

# JUDIT PRAT

Nordita (Nordic Institute for Theoretical Physics), Stockholm University and the KTH Royal Institute of Technology  
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**RESEARCH INTERESTS:** Understanding the nature of dark energy and dark matter with observations, weak gravitational lensing, large-scale structure, galaxy-halo connection, combinations of cosmological probes, galaxy surveys.

## POSTDOCTORAL EXPERIENCE

- 01/2024 ● **Nordita Postdoctoral Fellowship**  
Nordic Institute for Theoretical Physics, University of Stockholm and the KTH Royal Institute of Technology.
- 01/2023 ● **Schmidt AI in Science Postdoctoral Fellowship**  
University of Chicago.
- 12/2022 ● **Postdoctoral research scholar in the [Survey Science group](#)**  
University of Chicago, Kavli Institute for Cosmological Physics (KICP) and Astronomy and Astrophysics.  
10/2019 ● *Advisor:* Chihway Chang.

## EDUCATION

- 9/2019 ● **PhD in Physics: Probing cosmology and the galaxy-matter connection using weak lensing cross-correlations in the Dark Energy Survey** (*Awarded in 27/09/2019*)  
9/2015 ● Universitat Autònoma de Barcelona (UAB) & Institut de Física d'Altes Energies (IFAE).  
*Advisor:* Ramon Miquel. **Cum Laude with a special Award for doctoral studies in 2022** (by UAB).
- 9/2015 ● **Master (M.Sc.) in High Energy Physics, Astrophysics and Cosmology**  
9/2014 ● Universitat Autònoma de Barcelona (UAB) & Institut de Física d'Altes Energies (IFAE).  
*Thesis:* Galaxy bias from galaxy-galaxy lensing measurements in the DES Science Verification data set.  
*Advisor:* Ramon Miquel.
- 7/2014 ● **Bachelor of Science in Physics (B.Sc.):** Universitat Autònoma de Barcelona (UAB), with one year  
9/2010 ● exchange in University of California, Santa Barbara (UCSB).  
*Thesis:* Exploration of Light Curves of Type II-P Supernovae, at Las Cumbres Observatory Global Telescope Network.  
*Advisor:* Andy Howell.

## PUBLICATIONS SUMMARY [*From [ADS database](#)*]

**Total (refereed) corresponding author publications:** 9 (8). Citations: 272 (268). **h-index:** 7 (7).  
**Total (refereed) publications with important contributions:** 24 (20). Citations: 4212 (4051). **h-index:** 16 (15).  
**Total (refereed) publications:** 116 (103). Citations: 9173 (8963). **h-index:** 50 (50).

## TEACHING EXPERIENCE AND MENTORING

Master course on applications of General Relativity, University of Iceland (March-April 2025).  
Guest lecture about dark energy, University of Illinois in Chicago, USA (Apr 2022 and Apr 2023).  
Guest lecture at Weak Gravitational Lensing Class, UChicago, USA (Nov 2020).  
**BSc students supervision (4):** Dylan Jackaway (Cornell University, Summer 2023), Kihana Wilson (UChicago, 2021 - 2022), Nathalie Chicoine (2020-2024), Louise Gagnon (2022 - 2023).  
**PhD students co-supervision (2):** Georgios Zacharegkas (2019 - 2022), Jazmine Jefferson (2021 - 2023).  
**Undergraduate thesis supervision (1):** Nathalie Chicoine (2023, with honors)  
**Student-led publications (2):** Gagnon et al. (2023), Chicoine et al. (2024).

**SCIENTIFIC COLLABORATIONS:** LSST-DESC (2019 - Current), DES (2015 - Current) *with DES builder status from 2021, and DES associate member status from 2024.*

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## LEADERSHIP EXPERIENCE AND COMMUNITY BUILDING

Co-Convener of the Dark Energy Survey (DES) Weak Lensing Working Group.	2021 - Present
Member of Spokesperson Sustainability Committee (SSC) of the DESC	2024 - Present
Chair of the Niels Bohr Nordita Colloquium organizing committee	2024 - Present
Coordinator of the <a href="#">Community Engagement Working Group</a> within A&A Department, UChicago.	2022 - 2023
Organizer of “Chicagoland Cosmology” meetings.	2020 - 2022
Co-Convener of the Dark Energy Survey (DES) Galaxy-Galaxy Lensing Analysis Team.	2018 - 2021
<i>Organizing conferences and workshops (5):</i> SOC: DESC July meeting Zurich (2024); SOC: <a href="#">Lensing at different scales: Strong, Weak, and synergies between the two</a> (2023); LOC chair: DES Y6KP workshop at UChicago (2023); LOC: DESC meeting at UChicago (2022); LOC: DES Y3KP workshop at Barcelona (2018).	

## DIVERSITY AND INCLUSION

Elected LSST-DESC Collaboration Council member.	2023 - Present
Founding member of <a href="#">Community Engagement Working Group</a> at A&A Department, UChicago.	2020 - 2023
Gender Equality Committee member, IFAG.	2018 - 2019

## HIGHLIGHTED INVITED TALKS

**Invited seminars and colloquiums with visits (10):** [OKC Colloquium](#), Stockholm University, SE (Sep 2024), [London meeting](#), UCL, UK (Apr 2024), [Oxford Cosmology Seminar](#), UK (Jun 2023); Astro Seminar, UC Santa Barbara (Feb 2023); DARK seminar, University of Copenhagen (Dec 2022); [Case Western Reserve University Seminar](#) (Oct 2021); [University of Michigan Seminar](#) (Sep 2021); [DAO Colloquium](#), Herzberg Astrophysics in Victoria, Canada (*Remote*, May 2021); Duke Cosmology Seminar, Duke University (*Remote*, Apr 2021); CCAPP Seminar, Ohio State University (Jun 2018).

**Invited talks at conferences (5):** [X Meeting on Fundamental Cosmology](#), Sevilla (Oct, 2024); [Mock Barcelona](#), UAB, Barcelona (Oct, 2024); [Lensing at different scales: Strong, Weak, and synergies between the two](#), UChicago (Aug, 2023); Intriguing inconsistencies in the growth of structure over cosmic time, Sesto, Italy (Jul, 2022); AAS meeting, [CosmoPalooza](#) (*Remote*, Jan 2022).

**Special webinars (1):** [Presentation of DES Y3 3x2pt results](#) attended by > 700 scientists (May 2021).

## HIGHLIGHTED CONFERENCES AND WORKSHOPS ATTENDED (INCLUDING TALKS)

<i>Statistical Challenges in 21st Century Cosmology (COSMO21)</i> , Chania, Greece.	May 2024
<i>AI + Science Summer School</i> , UChicago, USA.	Jul 2023
<i>The University of Chicago and Caltech Conference on AI+Science</i> , UChicago, USA.	Mar 2023
<i>The Cosmic Web: Connecting Galaxies to Cosmology workshop</i> , KITP, USA.	Feb-Mar 2023
<i>The quest for precision Gravitational Wave Cosmology</i> , KICP, UChicago, USA.	Sep 2022
<i>Higher order statistics</i> , Aspen Center for Physics, USA.	Jun 2022
<i>American Physical Society (APS) April Meeting</i> , Columbus, USA.	Apr 2018
<i>Understanding Cosmological Observations</i> , Benasque, Spain.	Aug 2017

**LSST-DESC in-person meetings (3):** Zurich (Jul 2024); SLAC (Jul 2023); KICP, UChicago (Aug 2022).

**DES Collaboration meetings (11):** Sagaro, Spain (May 2024); U. Illinois (Oct 2023); U. Sussex, UK (Nov 2019); UPenn (June 2019); U. Campinas, Brazil (Dec 2018); Texas A&M (May 2018); U. of Queensland, Australia (Nov 2017); KICP, UChicago (Jun 2017); Kavli Institute for Cosmology, U. Cambridge, UK (Dec 2016); SLAC, Stanford (May 2016); Instituto de Física Teórica, UAM, Spain (Oct 2015).

**DES Workshops (4):** Modeling Dark Energy Observations in the Nonlinear Regime, UMichigan, (Oct 2018); SPT x DES Workshop, KICP, UChicago (Jun 2018); Y3 Key Project, CCAPP, Ohio State U. (Apr 2018); Clusters, KIPAC, SLAC, Stanford (Feb 2018).

## HIGHLIGHTED OUTREACH ACTIVITIES

<a href="#">ScientiFika</a> organizer	2024 - Present
Astronomy on Tap hosted by University of Illinois.	Oct 2023
<a href="#">Chicago's South Side Art Contest</a> organizer (UChicago)	Mar 2023
Organizer of <a href="#">First Outreach Symposium at KICP</a> , University of Chicago.	Sep 2020
<b>Press activities (6):</b> Interview in <a href="#">SpaceRef</a> (Jun 2023), NOIRLab article about the Dark Energy Survey (May 2023), <a href="#">Interview with UChicago Press release</a> and <a href="#">with a Catalan newspaper</a> about the DES Y3 3x2pt results (May 2021), local radio interview by college students (Oct 2017), local TV appearance about <a href="#">‘Maps of dark matter’</a> (May 2017).	
<b>Outreach talks about dark energy (3):</b> Life-long Learning Fermilab program ( <i>remote</i> , Sep 2021), high-school IES Matadepera, (Barcelona, Jan 2019), Astronomical Association of Sant Cugat - Vall d'oreix (Barcelona, Oct 2017).	

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## AWARDS

The Royal Swedish Academy of Sciences: 15000 SEK	2024
UChicago Data Science Institute Visitor Grant: 4600\$	2024
DES travel award: 8000\$	2016 - 2024

## SERVICE

Thesis Committee Member of David Sanchez Cid (Universidad Complutense de Madrid)	Oct 2024
US National Science Foundation (NSF) and NASA panel reviewer.	Confidential
Monthly Notices of the Royal Astronomical Society referee (7 papers reviewed)	2020 - Present
ApJ Letters referee (1 paper reviewed)	2020 - Present
Internal referee for DES publications (10++ papers reviewed).	2018 - Present
Observing for PA US at the William Herschel Telescope (La Palma): 10 nights.	2018 - 2019