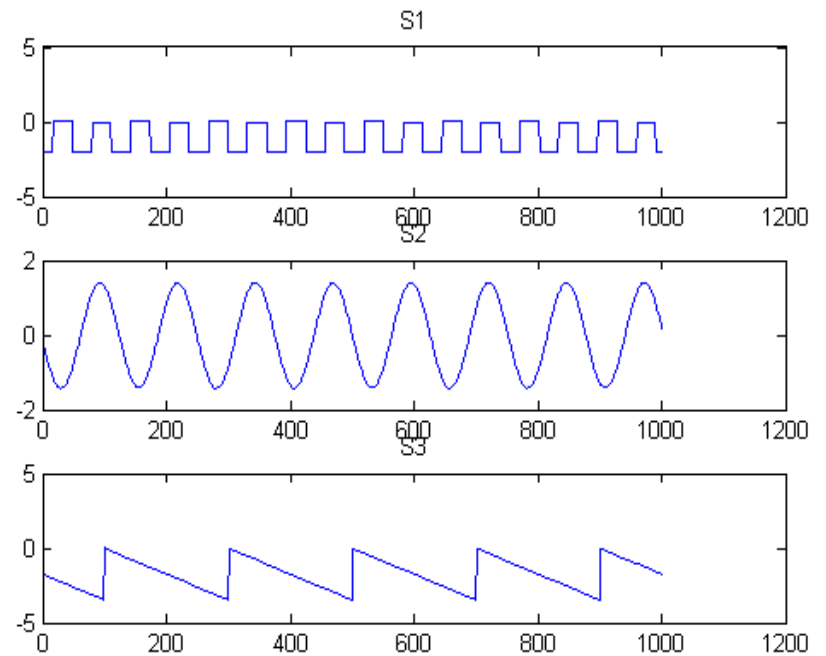
Problem 7.2 Toy Signal Seperation

Estimated sources

Problem 7.2 Toy Signal Seperation

Comparison

Problem 7.3
ICA on Image Patches

Problem 7.3 ICA on Image Patches

TODO