# TSDT14 Signal Theory

# Lecture Plan Autumn 2018

The plan below should be interpreted as an indication about approximately when the various course parts will be treated.

| Nr | Material | Contents |
|---|---|---|
| 1 | 2-3 | Introduction. Notation. Brief repetition of Signals and Systems, and stochastic variables. |
| 2 | 4.1-4.9 | Stochastic signals. |
| 3 | 4.10-4.11, 5.1-5.3 | LTI filtering. White noise. Colored noise. |
| 4 | 10 | Estimation. |
| 5 | 4.12, 5.4 | Various: Cross-Correlation, Cross-Spectrum, Poisson processes. Prediction. |
| 6 | 7.1-7.4 | Polynomial non-linearities. |
| 7 | 7.5-7.6 | Saturation and Quantization. |
| 8 | 8 | Modulation. AM, PM, FM. |
| 9 | 6.1-6.2 | Sampling and PAM. |
| 10 | 6.3-6.4, 11 | Reconstruction. |
| 11 | 9 | Multi-Dimensional Processes and Systems. |
| 12 | Extra material | Complex processes. |

The extra material for lecture twelve will be distributed in paper form, either before or at that lecture.