# **Ali HAMIE**

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21-cm cosmology, Radio/Optical surveys, Galaxy clusters, Radio interferometry, map-making, map/image processing

#### **EDUCATION**

# 2019–2021 | Toulouse III University (Paul Sabatier) – Toulouse FRANCE

Master's degree in Astrophysics, Space Sciences, and Planetology

Relevant modules: Extragalactic astrophysics and cosmology, Galaxy physics, General Relativity, Radiative processes — Instrumentation in astrophysics, Tools for reducing data, Numerical simulations, Signal and data processing — projects in AGN modelization, radiative transfer, space dynamics, estimation

# 2015–2019 Toulouse III University (Paul Sabatier) – Toulouse FRANCE

Bachelor's degree in Physics – L1 & L2 at Lebanese University

# 2010–2011 Saint Joseph University – Beirut LEBANON

First year of undergraduate degree in Telecom Engineering (L1)
Relevant modules include: Advanced C programming, and Linear systems.

## **ONLINE COURSES**

## 2021-Today

## **Data-driven Astronomy - University of Sydney**

massive data median stack, advanced cross-matching, querying and creating databases, ML for photometric redshift estimation and galaxies classification

# **Modeling natural processes - University of Geneva**

Monte-Carlo, Lattice Boltzmann, Barnes-Hut galaxy merger simulation

## Statistics with Python Specialization - University of Michigan

Data sampling, confidence intervals, hypothesis testing, fitting models

C/C++ specialization - University of California Santa Cruz

### RESEARCH EXPERIENCE

### Feb-Jul 2021

# The Irène-Joliot Curie Lab (IJCLab) formerly LAL - Orsay FRANCE

Master 2 five months full time internship

Supervisors: Prof. Reza Ansari and Dr. Olivier Perdereau — Abstract

Detecting faints HI clumps with Tianlai radio interferometer as a proof of concept of BAO's detection with future Intensity Mapping interferometers.

- · Simulating various observation strategies outcomes using the mapmaking software JSkyMap (C++/Shell)
- Developing an object-oriented pipeline that includes source finding, cross-matching, foreground subtraction, and post-processing large samples of images to prove required sensitivities (python)

### Jan-Mai2020

# Institute of Research in Astrophysics and Planetology (IRAP) – Toulouse

Master 1 part time internship - 4h/week - pairwork

Supervisors: Dr. Vincent Genot and Dr. Philippe Garnier

Testing Dynamical Time Warping (DTW) algorithm on solar wind's time series

#### **OBSERVATION EXPERIENCE**

# Oct 2020 | Pic du Midi Observatory – French Pyrenees FRANCE

Master 2 observation training - one week

Training in telescope use and image reduction (AstrolmageJ software)

#### **WORK EXPERIENCE**

# 2011-2015 ATS - Beirut LEBANON

Freight Forwarder Operator - Customs Broker Assistant

## **TECHNICAL SKILLS**

Programming	Python MATLAB	••••	Shell SQL	••••	С	••••
IT Tools	LaTeX		Git		Wiki	
Languages	French	••••	English	••••		

## **INTERESTS AND ACTIVITIES**

**Photography** Travel Reading/Writing

### **REFEREES**

## Prof. Reza Ansari

Internship supervisor Paris Saclay University IJCLab formerly LAL 91440 Orsay ansari@lal.in2p3.fr

# Dr. Natalie Webb

Head of M2 Program Paul Sabatier University **IRAP** 31028 Toulouse natalie.webb@irap.omp.eu