

Terese Thidemann Hansen

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Research Interests

Stellar and Galactic archaeology: first stars and galaxies, metal-poor stars, dwarf galaxies, stellar streams.
Nuclear astrophysics: origin of the elements, in particular the rapid neutron-capture process
Stellar spectroscopy and physics of stellar atmospheres

Employment

2021- Researcher, Department of Astronomy, Stockholm University
2018-2021 Postdoctoral Research Associate, Department of Physics and Astronomy, Texas A&M University
2015-2018 Postdoctoral Research Associate, The Observatories of the Carnegie Institution for Science

Education

2015 Ph.D, Heidelberg University
Title: "An Observational Study of Metal-Poor Stars"
Supervisor: Prof. Norbert Christlieb (N.Christlieb@lws.uni-heidelberg.de)
2011 M.Sc, Copenhagen University
Title: "Formation of the Heavy Elements in the Early Galaxy"
Supervisor: Prof. Johannes Andersen
2008 B.Sc, Dark Cosmology Center, Copenhagen University
Title: "Characterization of Dark Matter by X-ray"
Supervisor: Director DTU space Kristian Pedersen (kp@space.dtu.dk)

Grants

P.I. Olle Engkvists Stiftelse: SEK 1,949,000 (2026-2028)
P.I. Swedish Research Council Project Grant, VR 2025-05377: SEK 4,099,000 (2026-2029)
P.I. Swedish Research Council Starting Grant, VR 2021-05556: SEK 4,000,000 (2022-2025)
P.I., NASA *Hubble Space Telescope* GO-15951: \$27,157, total= \$147,794 (2020-2023)
Texas A&M University System National Laboratories Office travel mini-grant \$1,500 (2020)
Heidelberg Graduate School of Fundamental Physics travel grant: €1,276 (2012)

Honors and Awards

Mitchell Astronomy Fellow, Texas A&M University (2018-2021)

Successful P.I. Observing Proposals

Nordic Optical Telescope, Spain, 6 nights (2022-23), Instruments: FIES

Las Campanas Observatory, Chile, du Pont Telescope: 52 nights (2016-2019), Instruments: Echelle spectrograph

Las Campanas Observatory, Chile, Magellan Telescopes: 18 nights (2016-2019), Instruments: MIKE, M2FS

McDonald Observatory, US, Harlan J. Smith Telescope: 46 nights (2019-2021), Instruments: Cross-Dispersed Echelle Spectrograph

Hubble Space Telescope, cycle 27, 17 orbits (2020), Instrument: STIS

Professional Activities

Co-founder and leader of *R*-Process Alliance Collaboration (RPA [website](#))

Nordic Optical Telescope Observing Program Committee Chair (2024- , member since 2022)

Instituto de Astrofísica de Canarias, International Time Programme, Time Allocation Committee (2024 -)

Thesis examination: PhD Andre da Silva, Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences, September 2025.

External collaborator of the Dark Energy Survey

Member of GHOULS and S5 Collaborations

Manuscript referee for Nature, the AAS Journals, Astronomy & Astrophysics, Astronomy Nature, Publications of the Astronomical Society of Japan, and Monthly Notices of the Royal Astronomical Society

NASA proposal reviewer (HST and ADAP)

Organizer of Joint Nuclear and Astronomy Seminar at Texas A&M University (2019 - 2021)

Initiator and organizer of Astronomy Postdoc meetings at Texas A&M University (2020 - 2021)

Scientific organizing committee: “*R*-Process Alliance Workshop”, Boston, US, November 2019, “CEMP Stars as Probes of First-Star Nucleosynthesis, the IMF, and Galactic Assembly”, Geneva, Switzerland, September 2019, “Astronomdagarna”, Lund, Sweden, October 2024

Organizer “The *R*-Process Alliance: abundances of 2000 metal-poor stars”, RPA workshop, Livermore, US, November 2025

PhD Student Mentoring

June 2026 - present Aayush Arya, DAWN, Collaboration on stellar abundance analysis project.

May 2023 - present Mila Racca, Stockholm University.

Fall 2023 - present John Dixon, Texas A&M University.

Fall 2020 - Spring 2026 Kaitlin Webber, Texas A&M University. Currently Postdoc at Uppsala University.

Undergraduate Student Mentoring (13)

Oskar Mlakar (Stockholm University, Erasmus student, 2026); **Oivind Harket** (Stockholm University, Master Project, 2023); **Gabriela Miranda Romero** (Stockholm University, Bachelor project, 2022); **Elyse Harman** (Texas A&M University, 2023); **Jared Cathey** (Texas A&M University, Honors Thesis, 2020-21, → PhD University of Florida); **Daniel Huerta** (Texas A&M University, 2020-21); **Jordan Hosein** (Texas A&M University, 2020-21); **Ryan Albert** (Texas A&M University, 2020); **Jessica Myron** (Texas A&M University, Undergraduate Thesis, 2019-20, → PhD University of Montana); **Brittany Vamvakias** (Texas A&M University, 2019-20); **Isobel Austin** (Texas A&M University, 2019-20); **Carla Quintero** (Humboldt State University, REU program, 2019); **Tiger Lu** (Caltech, Carnegie summer student program, 2018, → PhD Yale University)

Teaching Experience

Fall 2026 Stellar Structure and Evolution, Stockholm University

Spring 2022, 2023, 2024, 2025 Observational Astrophysics II, Stockholm University (Course webpage)

Oct 2024 NEON Observing School tutor (Course webpage)

Fall 2024 Guest lecturer, FY535 – Astrophysics & basic cosmology, University of Southern Denmark

2016 - Present Training of undergraduate and graduate students during multiple observing runs at Las Campanas Observatory, McDonald Observatory, and The Nordic Optical Telescope.

October 2020 Order of Magnitude graduate class (1 lesson) Texas A&M University

June 2019 REU summer students: introduction lecture on galactic chemical evolution

July 2017 Carnegie summer students: poster workshop.

July 2016 Carnegie summer students: introduction lecture on galactic chemical evolution.

April - July 2012 Teaching Assistant, Exercises for the lecture Introduction to Astronomy II, University of Heidelberg.

Teaching Development

Courses taken at the Centre for the Advancement of University Teaching at Stockholm University on professional development in higher education teaching and learning for university teachers.

Fall 2023 Professional development course 2, Teaching and Learning in the Science Academic Area (7.5 ECTS)

Spring 2023 Professional development course 1, Teaching and learning (7.5 ECTS)

Fall 2022 Introduction to teaching science (3 ECTS)

Spring 2022 Research Supervision — theory and practice (3 ECTS)

Workshops: "Supporting doctoral students' writing", "The ABC method for course design", "Classroom assessment techniques", "Encouraging student engagement through interactive lectures."

Invited Conference and Workshop Talks

European Astronomical Society Annual Meeting, 2026, Lausanne, CH
CeNAM Frontiers in Nuclear Astrophysics Meeting, 2026, College Station, US
s, i & r Element Nucleosynthesis (sirEN), 2025, Giulianova, IT
American Physical Society, Global Physics Summit 2025, Anaheim, US
The Milky Way as seen through Neutron-Capture Elements, 2023, Lund, SE
Chemical Abundances from Non-LTE Radiative Transfer, 2023, Chicago, US
Astronomdagarna, 2022, Gothenburg, SE
NOT - a telescope for the future, 2022, La Palma, ES
JINA Horizons, 2020, Online
Chemical Evolution of Galaxies: The Next 25 Years, 2020, Sexten, IT
The Radiating Universe, 2019, Shanghai, CN
Massively multiplexed spectroscopy with MSE, 2019, Tucson, US
The Metal-Poor Galaxy, 2018, Ringberg, GE
Stellar Abundances in Dwarf Galaxies, AAS 232, 2018, Denver, US
GW170817: The First Double Neutron Star Merger, 2017, Santa Barbara, US
Fifty-One Erg, 2017, Corvallis, US
JINA-CEE Frontiers in Nuclear Astrophysics, 2016, South Bend, US

Contributed Conferences and Workshops

2x Talk: European Astronomical Society Annual Meeting, 2025, Cork, IE
Talk: Dansk Fysisk Selskab, 2015, Lyngby, DK
Talk: NPA XI, 2024, Dresden, DE
Talk: CeNAM Frontiers, 2024, South Bend, US
Talk: BRIDGCE, 2023, Edinburgh, UK
Talk: *i*-process Nucleosynthesis Workshop & School, 2023, CY
Talk: JINA Frontiers, 2022, South Bend, US
Talk: Precision Spectroscopy workshop, 2020, Online
Talk: *R*-process Sources in the Universe, 2019, Phoenix, US
Talk: A Celebration of CEMP and Gala of GALAH, 2017, Melbourne, AU
Talk: Electromagnetic Signatures of *r*-process Nucleosynthesis in Neutron Star Binary Mergers, INT workshop, 2017, Seattle, US
Talk: APOGEE collaboration meeting, 2017, Pasadena, US
Talk: Neutron star mergers: From gravitational waves to nucleosynthesis, Hirscheegg 2017 workshop, AT
Talk: IAU symposium 317, The General Assembly of Galaxy Halos: Structure, Origin and Evolution, IAU General Assembly, 2015, Honolulu, Hawaii, US
Talk: Nucleosynthesis and Chemical Evolution: Recent Progress and Future Directions, INT workshop, 2014, Seattle, US
Talk: XIII International Symposium on Nuclei in the Cosmos, 2014, Debrecen, HU
Talk: German Women in Physics, 2013, Heidelberg, GE
Talk: Nuclear Physics in Astrophysics VI, 2013, Lisbon, PT
Poster: XII International Symposium on Nuclei in the Cosmos, 2012, Cairns, AU
Poster: 9th Russbach Workshop on Nuclear Astrophysics, 2012, Russbach, AT
Talk: Danish Physical Society Meeting, 2011, Nyborg, DK
Poster: Nordic Physics Meeting, 2011, Helsinki, FI

Seminar and Colloquium Talks

May 2026, Astronomy Seminar, Herzberg Astronomy and Astrophysics Research Centre, CA
 April 2026, Division of Astrophysics Seminar, Lund University, SE
 March 2026, Network for Neutrinos, Nuclear Astrophysics, and Symmetries (N3AS) seminar (online)
 May 2025, Astronomy Seminar, Syddansk Universitet, DK
 October 2024, Astronomy Seminar, Institute for Astronomy, Astrophysics, Space Applications And Remote Sensing, GR
 March 2024, Astronomy Seminar, Texas A&M University, US
 November 2023, Astronomy Seminar, University of Surrey, UK (online)
 September 2023, School of Physics Colloquium, University of New South Wales (Online)
 October 2022, NASA Cosmic Origins Program Stars Science Interest Group Seminar (Online)
 September 2022, Astronomy Seminar, Uppsala University, SE
 May 2022, Oscar Klein Center Colloquium, Stockholm University, SE
 April 2021, Astronomy Seminar, Ohio University, US (Online)
 April 2021, Astronomy Seminar, University of Sao Paulo, BR (Online)
 April 2021, Astronomy Seminar, University of Notre Dame, US (Online)
 December 2020, Astronomy Seminar, Stockholm University, SE (cancelled due to covid)
 November 2020, IReNA Online Seminar
 May 2020, Astronomy Colloquium, University of Florida, US (Online)
 March 2020, Astronomy Seminar, Los Alamos National Lab (cancelled due to covid)
 May 2019, Astronomy Seminar, Universidad Diego Portales, CL
 February 2019, Astronomy Seminar, Texas A&M University, US
 October 2018, Astronomy Colloquium, Carnegie Observatories, US
 January 2018, Astronomy Seminar, Geneva Observatory, CH
 July 2017, Astronomy Seminar, Texas A&M University, US
 June 2014, SFB Seminar, Heidelberg University, GE
 March 2014, IMPRS Seminar, Heidelberg University, GE
 June 2013, IMPRS Seminar, Heidelberg University, GE

Outreach and Public Talks

September 2026: Låna en forskare, Sweden (five bookings)
 April 2025, 2026: Danish science festival - book a scientist (eight bookings in 2026).
 November 2024: Talk at Nyborg Rotary Club.
 April 2024: Swedish Qualifiers for the International Olympiad on Astronomy and Astrophysics (IOAA).
 March 2021: WISE (Women In Science and Engineering) September 2019: Talk at Brazos Valley Astronomy Club, College Station, TX
 May 2019: Talk at public viewing night at McDonald Observatory.
 February 2019: Astronomy on tap, College Station, TX.
 October 2017: Talk at Santa Monica Astronomical Society.
 October 2016, 2017, 2018: Carnegie Open House - Ask an astronomer.
 April 2016: TechSavvy, Pasadena City College, Astronomy workshop - build your own telescope.

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