Project list (updated Jan 15 2018)

These are the proposed research projects for LEAPS 2018. Please note that not all projects will go ahead and some may still be added in the near future. Final funding decisions lie with the Faculty sponsors. And please make a note that if you are interested in an ESA project, to check if your state is an ESA member or affiliate state.

Low-frequency VLA observations of a massive colliding galaxy cluster

Supervisor: Rienout van Weeren
Type of project: Observational, galaxy clusters, radio observations, particle acceleration

More info

Characterizing protoplanetary disks; Initial conditions for planet formation

Supervisor: Schuyler Wolff
Type of project: Modeling; planet formation, circumstellar disks

More info

Investigating the accuracy of SED fitting codes in constraining galaxy properties in the era of MUSE and JWST

Supervisor: Themiya Nanayakkara
Type of project: Modeling, galaxies, SED fitting

More info

How is galaxy color tied to dark matter?

Supervisor: Mohammadjavad Vakili
Type of project: Observational; galaxies, dark matter

More info

Exploring the composition of the beta Pic debris disk in the far-UV

Supervisor: Paul Wilson
Type of project: Observational; debris disks, Hubble, exocomets

More info
Telling discs from mergers with ALMA
Supervisor: Matus Rybak
Type of project: Simulation; high-redshift, ALMA, galaxies, star formation

More info

Early evolution of embedded proto-clusters
Supervisor: Alvaro Hacar
Type of project: Observational; star-formation, radioastronomy, ALMA

More info

Studying galaxy mergers using the deep learning approach
Supervisor: Maxwell Cai
Type of project: Modeling, simulations

More info

Observing planet-forming disks: linking ALMA to JWST
Supervisor: Daniel Harsono
Type of project: Database mining, observational, star/planet formation

More info

The dynamical origin of the flattening of globular clusters
Supervisor: Alice Zocchi
Type of project: Data analysis, modelling, ESA

More info

Ultra-deep spectroscopy with MUSE
Supervisor: Michael Maseda
Type of project: Observational, spectroscopy, galaxies

More info
Evaluating large-scale public engagement programmes and understanding grassroots participation

Supervisor: Jorge Rivero-Gonzalez
Type of project: Science communication research

More info

Surface characterization of ancient terrains on Mars using orbital imaging datasets

Supervisor: Ottaviano Ruesch
Type of project: Image processing, remote sensing, planetary science, ESA ExoMars, ESA

More info

Properties of radio sources in different cosmological environments

Supervisor: Francesco de Gasperin
Type of project: Observational

More info

Corroborating lunar impact flash locations with evidence in visible and infrared observations from Lunar Reconnaissance Orbiter

Supervisor: Chrysa Avdellidou
Type of project: Computational, ESA

More info

Unbiasing gravitational lensing shear

Supervisor: Arun Kannawadi-Jayaraman
Type of project: Galaxy image simulations, observations

More info

Enabling high-priority astronomy for miniaturized satellites

Supervisor: Christian Fuchs
Type of project: Instrumentation, satellite miniaturization, payload data handling, data processing, FPGA, microcontroller, Cubesats

More info
Please note that the ESA projects are only available for students from ESA member or affiliate states (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom, and Canada). Students from Cyprus, Estonia, Hungary, Latvia and Slovenia (affiliate members) can also apply for ESA projects.