

# Corentin Cadiou

## Contact

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<https://cphyc.github.io/>

## Languages

French – native  
English – fluent  
(114/120 at TOEFL in  
2016)  
German – medium

## Programming

– HPC –  
RAMSES  
MPI, OpenMP, Fortran  
& C++

– Data analysis –  
yt  
Python, NumPy, Linux

– General skills –  
Linux, bash, javascript

## Education

2016–2019	<b>PhD in Astrophysics</b> Defense expected in September 2019.	UPMC & IAP, Paris France
2015–2016	<b>Master's degree in Astrophysics</b> Specialization in cosmology and numerical astrophysics.	IAP, Paris Observatory, UPMC & ENS, Paris, France
2015	<b>Diploma of the École Normale Supérieure</b> Physics and Computer Sciences.	ENS, Paris, France
2012–2014	<b>Bachelor's degree, Physics</b>	ENS, Paris, France
2012	Admitted to École Normale Supérieure (ENS, most selective higher education school in France).	
2010–2012	Preparatory school in PCSI/PC* Two-year intensive program in advanced mathematics and physics to prepare the national competitive exam for entry to engineering schools.	Lycée Sainte-Geneviève, Versailles, France
2010	French Baccalauréat (High school diploma)	Saverne, France

## Research experience

2016–2018	<b>Member of the project SPIN(E)</b> TODO: description ANR. Funded by the French ANR (PI : C. Pichon).	Agence Nationale de la Recherche, France
2016–2019	<b>Post-graduate research</b> "The Origin of the Hubble Sequence" supervisors: Christophe Pichon and Yohan Dubois, funded by ENS.	IAP, Paris, France
2016	<b>Kavli Summer Program in Astrophysics</b> "Evolution of the atmosphere of close-by Kepler exoplanets", supervisors: James Owen and Fred Adams.	UCSC, California, USA
2014	<b>Research internship</b> "Angular momentum mixing processes in red giants to explain the slow-rotating cores problem", supervisor: Pascale Garaud.	UCSC, California, USA

## Publications

2018	<b>Tracing Lagrangian Flows in the Eulerian Code RAMSES</b> <b>C. Cadiou</b> , Y. Dubois & C. Pichon	MNRAS, in prep.
2018	<b>Galaxies flowing in the oriented saddle frame of the cosmic web</b> K. Kraljic, C. Pichon, Y. Dubois, S. Codis, <b>C. Cadiou</b> , et al.	MNRAS
2017	<b>Galaxy evolution in the metric of the Cosmic Web</b> K. Kraljic, S. Arnouts, C. Pichon, C. Laigle, S. de la Torre, D. Vibert, <b>C. Cadiou</b> , et al.	MNRAS
2017	<b>How does the cosmic web impact assembly bias?</b> M. Musso & <b>C. Cadiou</b> , C. Pichon, S. Codis, K. Kraljic & Y. Dubois	MNRAS

## Talks and Posters

Sept. 2016	Ramses User Meeting	Lyon, France
May 2017	CITA journal club	Toronto, Canada
Sept. 2017	Ramses User Meeting	Nice, France
Sept. 2017	SPIN(E) ANR Meeting	Agay, France
Nov. 2017	KIAS journal club	Seoul, South Korea
May. 2018	TODO: Some random talk in Lyon	Lyon, France
May. 2018	SPIN(E) ANR Meeting	Edinburgh, UK
Sept. 2018	West Coast Swings workshop	Perth, Australia
<b>Internal seminars</b>		
2016, 2017	ED127 PhD day	Paris, France
2016, 2017	IAP PhD day	Paris, France
2016, 2017	YMCA, IAP student seminar	Paris, France
<b>Posters</b>		
Sept. 2018	Analytics, Computation and Inference in Cosmology	Cargese, France
Oct. 2018	Astrosim	Lyon, France

## Teaching and Outreach

2016–2019	<b>Teaching Assistant</b> Courses included: concept and methods of Physics at B.Sc. level (192 hours). Graded all written work, oral and final written exams and assisted with labs.	UPMC, Paris, France
2017–2019	<b>Mystery Science Picture</b> Monthly release of a scientific picture for public outreach and spreading of science.	

## Awards

2018	<b>NumFOCUS New Contributor Award</b> Awarded for developing and extending the RAMSES frontend of the yt project, a Python package for analyzing and visualizing astrophysical simulations.	
2017–now	<b>yt team member</b> Nominated for continuous and significant contributions to the yt project.	
2016–2019	<b>ILP fellowship</b> 15000€ grant for research expenses, including travel.	

## Other Experiences

2015	6-months internship in an IT company Development of a real-time peer-to-peer collaborative text editor.	Linagora, Paris, France
2015	Ranked 2/130th team at the <b>Google Hashcode</b> programming competition.	Paris, France
2012–2013	Team member of the ENS student association.	Paris, France
2008–now	Member of an NGO to help development in Benin.	France & Benin