

Dr. Lisa Bugnet

Assistant Professor
Head of the *Asterics*
– Asteroseismology & Stellar Dynamics group
Institute of Science and Technology Austria (ISTA)
Am Campus 1, 3400 Klosterneuburg
Austria

PI of ERC StG *Calcifer*
A&A Associate Editor

lisa.bugnet@ist.ac.at
(+43) 676-79 49 140

 : 0000-0003-0142-4000

 : <https://www.asterics.at>

Scientific expertise

STELLAR ASTROPHYSICS
Asteroseismology of Solar-like stars
Stellar internal dynamics
Solar-like stars evolution

ADVANCED DATA ANALYSIS
Asteroseismic/photometric data analysis
Large datasets

MODELING & THEORY
Stellar inner structure and evolution modeling
Stellar pulsations modeling
Theory of Stellar oscillations
Magnetohydrodynamics

- 2023 - **Assistant Professor at the Institute of Science and Technology Austria (ISTA)**
Klosterneuburg, Austria
Head of *Asterics* – *Stellar Dynamics and Asteroseismology* group
- 2020 - 2022 **Flatiron Research Fellow at the Center for Computational Astrophysics of the Flatiron Institute.**
New York, USA

EDUCATION

- 2017 - 2020 **Ph.D. in Astrophysics, supervised by Prs. Rafael A. García, Stéphane Mathis & Savita Mathur**
*CHARACTERIZATION OF SOLAR-TYPE STARS AND STUDY OF THEIR INTERNAL MAGNETIC FIELDS
ALONG THE EVOLUTION.*
Machine learning for asteroseismology and theoretical constraints for internal magnetic fields.

Defended on 2020, September 28th
Laboratory Dynamics of Stars, (Exo)-planets and their Environment, Department of Astrophysics, The French
Alternative Energies and Atomic Energy Commission (CEA). *Very Honorable, with Committee Praise.*
- 2016 - 2017 **Master of Science, Paris Observatory**, major in *Astrophysics*, *magna cum laude honors*.
2014 - 2017 **Master of Science, École Normale Supérieure de Paris (ENS)**, major in *Earth Sciences*, *magna cum
laude honors*.

- 1- **PUBLICATIONS & COMMUNICATIONS** ☉ **36 Referee articles**, among which :
5 first author articles, 5 supervision articles, 3 review articles, 11 major contributions, 12 minor contri-
butions, 1426 citations (H-index=23)
[My full list of publications can be found at : https://ui.adsabs.harvard.edu/
public-libraries/27AaD6wFQsSFysTMJT8qrQ](https://ui.adsabs.harvard.edu/public-libraries/27AaD6wFQsSFysTMJT8qrQ)

- ☉ **23 Oral communications**, among which : 5 invited talks, 9 contributed talks, 9 invited seminars.

- 2- **GRANTS FELLOWSHIPS & PRIZES**
- ☐ **ERC Starting Grant *Calcifer*** – *Unveiling the mysteries of stellar dynamics : a pioneering journey
in magnetoastroseismology*, 1/10/2024-30/9/2029
 - ☐ **Independent Postdoctoral Research Fellow funded by the Research Foundation Flanders**,
1/10/2022-30/9/2025, Host Institute : KU Leuven, Belgium *Declined due to the position at ISTA*
 - ☐ **Flatiron Research Fellowship**, 2020 - 2023, Flatiron Institute, Simons foundation
 - ☐ **L'Oreal-UNESCO For Women in Science, France, Young Talents Fellow**. 2019, 15,000€ prize
[Link to the program](#)
 - ☐ **International Student mobility**, Funding for a 5 weeks stay at Institute of Astrophysics of Canarie
Islands (IAC), 2018, Paris Diderot University
 - ☐ **PhD Prize of the International Astronomical Union**, division G : "Solar and Stellar physics", 2020
 - ☐ **PhD Prize of the French Society of Astronomy and Astrophysics**, 2021
 - ☐ **Best oral contribution**, TASC4/KASC11 *First Light in a new era of Astrophysics Conference*. 2018,
Aarhus, Danemark

3- SUPERVISION

- ◇ **3 ongoing PhD students, ISTA**, main supervisor, since 2023, 2024, and 2025.
- ◇ 11 Undergraduate students as main or co-supervisor, since 2018.
- ◇ 4 Postdoctoral Fellows, since 2023.

4- CONFERENCES ORGANIZATION

- ◇ **Chair of the SOC and LOC, TASC9/KASC16 2025 : « The TESS and Kepler asteroseismic conference »** <https://tasc9-kasc16.ista.ac.at>, ISTA, July 2025
- ◇ Scientific organiser, TASC7/KASC14 2023 : « The TESS and Kepler asteroseismic conference », The University of Hawai'i at Mānoa, July 2023
- ◇ Scientific organiser, EAS22 Special session 21 : « Stellar characterization, large data sets, and Machine Learning », Valencia, Spain, 27 June 2022

5- PEER REVIEWING & COMMITTEES

- ◇ **Astronomy & Astrophysics Associate Editor for Stellar physics**
Major editing role with about 200 articles per year, 2026–
- ◇ Referee for « Nature », 2022–
- ◇ Referee for « Nature Astronomy », 2020–
- ◇ Referee for « Astronomy & Astrophysics », 2021–
- ◇ Referee for « The Astrophysical Journal », 2024–
- ◇ Member of the Physics – Chemistry – Earth Sciences faculty hiring committee, ISTA, 2024-2025
- ◇ Member of the Computer Sciences – Data Sciences – Astronomy – Earth Sciences faculty hiring committee, ISTA, 2023-2024
- ◇ Panelist for the “Golden Webinar in Astrophysics”, “The Space Age of Asteroseismology : a Golden Opportunity to Dive Deep into Stars and Measure their Internal Physics” by Conny Aerts, 2021
- ◇ Panelist for the “Transport in Stellar Interiors” KITP program conference, discussion on stellar internal magnetic fields, 2021

6- TEACHING

- △ **Computational Stellar Physics**, ISTA, Fall 2023
- △ **Life in the Universe**, ISTA, Spring 2024 & 2025
- △ **Invited Lecturer, MESA Summer School**, Budapest, Hungary, August 2023
- △ **Invited Lecturer, The 13th Session of the LSSTC Data Science Fellowship Program (DSFP)**, Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA) at Northwestern University, 2021
- △ Mathematics Hands-on classes, Freshman and Sophomore years, Paris Sud University, 2017-2019
- △ Master AMS Hands-on projects *Modeling Astrophysical systems*, ENSTA ParisTech', 2017-2018
- △ Methodology class, freshman year, Paris Sud University, 2017-2018
- △ Private lessons *Mathematics, Physics, Chemistry, Biology & Earth sciences*, Highschool, weekly : 7 students from 2014 to 2019

7- INTERNATIONAL COLLABORATIONS

- PLATO (ESA M3 space mission)
 - ⊗ Responsible of sub-module WP125 :MSAP5-2-23 (« Mass from Surface gravity and Radius »)
 - ⊗ Responsible of sub-module WP125 :MSAP4-04 (« Gravity from FLiPer »)
- TESS (mission spatiale NASA/MIT)
 - ▶ Member of « Tess Asteroseismic Consortium » (TASC)
 - ▶ Member of WG2 « Solar-like stars »
 - ▶ Member of WG3 « Red giants »
 - ▶ Member of « TESS Data for Asteroseismology » (T'DA), stellar classification branch
- Kepler/K2 (mission spatiale NASA)
 - ▶ Member of « Kepler Asteroseismic Consortium » (KASC)
 - ▶ Member of « APOKASC » consortia

8- OUTREACH

- ✧ Interview for ORF Niederösterreich heute "Warum eigentlich?": Starlight full of mysteries"
- ✧ Ö1 Radio interview
- ✧ Der Pragmaticus: Wie die Sterne klingen (nicht schön) - pragmaticus magazine
- ✧ Die Zeit newspaper - 3 and a half questions (October 10th 2024)
- ✧ Die Presse: "Was Sterne funkeln lässt"
- ✧ Salzburger Nachrichten: My advice to women: Go into research
- ✧ Meinbezirk Klosterneuburg: ISTA Forschende erhalten Millionen-Förderung
- ✧ Falter: "She is reaching for the Stars"
- ✧ Wiener Zeitung: "Astroseismology instead of a Christmas story: What does the "flickering" of a distant star tell us about the celestial body and the cosmos?"
- ✧ French Embassy: Observer les étoiles : portrait de Lisa Bugnet, astrophysicienne française à l'Institut des sciences et de technologie en Autriche (ISTA).
- ✧ « *The Sun : The laugh of stars* »: Interview for « Le Sense Of Wonders » and « CEA Recherche », 2020
- ✧ « *Du Big Bang aux Big Bands* » : Interview for The Night of Astronomy 2020
- ✧ Podcast : « *Talents scientifiques* », Serious Audio - 2020
- ✧ « *Étoiles en scène* » : Express conferences about the last news of cosmos, Grand Rex Movie Theater, Paris Observatory- Paris Science and Literature, December 2019
- [Link to the video](#)
- ✧ « *Astroseismology : the laugh of stars* »: outreach video for the CEA YouTube channel October 2019
- ✧ *Paris under the stars*, French Astronomy Association , Summer 2019
- ✧ *Astronomy kids' day*, French Astronomy Association 2019
- ☐ **Jury first prize, French *Three-minute thesis* contest**, 2019, USPC Finale
- [Link to the video](#), and [Link to the program](#)
- ☐ Jury second prize, *Chronothesis : My Thesis in 5 minutes*, 2018, French Astronomy Association