« BigData » in imXgam

Inverse problems

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Generic inverse problems

How to solve the following generic inverse problem ?

$$\arg\min_x F(x) + G(x)$$

Where F and G can be:

- non-convex
- lower semi-continuous
- non differentiable

and will help to

- incorporate any data fidelity model
- incorporate any constraint / knowledge on your

Examples:

Classical constrained least-squares

$$\arg\min_x \frac{1}{2}\|y - Ax\|_\Sigma^2 + \chi_C(x)$$

Log-likelihood for any noise model and sparse objects

$$\arg\min_x D_{KL}(x) + \|Wx\|_1$$

A must-read data science training course by Xavier Bresson

(27-30 june 2017)

- http://data-science-training-xb.com/

- Slides, python notebooks, python codes, references, training data… just bring your coffee and close your door.