Lucas F. Secco

Curriculum Vitae

Employment

2020- present Postdoctoral Fellow, Kavli Institute for Cosmological Physics - University of Chicago, USA.

Education

- 2015–2020 Ph.D in Physics & Astronomy, University of Pennsylvania, USA.
 - Thesis: Weak Lensing and Cosmology in the Dark Energy Survey. Advisor: Prof. Dr. Bhuvnesh Jain
- 2013–2015 M.S. in Physics, Universidade de São Paulo, Brazil.
 - Thesis: Power Spectrum Estimators in Galaxy Surveys. Advisor: Prof. Dr. Raul Abramo
- 2009–2013 B.S. in Physics, Universidade Federal do Rio Grande do Sul, Brazil.

Fellowships & Awards

- 2020- present KICP Fellowship, Kavli Institute for Cosmological Physics University of Chicago.
 - 2020 Dark Energy Survey Builder.
 - Two years of full-time equivalent work on infrastructure
 - Fall 2017 Dark Energy Survey Early Career Scientist.
 - Grant for participating in the Fall 2017 and Summer 2018 DES Collaboration Meetings.
 - 2013-2015 **FAPESP Scholarship**, *Universidade de São Paulo*, São Paulo, Brazil.
 - São Paulo Research Funding Agency Scholarship

Selected Publications

For complete up-to-date list (ADS library): https://lfsecco.com/publications.

- [1] L. F. Secco, T. Karwal, W. Hu, E. Krause (2022). "The Role of the Hubble Scale in the Weak Lensing vs. CMB Tension" arXiv:2209.12997
- [2] **L. F. Secco**, M. Jarvis, B. Jain, C. Chang et al. (2022). "Dark Energy Survey Year 3 Results: Three-Point Shear Correlations and Mass Aperture Moments" PRD 105, 103537
- [3] K. Hoffmann, **L. F. Secco**, J. Blazek, M. Crocce et al. (2022). "Modeling Intrinsic Galaxy Alignment in the MICE Simulation" arXiv:2206.14219 (submitted to PRD)
- [4] L. F. Secco, S. Samuroff, E. Krause, B. Jain et al. (2021). "Dark Energy Survey Year 3 Results: Cosmology from Cosmic Shear and Robustness to Modeling Uncertainty" PRD 105, 023515
- [5] E. Krause, X. Fang, S. Pandey, **L. F. Secco** et al. (2021).

 "Dark Energy Survey Year 3 Results: Multi-Probe Modeling Strategy and Validation" arXiv:2105.13548 (submitted to PRD)
- [6] **L. F. Secco**, A. Farah, B. Jain, S. Adhikari, A. Banerjee and N. Dalal (2018). "Probing Self-interacting Dark Matter with Disk Galaxies in Cluster Environments" ApJ 860 no.1, 32
- [7] L. R. Abramo, **L. F. Secco** and A. Loureiro (2016). "Fourier analysis of multitracer cosmological surveys" MNRAS 455, 3871-3889

Selected Presentations & Conferences

- Jun 2022 **Kavli IPMU at Tokyo University**, *APEC Seminar*, Tokyo, Japan. "Weak Lensing in the Upcoming Era of Surveys"
- Jun 2022 **Yukawa Institute at Kyoto University**, *Gravity Workshop*, Kyoto, Japan. "Cosmological Constraints from the DES"
- Jul 2021 **CEA Paris-Saclay**, *CosmoStat Q&A*, Paris, FR (virtual). "The DES Y3 Cosmic Shear Results"
- Jun 2021 Max Planck Institute for Astrophysics, Cosmology Seminar, Garching, DE (virtual).

 "The DES Y3 Cosmic Shear Results"
- Jun 2021 **University of São Paulo**, *Cosmology Seminar*, São Paulo, BR (virtual). "The DES Y3 Cosmic Shear Results"
- Jan 2020 **Columbia University**, Astronomy Seminar, New York, NY. "Weak Lensing Cosmology with 2pt and 3pt Correlations"
- Nov 2019 **University College London**, Cosmology Seminar, London, UK. "Weak Lensing Cosmology with 2pt and 3pt Correlations"
- Oct 2019 **Stanford University**, Cosmology Seminar, Stanford, CA. "Challenges for the Upcoming DES-Y3 Cosmic Shear Cosmology"
- Oct 2019 **University of California at Berkeley**, *BCCP/Cosmology Seminar*, Berkeley, CA. "Challenges for the Upcoming DES-Y3 Cosmic Shear Cosmology"

Service & Mentoring

- 2021–2022 **KICP Seminar Organizer**, *University of Chicago*, Chicago, IL. Organized weekly seminars for the KICP and Astronomy communities at UChicago.
- 2018–2022 **DES Cosmic Shear Convener**, *Dark Energy Survey Collaboration*.

 Co-convener of the cosmic shear analysis group in DES. Organized telecons, meetings and co-led the cosmic shear analysis.
- 2018–2019 **DES Early Career Scientists**, *Dark Energy Survey Collaboration*.

 Contributed to the group within DES that organizes career panels, collaboration meetings and helps promote visibility for early career graduate students and postdocs.
- 2015–2017 **Teaching & Mentoring**, *University of Pennsylvania*, Philadelphia, PA.

 Taught and graded PHYS101 labs for a total of 80 undergraduate students at Penn over 2 semesters.

 Mentored Penn undergraduate student Amanda Farah in a project that culminated in a publication on self-interacting dark matter (see *Selected Publications*)
- Spring 2017 Volunteer Physics and Maths Teacher, Legion of Good Will, New York, NY.

 Taught a series of lectures on high school level physics and maths to adult Brazilian immigrants living living in NY & NJ who did not possess a Brazilian secondary education degree (total of 20h).
- 2016–2021 Public Outreach.

Talks given to general audiences on numerous occasions, including the Sulzer Public Library (Chicago IL) and the Philadelphia Science Festival (Philadelphia PA).

Professional References

- Dr. Bhuvnesh Jain, University of Pennsylvania, Philadelphia, PA (USA).
- Dr. Elisabeth Krause, University of Arizona, Tucson, AZ (USA).
- Dr. Scott Dodelson, Carnegie Mellon University, Pittsburgh, PA (USA).
- Dr. Chihway Chang, University of Chicago, Chicago, IL (USA).
- **Dr. Dragan Huterer**, *University of Michigan*, Ann Arbor, MI (USA).