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## Distributed optimisation: a subgradient averaging algorithm with convergence rates

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Thursday, July 25<sup>th</sup> 2019, h:12.30  
Aula 5.5, DEI

### About the speaker

Licio Romao received BS degree in Electrical Engineering from the University of Campina Grande in 2014 and MS degree in Electrical Engineering from the University of Campinas in 2017. He is currently a PhD student at the University of Oxford under the supervision of Prof. Antonis Papanikolaou and Prof. Kostas Margellos. He is supported by CAPES, a Foundation within the Ministry of Education in Brazil.

### Abstract

In this talk, I will present a new distributed algorithm to solve non-smooth optimisation problems where agents possess possibly different constraint sets. More specifically, I will discuss the following results: (1) asymptotic convergence of the generated iterates to a point in the optimal set for general time-varying step-sizes; (2) sublinear convergence rate for a step-size proportional to the inverse of the square-root of the iteration counter. This last result recovers standard rates for non-smooth optimisation (distributed) algorithms to the scenario of different constraint sets.

### Contact

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