



Learning the Universe

Data Science Tools for Astronomical Surveys

18th Vatican Observatory
Summer School

04-30 June 2023
Castel Gandolfo, Italy

Faculty

Viviana Acquaviva (Co-Chair)
CUNY / Flatiron Institute

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As detectors become more sensitive, telescopes grow larger, and computers become ever more powerful, astronomical data has entered the petabyte domain. Major surveys have already measured billions of celestial sources; new surveys will produce astronomical catalogs of tens of billions of stars and galaxies, millions of AGN, and trillions of diverse precise measurements.

We will explore the science behind these surveys, present the concepts of Big Data and Machine Learning, and provide a hands-on data analysis experience to enable students to use these data for their astronomical projects.

Scientific Organizing Committee (SOC)

Guy Consolmagno, director Vatican Observatory - **Alessandro Omizzolo**, Vatican Observatory & INAF-Padova - **Stefano Cristiani**, INAF-Trieste - **Andrea Grazian**, INAF-Padova - **Viviana Acquaviva**, CUNY/Flatiron Institute - **Željko Ivezić**, University of Washington / Rubin Observatory - **Dalya Baron**, Tel Aviv University / Carnegie Observatories - **Marc Huertas-Company**, Instituto de Astrofísica de Canarias / Observatoire de Paris - **Francisco Antonio Villaescusa Navarro**, Flatiron Institute / Princeton University

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Complete the **application form** at vaticanobservatory.va by **31 October 2022**

