This course is aimed to familiarize students with the emergent area of the so called
"Big Data" and to provide them with research ideas. This field is at the lucky convergence of innovative data management and processing techniques with new opportunities and needs in the applications. For these reasons in order to elaborate the present proposal the coordinators have worked together with several other colleagues (in Computer Science as well as in other applicative disciplines) to produce a balanced syllabus.

We propose to devote part of the course to present the state of the art methods for big data processing, and part of the course to present applications, and research opportunities related to these applications, in the field of Computer Vision and Pattern Recognition, Health, Social Science.

BIG DATA: ALGORITHMS AND METHODS
"The dark side of big data: efficient algorithms and data structure"

BIG DATA FOR ARTIFICIAL INTELLIGENT AND VISION
"Big data for Computer Vision"

BIG DATA FOR LIFE SCIENCES AND HEALTH
"Epidemiology in the Era of Big Data"

BIG DATA FOR SOCIAL STUDIES AND HUMANITIES
"The information and misinformation diffusion, and the emergence of collective narratives in online social media"