# Corentin Cadiou

Assistant professor
*Chargé de recherche*

J 16/09/1992

H Male

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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

2015 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** — DiRAC

**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** — DiRAC

**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) — DiRAC

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 — PRACE

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 — CINES

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 **eSSENCE grant (1 100 000 kr ≈ 95 000 €)** Lund University, Sweden

Research grant for the project: "Galaxy formation in the exascale era".

2024-26 **Fysiografen grant (110 000 kr ≈ 9 500 €)** Lund University, Sweden

Research grant for the project: "The formation of disk, from cosmic dawn to cosmic noon".

2023-25 **Fysiografen grant (140 000 kr ≈ 2 000 €)** 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 Yt 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 (× 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 **Teaching Assistant** Sorbonne Université, Paris, France

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.

## Outreach activities

2019–now **Outreach presentations in high-schools, museums, for the general public, for open house days.**

2020–22 **Host and co-founder of the "Astronomy on Tap" London satellite**

Fortnightly general public online presentations (online 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 **Speaker at the "Pint of Science" festival** Paris, France

2017–19 ***Journée de la Science* (Open House days)** Sorbonne Université, France

Presented activities of the IAP, set up and performed hand-based experiments.

## 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 | *online*, Kavli IPMU, Kashiwa, Japan |
| 01/2021 | LCDM: Dark Matter In Cosmology | *online*, Monthly meeting of London-based cosmologists |
| 11/2019 | Yonsei-IAP Workshop | *online* |
| 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 (online) |
| 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 | *online*, Berkeley, USA |
| 11/2021 | Oxford Cosmology Seminar | Oxford, UK |

**— Contributed talks**

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|---|---|---|
| 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 |

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|---|---|---|
| 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: ResearcH 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

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|---|---|---|
| 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 **1005** times ($h$-index of 16 as of 4th February 2026), source: NASA/ADS.

### — Submitted articles

1. "**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).
2. "**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).
3. "**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).
4. "**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, Rodríguez Montero, Rosdahl, Sanati, Saxena, Slyz, Stiskalek, Storck, Veenema & Yee, *submitted, arXiv:2510.05201*, (2025).
7. "**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. "**Introducing NewCluster: First half of the history of a high-resolution cluster simulation**", Han, Yi, Dubois, Rhee, Jeon, Jang, Byun, **Cadiou**, Kim, Kimm & Pichon, *Astronomy and Astrophysics, 705, A169*, (2026).
2. "**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).
3. "**RAMSES-yOMP: Performance Optimizations for the Astrophysical Hydrodynamic Simulation Code RAMSES**", Han, Dubois, Lee, Kim, **Cadiou** & Yi, *The Astrophysical Journal, 978, 96*, (2025).
4. "**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).
5. "**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).
6. "**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).
7. "**Running with the bulls: The frequency of star-disc encounters in the Taurus star-forming region**", Winter, Benisty, Shuai, Dûchene, Cuello, Anania, **Cadiou** & Joncour, *Astronomy and Astrophysics, 691, A43*, (2024).
8. "**The AGORA High-resolution Galaxy Simulations Comparison Project. IV. Halo and Galaxy Mass Assembly in a Cosmological Zoom-in Simulation at z ≤ 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).
9. "**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).
10. "**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).
11. "**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).
12. "**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).
13. "**pynbody/genetIC: Version 1.5.0**", Pontzen, **Cadiou**, svstopyra, nroth0815, Rey & rc-softdev-admin, *–999*, (2024).
14. "**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).
15. "**pynbody/tangos: Version 1.9.1**", Pontzen, Tremmel, **Cadiou**, Rey, Wright, Davies, philosaph & Quinn, *–999*, (2023).
16. "**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, mihaimt, Woods, EthTay, Altay, Winkler, Shaw & Moon, *–999*, (2023).
17. "**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).

18. "**Stellar angular momentum can be controlled from cosmological initial conditions**", **Cadiou**, Pontzen & Peiris, *Monthly Notices of the Royal Astronomical Society, 517, 3459*, (2022).
19. "**Forecasts for WEAVE-QSO: 3D clustering and connectivity of critical points with Lyman-α 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).
20. "**Gravitational torques dominate the dynamics of accreted gas at z > 2**", **Cadiou**, Dubois & Pichon, *Monthly Notices of the Royal Astronomical Society, 514, 5429*, (2022).
21. "**Matplotlib label lines**", **Cadiou**, *–999*, (2022).
22. "**Matplotlib label lines**", **Cadiou**, *–999*, (2022).
23. "**FyeldGenerator**", **Cadiou**, *–999*, (2022).
24. "**On the causal origin of the angular momentum of dark matter halos and galaxies**", **Cadiou**, *EAS2022, European Astronomical Society Annual Meeting, 476*, (2022).
25. "**pynbody/genetIC: Version 1.3.5**", Pontzen, **Cadiou**, Svstopyra, Nroth0815, Rey & Rc-Softdev-Admin, *–999*, (2022).
26. "**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).
27. "**Angular momentum evolution can be predicted from cosmological initial conditions**", **Cadiou**, Pontzen & Peiris, *Monthly Notices of the Royal Astronomical Society, 502, 5480*, (2021).
28. "**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).
29. "**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).
30. "**Tracing the simulated high-redshift circumgalactic medium with Lyman α emission**", Mitchell, Blaizot, **Cadiou**, Dubois, Garel & Rosdahl, *Monthly Notices of the Royal Astronomical Society, 501, 5757*, (2021).
31. "**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).
32. "**pynbody/genetIC: Version 1.3**", Pontzen, **Cadiou**, Svstopyra, Nroth0815, Rey & Rc-Softdev-Admin, *–999*, (2021).
33. "**pynbody/genetIC: Version 1.2**", Pontzen, Svstopyra, **Cadiou**, Nroth0815, Rey & Rc-Softdev-Admin, *–999*, (2021).
34. "**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).
35. "**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).
36. "**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).
37. "**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).
38. "**Accurate tracer particles of baryon dynamics in the adaptive mesh refinement code Ramses**", **Cadiou**, Dubois & Pichon, *Astronomy and Astrophysics, 621, A96*, (2019).
39. "**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).
40. "**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).
41. "**How does the cosmic web impact assembly bias?**", Musso, **Cadiou**, Pichon, Codis, Kraljic & Dubois, *Monthly Notices of the Royal Astronomical Society, 476, 4877*, (2018).