

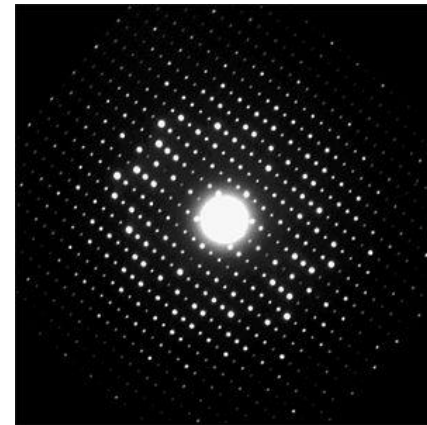
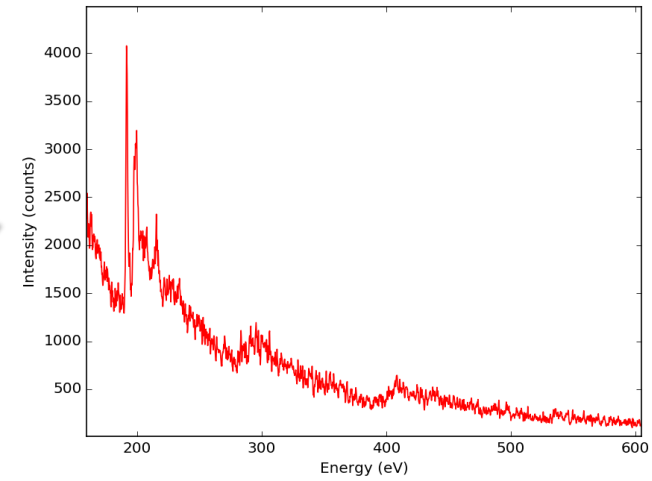
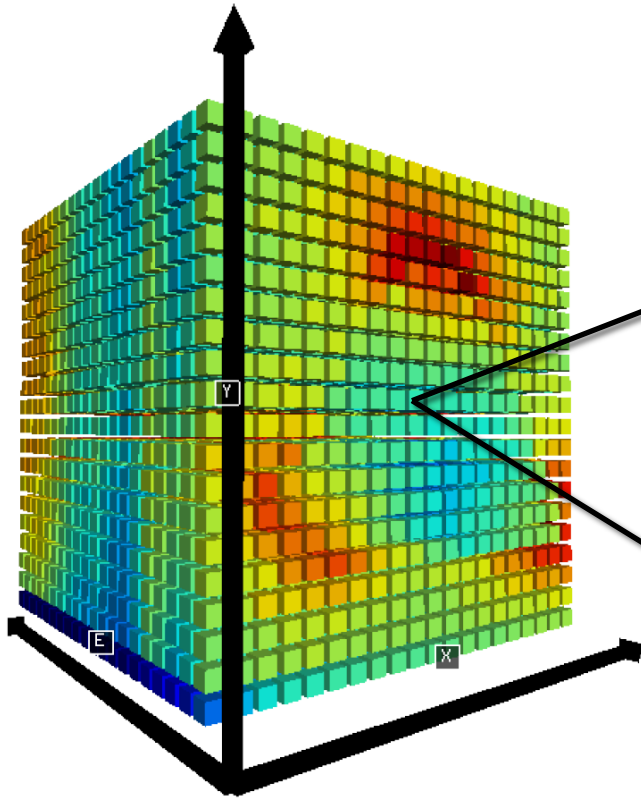
HyperSpy and SAMFire for big data analysis

by Tomas Ostaševičius

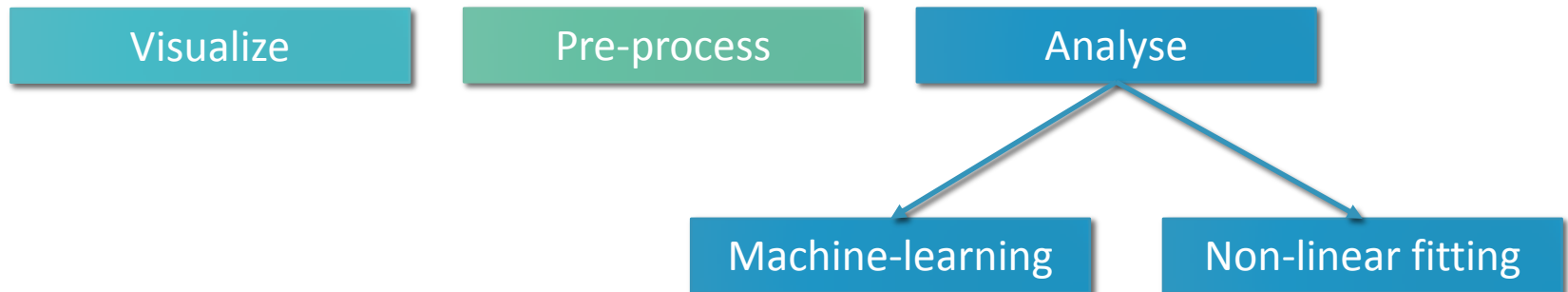


**UNIVERSITY OF
CAMBRIDGE**

Electron Microscopy data



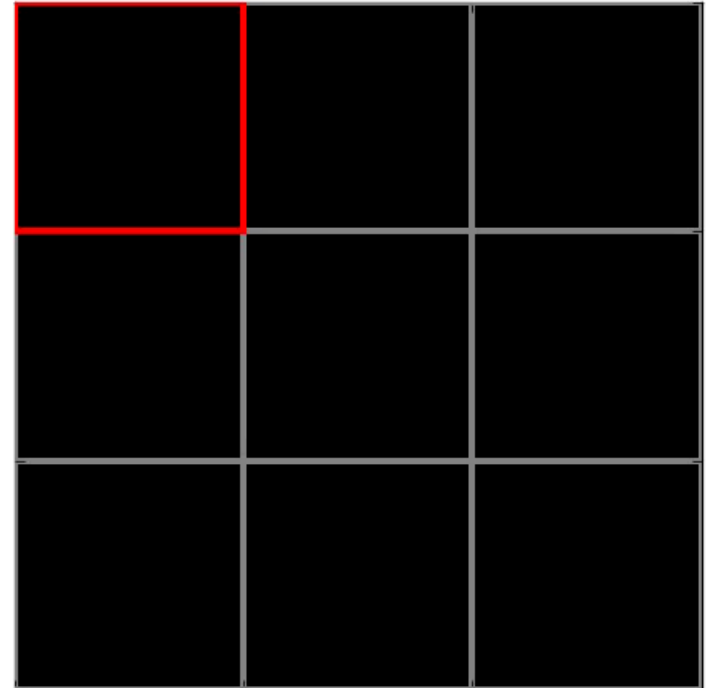
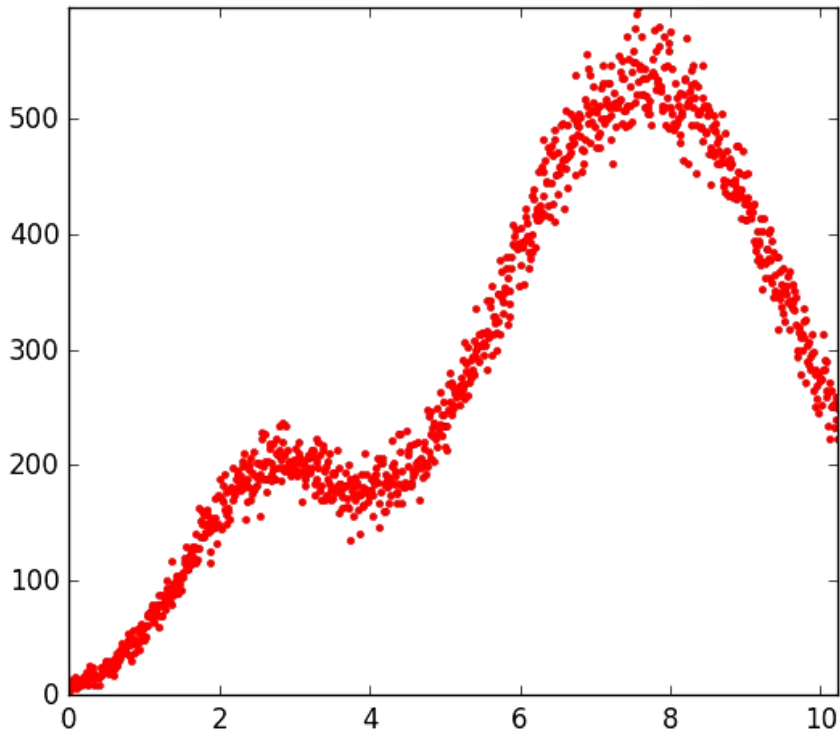
Multidimensional analysis



HyperSpy
multi-dimensional data analysis

- Python
- Open-source
- Actively developed
- www.hyperspy.org

Traditional Fitting approach



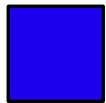
Spectral image

SAMFire (Smart Adaptive Multi-dimensional Fitting)

- Use data to determine which pixel to fit next.
- Use **all** available information.
- Check if fit succeeds.



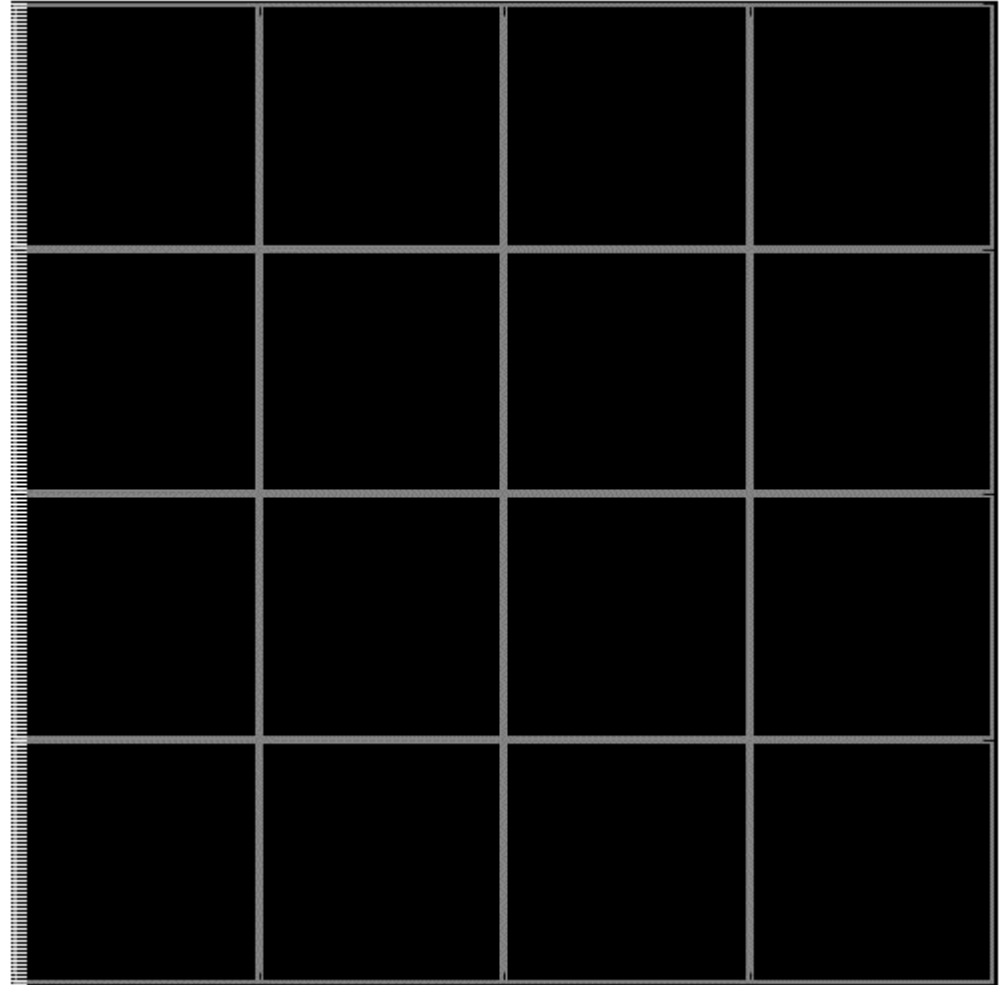
Not fitted



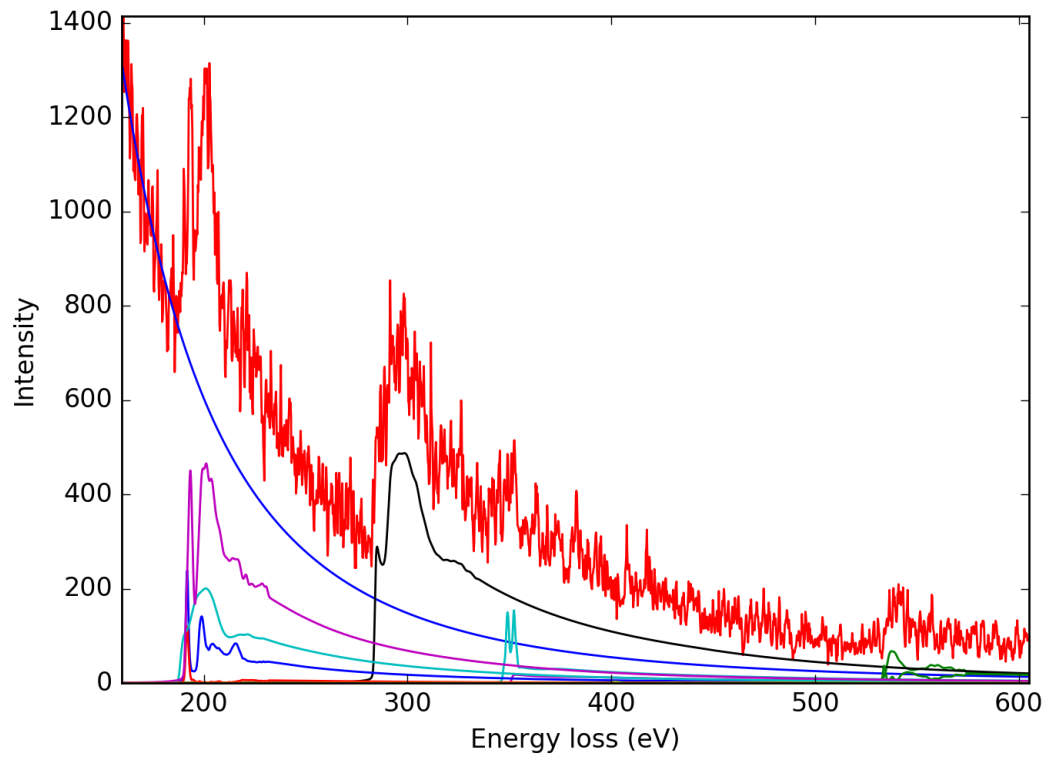
Fitted



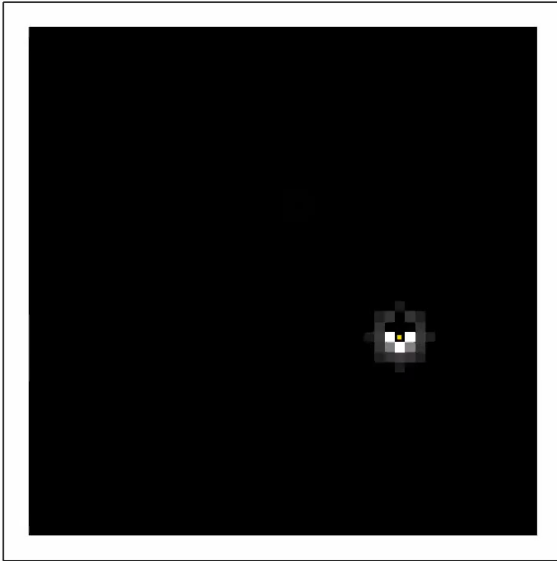
Next



It works!



Thank you



Collaborators:

Francisco de la Peña,
Paul Midgley,
Raul Arenal

