

**Tilastollisen oppimisen jatkokurssi 2018–2019**  
**Advanced statistical learning 2018–2019**

**Round 5, 28.1.–10.2.**

**Topics:**

- Unsupervised learning
- Dimension reduction
- Principal component analysis and principal component regression
- Partial least squares
- K-means and hierarchical clustering

**Material:**

- ISLR chapters 6.3, 10.1–10.3
- ISLR videos 6.9–6.10 and 10.1–10.5
- FDP videos: –
- ESLR chapters 3.5, 14 (especially 14.3 and 14.5)

**Exercises**

1. ISLR 6.9, parts (a) and (e)–(f) and compare results to Round 1.
2. ISLR 6.11 with the PCR (cf. Round 1)
3. ISLR 10.3
4. ISLR 10.9
5. ISLR 10.10