

# Corentin Cadiou

Assistant professor  
*Chargé de recherche*

J 16/09/1992

H Male

F French

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## Science interests

galaxy formation  
cosmic web  
numerical simulations  
cosmology

## Languages

French (native)

English (C2)

German (B2)

Spanish & Swedish (A1)

## Numerics

### HPC

MPI OpenMP

Kokkos

### Programming

Fortran C++

Python

## Research experience

2025–now **Chargé de recherche (Assistant Professor)**

IAP, France 

Permanent, 100%-research position. Recruited on a interdisciplinary project to develop high-performance computing and data science in astronomy.

2022–25 **Post-doctoral research**

Lund, Sweden 

Working on the group of Prof. Agertz on the role of angular momentum in the formation of galactic disks. Start: 01/10/2022, end: 31/01/2025

2019–22 **Post-doctoral research**

UCL, London, UK 

With Profs. Pontzen and Peiris, on ERC grant.

2016–19 **Post-graduate research**

IAP, Paris, France 

Supervisors: C. Pichon and Y. Dubois.

## Education

2019 **PhD in Astrophysics**

Sorbonne & IAP, Paris 

"The impact of the large-scale structures of the Universe on dark matter halo and galaxy formation". Refereed by S. White and A. Dekel.

2016 **Master's degree (Master 2) in Astronomy and Astrophysics**

Univ. Paris Diderot, Paris Observatory, Paris, France 

Diploma of the École Normale Supérieure (ENS)

ENS, Paris 

Major in physics, minor in Computer Sciences

2013 Bachelor's degree, Physics

Univ. Paris Diderot & ENS, Paris 

## Time allocations

Over my career, I have been **PI or co-I of projects securing 400 MCPU hr** (4,000,000€, assuming a price of 0.01€/CPU hr). My developments also enabled additional projects for a total of more than 100 MCPU hr.

2024–now **(co-I) Harkonnens simulations**

  

250 MCPU hr (EuroHPC) + 60 MCPU hr (Spanish national call). Suite of high-resolution simulations to support ESA's ARRAKIHS mission to investigate the nature of dark matter.

2024 **(PI) The role of mergers in shaping Milky-Way galaxies**



6 MCPU hr allocation (Swedish national call). Suite of high-resolution simulations focused on the role played by mergers in the formation of our galaxy.

2024 **(PI) How the cosmological environment drives galaxy properties**



3.6 MCPU hr allocation (local call). Suite of simulations to unravel the role played by the cosmological environment in setting the properties of galaxies.

2023–25 **(co-I) MEGATRON project**



Large 50 MCPU hr allocation (UK national call), 15th DiRAC call (PI: H. Katz). Extreme-resolution cosmological simulation focused on circum-galactic physics.

2021–22 **(PI) Angular momentum project**



9.7 MCPU hr allocation (UK national call), 13th DiRAC call. Demonstration of the feasibility of controlling the angular momentum of galaxies in a cosmological volume.

2021–24 **EDGE Project ('code builder' status)**



Automatically co-author of all publications that use my contributed code. 40 MCPU hr obtained (UK national call, PI: J. Read). Suite state-of-the-art simulations of dwarf galaxies.

2020–21 **Obelisk simulation**



Radiation-hydrodynamical cosmological simulation following the assembly of a proto-cluster. 50 MCPU hr obtained (Europe wide call, PI: M. Trebitsch).

2018–20 **CINES computational time allocation**



Co-I of a 2 MCPU hr subproject, 25 MCPU hr obtained (France national call, PI: M. Volonteri). Investigation on the role of cosmological accretion on angular momentum accretion.

## Awards and recognitions

|         |   |                         |
|---------|---|-------------------------|
| 2024-26 | <b>eSSENCE grant (1 100 000 kr ≈ 95 000 €)</b>  | Lund University, Sweden |
|         | Research grant for the project: "Galaxy formation in the exascale era".   |                         |
| 2024-26 | <b>Fysiografen grant (110 000 kr ≈ 9 500 €)</b>   | Lund University, Sweden |
|         | Research grant for the project: "The formation of disk, from cosmic dawn to cosmic noon".   |                         |
| 2023-25 | <b>Fysiografen grant (140 000 kr ≈ 2 000 €)</b>   | Lund University, Sweden |
|         | Research grant for the project: "The role of environment in driving galaxy spin".   |                         |
| 2018    | NumFOCUS New Contributor Award  |                         |
|         | In recognition of my contributions to the <code>Yt</code> project, the most widely-used Python package for analysing simulations. |                         |
| 2016-19 | ILP fellowship (5000 € per annum)   |                         |
| 2012-19 | ENS scholarship & ENS doctoral fellowship, prestigious full stipends awarded nationwide to 20 fellows.                            |                         |

## Responsibilities

### — International collaborations & code development for open-science

#### 2023–now **ARRAKIHS mission**

European Space Agency (ESA) space mission to shed light on the nature of dark matter, to be launched in 2030. Co-I of the Simulation Work Package to interpret the data.

#### 2023–now **'Agora' collaboration**

Code comparison project aimed at finding which galaxy properties are robust predictions from the different models.

#### 2022–now **'Ginea' collaboration**

France

Collaboration to develop the next-generation cosmological simulation code (DYABLO, to supersede RAMSES). Personal contributions include key insight into input/output formats and coupling with post-processing tools.

#### 2019–24 Member of ERC GMGalaxies (2019–2022, PI: Pontzen).

#### 2016–24 Member of ANR Spine (2016–2017, PI: Pichon) and SEGAL (2019–2024, PI: Pichon).

#### 2017–now **Yt team member**, in charge of support of the RAMSES code.

`Yt` is now the most widely used library to analyse astrophysical simulations. Personal contributions include support for the RAMSES code, significant I/O performance improvements ( $\times 100$  faster for RAMSES), community support.

### — Community service

#### 2025–now **IAP Seminars**

In charge of the organization of IAP's seminars (weekly).

#### 2022–now **Member of the EAS Advisory Committee on Sustainability**

The European Astronomical Society (EAS) Sustainability Advisory Committee aims to investigate, communicate, and make recommendations to the Council on sustainability matters related to astronomy and astrophysics.

#### 2020–now **Reviewer for Astronomy and Astrophysics, Monthly Notices of the Royal Astronomical Society, Scipy's conference proceedings**

#### 2016–21 Organizer of IAP pre-seminar and the 'Extragalactic Journal Club'

IAP, Paris, France & UCL, London, UK

### — Teaching and supervision

#### 2025–now **PhD student supervisions**

Supervision of 1 PhD student: S. Errachi (IAP, Master 2, 25–now);

#### 2020–now **Master's student supervisions**

Supervision of 9 Master's students. The work of the students in bold led to a submitted paper:

- Y. Su (Master Calcul Haute Performance et Simulation, Université Saint-Quentin, Master 2 in HPC, 25–26);
- S. Errachi (Master Noyau Particule et Astroparticules, Univ. Paris Cité, 25–26);
- E. Larsson (Lund, Master 2, 24–25);
- Z. Khurij (Lund, Master 2, 24–25);
- **A. Storck** (Lund, Master 2, 23–24);
- A.-M. Söderman (Lund, Master, 23–24);
- **Z. Kocjan** (UCL, MSc, 21–23);
- J. Warbrick (UCL, MSci, 20–21);
- **E. Pharabod** (Polytechnique, France, Master 2, 20–21).

|         |                           |                                    |
|---------|---------------------------|------------------------------------|
| 2016–19 | <b>Teaching Assistant</b> | Sorbonne Université, Paris, France |
|         |                           |                                    |

## Outreach activities

|          |   |                             |
|----------|---|-----------------------------|
| 2019–now | <b>Outreach presentations in high-schools, museums, for the general public, for open house days.</b>  |                             |
| 2020–22  | <b>Host and co-founder of the “Astronomy on Tap” London satellite</b>   |                             |
|          | Fortnightly general public online presentations ( <a href="#">online</a> due to the pandemic, more than 4,600 views). Awarded £1,000 by UCL Astronomy department to carry our activities. |                             |
| 2020     | Scientific expertise to translate the general public book ‘A History of the Universe in 100 stars’.   |                             |
| 2019     | <b>Speaker at the “Pint of Science” festival</b>  | Paris, France               |
| 2017–19  | <b>Journée de la Science (Open House days)</b>  | Sorbonne Université, France |
|          |   |                             |

## Visiting programs, schools and conferences

Invited talks at conferences and seminars are listed below. Poster presentations are highlighted as “x”.

### — Invited talks

|         |  |  |
|---------|--|--|
| 06/2025 | National Astronomical Meeting                      | Durham University, Durham, United Kingdom                    |
| 06/2025 | YT workshop  | Royal Astronomical Observatory, Edinburgh, UK                |
| 03/2023 | Connecting Galaxies to Cosmology visiting Program  | KITP, Santa Barbara, USA                                     |
| 10/2022 | 10th Workshop on Cosmology and Structure Formation | KIAS, Seoul, South Korea                                     |
| 03/2022 | Cosmic Cartography                                 | <i>online</i> , Kavli IPMU, Kashiwa, Japan                   |
| 01/2021 | LCDM: Dark Matter In Cosmology                     | <i>online</i> , Monthly meeting of London-based cosmologists |
| 11/2019 | Yonsei-IAP Workshop                                | <i>online</i>  |
| 03/2019 | YT workshop  | University of Illinois, Urbana, USA                          |

### — Seminars

|         |   |  |
|---------|---|--|
| 12/2025 | Seminar PKU/KIAA  | Peking University/Kavli Institute for Astronomy and Astrophysics, Beijing, China |
| 12/2025 | Colloquium Tsinghua University                            | Tsinghua University, Beijing, China  |
| 06/2025 | Institute for Fundamental Physics of the Universe seminar | IFPU, Trieste, Italy   |
| 04/2025 | City University New York (CUNY) Physics Seminar           | CUNY, New York, USA ( <i>online</i> )  |
| 04/2023 | Kavli Institute for Theoretical Physics blackboard talk   | KITP, Santa Barbara, USA   |
|         |   |  |

Prestigious talks intended to explain the science of one program to the other KITP program participants, locals, and scientists outside of a specialized field.

|         |                            |                               |
|---------|----------------------------|-------------------------------|
| 02/2022 | Berkeley Cosmology Seminar | <i>online</i> , Berkeley, USA |
| 11/2021 | Oxford Cosmology Seminar   | Oxford, UK                    |

### — Contributed talks

|         |                     |  |
|---------|---------------------|--|
| 11/2025 | RAMSES SNO Meeting  | Université Paris Diderot, Paris, France        |
| 05/2025 | RAMSES User Meeting | Observatoire de Strasbourg, Strasbourg, France |
| 11/2024 | DYABLO Workshop     | IAP, France                                    |

|         |   |   |
|---------|---|---|
| 09/2024 | Framing the Big Picture of Galaxy Star Formation Quenching with JWST and Euclid | ESAC, Madrid, Spain                                     |
| 09/2024 | High- $z$ Kinematics Workshop III   | Max Planck Institute for Astronomy, Heidelberg, Germany |
| 03/2024 | Building Galaxies from Scratch  | University of Vienna, Austria                           |
| 01/2024 | x D-LOCKS Meeting   | Technical University of Denmark, Copenhagen, Denmark    |
| 12/2023 | New Simulations for New Problems in Galaxy Formation                            | Institut d'Astrophysique de Paris, France               |
| 08/2023 | Santa Cruz Galaxy Workshop  | University of California Santa Cruz, USA                |
| 07/2022 | x National Astronomy Meeting (NAM)  | Warwick, UK   |
| 06/2022 | x EAS Meeting   | Valencia, Spain   |
| 06/2022 | Journées du PNCG (cosmology & galaxies)   | Observatoire Astronomique de Strasbourg, France         |
| 09/2021 | RAMSES User Meeting   | online, Strasbourg Observatory, France                  |
| 07/2021 | Scipy 21: data analysis and code development in Python (900 participants)       | online  |
| 12/2020 | RHytHM: ResearchH using YT Highlights Meeting.                                  | online  |
| 11/2020 | KIAS Cosmology Workshop.  | online  |
| 10/2019 | KIAS Internal Workshop  | KIAS, Seoul, South Korea                                |
| 09/2018 | West Coast Swings workshop  | ICRAR, Perth, Australia                                 |
| 05/2018 | SPIN(E) ANR Meeting   | ROE, Edinburgh, UK                                      |
| 09/2017 | SPIN(E) ANR Meeting   | Agay, France  |
| 09/2017 | RAMSES User Meeting   | Nice Observatory, Nice, France                          |
| 09/2016 | RAMSES User Meeting   | CRAL, Lyon, France                                      |

#### — Journal clubs

|         |                                 |   |
|---------|---------------------------------|---|
| 12/2025 | Tsinghua Astronomy journal club | Tsinghua University, Beijing, China           |
| 12/2025 | Yonsei journal club             | Yonsei University, Seoul, South Korea         |
| 12/2021 | 'FLAT' talk                     | Durham, UK                                    |
| 11/2021 | Cosmology Journal Club          | IAP, Paris, France                            |
| 11/2021 | Astrophysics Journal Club       | Racah Institute of Physics, Jerusalem, Israel |
| 10/2021 | Galaxy Coffee                   | MPIA, Heidelberg, Germany                     |
| 09/2021 | Cambridge Cosmology Seminar     | online, Institute of Astronomy, Cambridge, UK |
| 12/2018 | Journal club & visiting program | Astrophysics Department, Oxford, UK           |
| 04/2018 | CRAL journal club               | CRAL, Lyon, France                            |
| 10/2017 | KIAS journal club               | KIAS, Seoul, South Korea                      |
| 04/2017 | CITA Journal Club               | CITA, Toronto, Canada                         |

## Publication list

I have submitted **21** articles as lead or co-lead author (**20** already published in MNRAS and A&A). I also contributed to **27** other articles. My papers have been cited **973** times ( $h$ -index of 16 as of 14<sup>th</sup> December 2025), source: [NASA/ADS](#).

#### — Submitted articles

- “On the Origin of Intracluster Light based on the High-resolution Simulation, NewCluster”, Jeon, Contini, Han, Rhee, Martin, Kim, Lee, Kimm, Pichon, Byun, Dubois, [Cadiou](#), Jang & Yi, [submitted, arXiv:2512.06098](#), (2025).
- “MEGATRON: The environments of Population III stars at Cosmic Dawn and their connection to present day galaxies”, Storck, Katz, Devriendt, Slyz, [Cadiou](#), Choustikov, Rey, Saxena, Agertz & Kimm, [submitted, arXiv:2510.06853](#), (2025).
- “MEGATRON: Disentangling Physical Processes and Observational Bias in the Multi-Phase ISM of High-Redshift Galaxies”, Choustikov, Katz, Cameron, Saxena, Devriendt, Slyz, Rey, [Cadiou](#), Blaizot, Kimm, Laseter, Matsumoto & Rosdahl, [submitted, arXiv:2510.06347](#), (2025).
- “MEGATRON: the impact of non-equilibrium effects and local radiation fields on the circumgalactic medium at cosmic noon”, [Cadiou](#), Katz, Rey, Agertz, Blaizot, Cameron, Choustikov, Devriendt, Hauk, Jones, Kimm,

Laseter, Martin-Alvarez, Matsumoto, Nyhagen, Pearce, Rodríguez Montero, Rosdahl, Rufo Pastor, Sanati, Saxena, Slyz, Stiskalek, Storck & Yee, [submitted](#), arXiv:2510.05667, (2025).

5. “**MEGATRON: how the first stars create an iron metallicity plateau in the smallest dwarf galaxies**”, Rey, Katz, [Cadiou](#), Sanati, Agertz, Blaizot, Cameron, Choustikov, Devriendt, Hauk, Ji, Jones, Kimm, Laseter, Martin-Alvarez, Matsumoto, Pearce, Revaz, Rodriguez Montero, Rosdahl, Saxena, Slyz, Stiskalek, Storck, Veenema & Yee, [submitted](#), arXiv:2510.05232, (2025).
6. “**MEGATRON: Reproducing the Diversity of High-Redshift Galaxy Spectra with Cosmological Radiation Hydrodynamics Simulations**”, Katz, Rey, [Cadiou](#), Agertz, Blaizot, Cameron, Choustikov, Devriendt, Hauk, Jones, Kimm, Laseter, Martin-Alvarez, Matsumoto, Pearce, Rodriguez Montero, Rosdahl, Sanati, Saxena, Slyz, Stiskalek, Storck, Veenema & Yee, [submitted](#), arXiv:2510.05201, (2025).
7. “**Introducing NewCluster: the first half of the history of a high-resolution cluster simulation**”, Han, Yi, Dubois, Rhee, Jeon, Jang, Byun, [Cadiou](#), Kim, Kimm & Pichon, [submitted](#), arXiv:2507.06301, (2025).
8. “**The Impact of Star Formation and Feedback Recipes on the Stellar Mass and Interstellar Medium of High-Redshift Galaxies**”, Katz, Rey, [Cadiou](#), Kimm & Agertz, [submitted](#), arXiv:2411.07282, (2024).

## — Published articles

1. “**EDGE: the emergence of dwarf galaxy scaling relations from cosmological radiation-hydrodynamics simulations**”, Rey, Taylor, Gray, Kim, Andersson, Pontzen, Agertz, Read, [Cadiou](#), Yates, Orkney, Scholte, Saintonge, Breneman, McQuinn, Muni & Das, *Monthly Notices of the Royal Astronomical Society*, 541, 1195, (2025).
2. “**RAMSES-yOMP: Performance Optimizations for the Astrophysical Hydrodynamic Simulation Code RAMSES**”, Han, Dubois, Lee, Kim, [Cadiou](#) & Yi, *The Astrophysical Journal*, 978, 96, (2025).
3. “**Exploring the causal effect of cosmic filaments on dark matter haloes**”, Storck, [Cadiou](#), Agertz & Galárraga-Espinosa, *Monthly Notices of the Royal Astronomical Society*, 539, 487, (2025).
4. “**EDGE-INFERNO: Simulating Every Observable Star in Faint Dwarf Galaxies and Their Consequences for Resolved-star Photometric Surveys**”, Andersson, Rey, Pontzen, [Cadiou](#), Agertz, Read & Martin, *The Astrophysical Journal*, 978, 129, (2025).
5. “**How complex are galaxies? A non-parametric estimation of the intrinsic dimensionality of wide-band photometric data**”, [Cadiou](#), Laigle & Agertz, *Monthly Notices of the Royal Astronomical Society*, 537, 1869, (2025).
6. “**Running with the bulls: The frequency of star-disc encounters in the Taurus star-forming region**”, Winter, Benisty, Shuai, Dùchene, Cuello, Anania, [Cadiou](#) & Joncour, *Astronomy and Astrophysics*, 691, A43, (2024).
7. “**The AGORA High-resolution Galaxy Simulations Comparison Project. IV. Halo and Galaxy Mass Assembly in a Cosmological Zoom-in Simulation at  $z \leq 2$** ”, Roca-Fàbrega, Kim, Primack, Jung, Genina, Hausammann, Kim, Lupi, Nagamine, Powell, Revaz, Shimizu, Strawn, Velázquez, Abel, Ceverino, Dong, Quinn, Shin, Segovia-Otero, Agertz, Barrow, [Cadiou](#), Dekel, Hummels, Oh, Teyssier & AGORA Collaboration, *The Astrophysical Journal*, 968, 125, (2024).
8. “**Probing cosmology via the clustering of critical points**”, Shim, Pichon, Pogosyan, Appleby, [Cadiou](#), Kim, Kraljic & Park, *Monthly Notices of the Royal Astronomical Society*, 528, 1604, (2024).
9. “**Hot gas accretion fuels star formation faster than cold accretion in high-redshift galaxies**”, Kocjan, [Cadiou](#), Agertz & Pontzen, *Monthly Notices of the Royal Astronomical Society*, 534, 918, (2024).
10. “**Estimating major merger rates and spin parameters ab initio via the clustering of critical events**”, [Cadiou](#), Pichon-Pharabod, Pichon & Pogosyan, *Monthly Notices of the Royal Astronomical Society*, 531, 1385, (2024).
11. “**Evolution of cosmic filaments in the MTNG simulation**”, Galárraga-Espinosa, [Cadiou](#), Gouin, White, Springel, Pakmor, Hadzhiyska, Bose, Ferlito, Hernquist, Kannan, Barrera, Maria Delgado & Hernández-Aguayo, *Astronomy and Astrophysics*, 684, A63, (2024).
12. “**pynbody/genetic: Version 1.5.0**”, Pontzen, [Cadiou](#), svstopryra, nroth0815, Rey & rc-softdev-admin, -999, (2024).
13. “**Hot gas accretion fuels star formation faster than cold accretion in high redshift galaxies**”, Kocjan, [Cadiou](#), Agertz & Pontzen, *American Astronomical Society Meeting Abstracts #243*, 243, 306.02, (2024).
14. “**pynbody/tangos: Version 1.9.1**”, Pontzen, Tremmel, [Cadiou](#), Rey, Wright, Davies, philosoph & Quinn, -999, (2023).
15. “**pynbody/pynbody: Version 1.5.2**”, Pontzen, Roškar, [Cadiou](#), Stinson, Mastropietro, Rey, Keller, Duffy, mkrets, Tremmel, Davies, Franck, Quinn, Sarmento, Bovy, nroth0815, Coles, Ji, Applebaum, Zana, Biernacki, Herpich, mihamit, Woods, EthTay, Altay, Winkler, Shaw & Moon, -999, (2023).
16. “**Yt-project/yt\_astro\_analysis: yt\_astro\_analysis-1.1.3**”, Smith, Turk, ZuHone, Robert, Skory, Hummels, Myers, Kowalik, Eganhila, Skillman, Warren, [Cadiou](#), Gsiisg, Wise, Madcpf, Leitner, Scopatz, De Val-Borro, Stark, Meng-Yuan, Keller, Dong, Richardson, Krafczyk, Goldbaum, Sankar & Stonnes, -999, (2023).

17. "Stellar angular momentum can be controlled from cosmological initial conditions", **Cadiou**, Pontzen & Peiris, *Monthly Notices of the Royal Astronomical Society*, **517**, 3459, (2022).
18. "Forecasts for WEAVE-QSO: 3D clustering and connectivity of critical points with Lyman- $\alpha$  tomography", Kraljic, Laigle, Pichon, Peirani, Codis, Shim, **Cadiou**, Pogosyan, Arnouts, Pieri, Iršič, Morrison, Oñorbe, Pérez-Ràfols & Dalton, *Monthly Notices of the Royal Astronomical Society*, **514**, 1359, (2022).
19. "Gravitational torques dominate the dynamics of accreted gas at  $z > 2$ ", **Cadiou**, Dubois & Pichon, *Monthly Notices of the Royal Astronomical Society*, **514**, 5429, (2022).
20. "Matplotlib label lines", **Cadiou**, -999, (2022).
21. "Matplotlib label lines", **Cadiou**, -999, (2022).
22. "FyeldGenerator", **Cadiou**, -999, (2022).
23. "On the causal origin of the angular momentum of dark matter halos and galaxies", **Cadiou**, EAS2022, European Astronomical Society Annual Meeting, 476, (2022).
24. "pynbody/geneticIC: Version 1.3.5", Pontzen, **Cadiou**, Svstopyra, Nroth0815, Rey & Rc-Softdev-Admin, -999, (2022).
25. "The causal effect of environment on halo mass and concentration", **Cadiou**, Pontzen, Peiris & Lucie-Smith, *Monthly Notices of the Royal Astronomical Society*, **508**, 1189, (2021).
26. "Angular momentum evolution can be predicted from cosmological initial conditions", **Cadiou**, Pontzen & Peiris, *Monthly Notices of the Royal Astronomical Society*, **502**, 5480, (2021).
27. "The clustering of critical points in the evolving cosmic web", Shim, Codis, Pichon, Pogosyan & **Cadiou**, *Monthly Notices of the Royal Astronomical Society*, **502**, 3885, (2021).
28. "EDGE: a new approach to suppressing numerical diffusion in adaptive mesh simulations of galaxy formation", Pontzen, Rey, **Cadiou**, Agertz, Teyssier, Read & Orkney, *Monthly Notices of the Royal Astronomical Society*, **501**, 1755, (2021).
29. "Tracing the simulated high-redshift circumgalactic medium with Lyman  $\alpha$  emission", Mitchell, Blaizot, **Cadiou**, Dubois, Garel & Rosdahl, *Monthly Notices of the Royal Astronomical Society*, **501**, 5757, (2021).
30. "The OBELISK simulation: Galaxies contribute more than AGN to H I reionization of protoclusters", Trebitsch, Dubois, Volonteri, Pfister, **Cadiou**, Katz, Rosdahl, Kimm, Pichon, Beckmann, Devriendt & Slyz, *Astronomy and Astrophysics*, **653**, A154, (2021).
31. "pynbody/geneticIC: Version 1.3", Pontzen, **Cadiou**, Svstopyra, Nroth0815, Rey & Rc-Softdev-Admin, -999, (2021).
32. "pynbody/geneticIC: Version 1.2", Pontzen, Svstopyra, **Cadiou**, Nroth0815, Rey & Rc-Softdev-Admin, -999, (2021).
33. "The clustering of critical points in the evolving cosmic web", Shim, Codis, Pichon, Pogosyan & **Cadiou**, *The Bulletin of The Korean Astronomical Society*, **46**, 47.2, (2021).
34. "When do cosmic peaks, filaments, or walls merge? A theory of critical events in a multiscale landscape", **Cadiou**, Pichon, Codis, Musso, Pogosyan, Dubois, Cardoso & Prunet, *Monthly Notices of the Royal Astronomical Society*, **496**, 4787, (2020).
35. "pynbody/pynbody: Version 1.0.2", Pontzen, Roškar, Stinson, **Cadiou**, Keller, Duffy, Mkrets, Tremmel, Mastropietro, Sarmento, Quinn, Nroth0815, Coles, Ji, Biernacki, GFG-CHAOS, Herpich, Mihaimt, Woods, Bovy, Emapple, Altay, De Val-Borro, Shaw, Moon, TobiBu, Mueslo & Perret, -999, (2020).
36. "Dense gas formation and destruction in a simulated Perseus-like galaxy cluster with spin-driven black hole feedback", Beckmann, Dubois, Guillard, Salome, Olivares, Polles, **Cadiou**, Combes, Hamer, Lehnert & Pineau des Forets, *Astronomy and Astrophysics*, **631**, A60, (2019).
37. "Accurate tracer particles of baryon dynamics in the adaptive mesh refinement code RAMSES", **Cadiou**, Dubois & Pichon, *Astronomy and Astrophysics*, **621**, A96, (2019).
38. "Galaxies flowing in the oriented saddle frame of the cosmic web", Kraljic, Pichon, Dubois, Codis, **Cadiou**, Devriendt, Musso, Welker, Arnouts, Hwang, Laigle, Peirani, Slyz, Treyer & Vibert, *Monthly Notices of the Royal Astronomical Society*, **483**, 3227, (2019).
39. "Galaxy evolution in the metric of the cosmic web", Kraljic, Arnouts, Pichon, Laigle, de la Torre, Vibert, **Cadiou**, Dubois, Treyer, Schimd, Codis, de Lapparent, Devriendt, Hwang, Le Borgne, Malavasi, Milliard, Musso, Pogosyan, Alpaslan, Bland-Hawthorn & Wright, *Monthly Notices of the Royal Astronomical Society*, **474**, 547, (2018).
40. "How does the cosmic web impact assembly bias?", Musso, **Cadiou**, Pichon, Codis, Kraljic & Dubois, *Monthly Notices of the Royal Astronomical Society*, **476**, 4877, (2018).