

## CURRICULUM VITAE

CONTACT INFORMATION   McGill Space Institute 207   adelie.gorce@mcgill.ca  
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 Montreal, QC H3A 2A7   Website

## RESEARCH EXPERIENCE

**McGill University** **Montreal, QC, Canada**  
*Postdoctoral researcher - Trottier chair fellow* *since Nov. 2020*

**Université Paris-Saclay & Imperial College London**  
*Postgraduate research student in cosmology* *2017-2020*

**University College London** **London, UK**  
*Master thesis on “Observational probes of inflationary theory”* *2017*

**Institut d’Astrophysique Spatiale** **Orsay, France**  
*Undergraduate research project on “Combining observational probes of cosmic reionisation”* *2016*

## EDUCATION

**Université Paris-Saclay & Imperial College London**  
*PhD in Astrophysics* *2017-2020*  
 Thesis: “Cosmological signatures of the Epoch of Reionisation”  
 Supervisors: Marian Douspis & Jonathan Pritchard

**Imperial College London** **United Kingdom**  
*MSc in Physics, obtained with Distinction (> 70%)* *2016-2017*

**CentraleSupélec, Grande Ecole** **France**  
*Bachelor in Engineering & General Science – Diplôme d’ingénieur centralien* *2013-2017*

## TEACHING EXPERIENCE

**Classroom experience** .....

**CHAMP camp**, Research summer school **Philadelphia, PA, USA**  
*Teaching assistant in Cosmology* *June 2022*

**Imperial College London** **United Kingdom**  
*Teaching assistant* *2017-2020*

- Fourier analysis, Differential equations & Thermodynamics
- Tutor groups of 20 Year 2 BSc in Physics students, 4hrs/week

**Student supervision** .....

- Ivelin Georgiev, PhD, Stockholm University, Sweden *Since April 2021*
- Jade Ducharme, Year 3 undergrad at McGill → Brown University (PhD) *Summer 2021*
- Joëlle-Marie Bégin, Year 3 undergrad at McGill → Princeton University (PhD) *Summer 2021*

**Mentoring** .....

- Mentor, Physics Mentorship Program, McGill University (pastoral care) *Since Oct. 2021*  
*Regular meetings with a Physics postgrad mentee.*
- Mentor, MSI summer research program, McGill University *Summer 2021*  
*Gave talks on research and soft skills to give students the key to a successful summer of research.*
- Mentee, Women & Science society, France *2018-2020*

**OUTREACH EXPERIENCE**

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- *Space explorers* volunteer, Science talks in Montréal classrooms *Since 2021*
  - Classroom talk as part of the “*An astronomer in your classroom*” project, Montréal *May 2021*
  - Podcast episode on radio astronomy, with Polytechnique Montréal *March 2021*
  - *I’m a scientist, get me out of here*, online chatroom answering questions from pupils *March 2019*
  - Volunteer for the *SpaceBus France*, pop-up festival about astronomy *2018*
  - *Imperial festival*, stall about the Planck satellite and the SKA *2018 & 2019*
  - Postgraduate outreach ambassador, Imperial College *2018-2020*
  - Volunteer at a primary school for an “Introduction to engineering” class *2015*

**AWARDS & GRANTS**

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- A&A Best PhD Thesis Award** *2022*  
Award for outstanding research published in A&A by individuals in the initial stages of their careers.  
Awarded at the EAS annual meeting in Valencia, Spain, in June 2022.
  - Trottier Astrophysics Prize Postdoctoral Fellowship** *2020*
  - Royal Astronomical Society Travel grant** *2019*
  - Bourse de thèse** de l’Ecole doctorale Astronomie & Astrophysique en Ile de France *2017*
  - PhD funding** from the Science & Technology Facilities Council (UK) *2017*  
GBP 18 000 to cover College tuition fees. 4 students awarded among 100 applicants.

**COMMUNITY INVOLVEMENT**

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- Referee for the *Physical Reviews*, *Nature* and *MNRAS*
  - Member of the McGill Space Institute (MSI) seminar committee (2022-2023)
  - Judge for the Physics Undergraduate summer research showcase, McGill University (2022)
  - Member of the MSI Undergraduate research awards selection committee (2021)
  - Student representative for the astrophysics group, Imperial College London, 2018

**International collaborations** .....

- Square Kilometre Array (SKA)**, Member of the Cosmic Dawn Science working group *Since 2018*
- Hydrogen Epoch of Reionization Array (HERA)** - Permanent member *Since 2020*
  - Maintains and updates the power spectrum analysis code `hera_pspec` (available online)
  - Contributes to the theoretical interpretation of observations and to the development of the related Bayesian analysis framework `pspec_like`

**Societies** .....

International Astronomical Union (IAU, Junior member since 2022), Canadian Astronomical Society (CASCA, since 2022), Royal Astronomical Society (RAS, since 2018), Société Française d’Astronomie & d’Astrophysique (SF2A, since 2021), European Astronomical Society (EAS, since 2021).

### Conference organisation .....

- 4th global 21 cm workshop, Berkeley, CA, USA (SOC member), see website *October 2022*
- CMB+EoR workshop, McGill University, QC, Canada (main organiser, website) *July 2022*
- SAZERAC gulp on the 21 cm signal (co-chair, website) *March 2022*
- SAZERAC sip: CMB and reionisation, online conference (main organiser, website) *April 2021*
- SAZERAC sip: The 21 cm signal, online conference (SOC member, website) *January 2021*

## ADDITIONAL SKILLS

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### Programming & Data analysis .....

- Programming languages (Python, C++, Fortran) & parallelised computing (openMP)
- Bayesian analysis methods & techniques (MCMC: `emcee`, CosmoMC, 21CMMC)
- Cosmology tools: Reionisation simulations (21CMFAST, AMBER), theory predictions (CAMB, CLASS).

### Languages .....

French (native speaker), English (fluent), German (conversational), Russian & Italian (notions).

## PUBLICATIONS

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See publication list.

## REFERENCES

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- Dr. Jonathan Pritchard, Imperial College London (email)
- Dr. Marian Douspis, Institut d’Astrophysique Spatiale (email)
- Prof. Dominique Aubert, Observatoire de Strasbourg (email)
- Prof. Adrian Liu, McGill University (email)