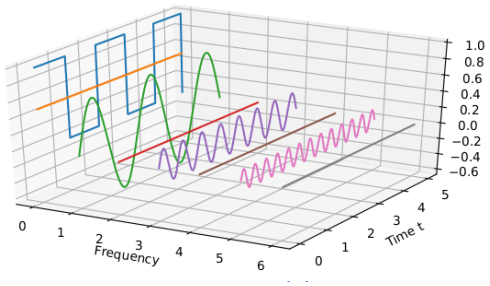
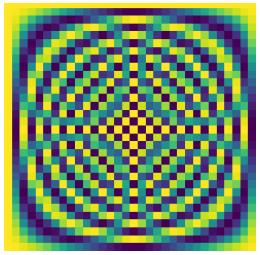
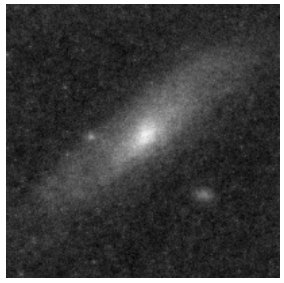
APM 51055 : Signal Processing

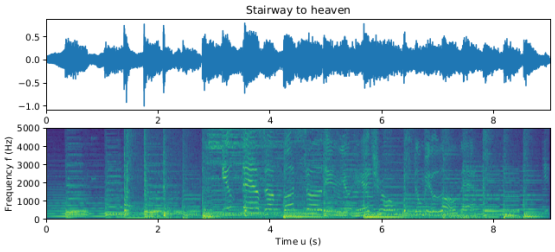
R. Flamary

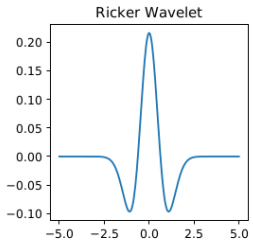
from Fourier to Machine Learning

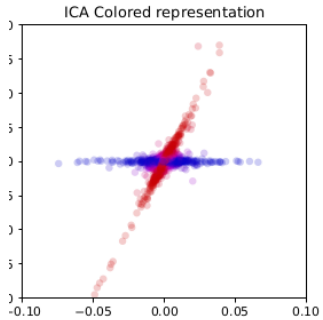


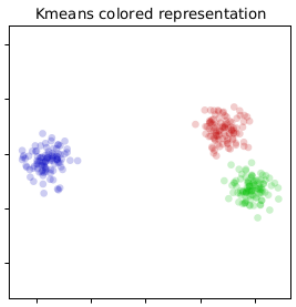


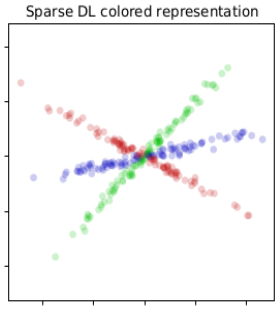




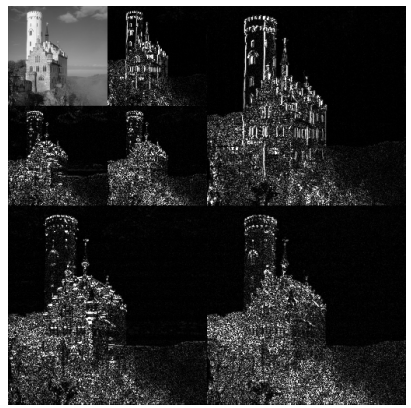








1. **Fourier analysis and analog filtering**
   Fourier Transform, convolution, analog signal processing.
2. **Digital signal processing**
   Sampling, Fast Fourier Transform (FFT), Image processing.
3. **Random signals**
   Noise stochastic processes, linear modeling and filtering.
4. **Signal representation and dictionary learning**
   Non-stationarity, Short Time FT, wavelets, DCT, dictionary learning.
5. **Signal processing with machine learning**
   Learning representations, generating realistic signals.



Courses + practical sessions in Python