

# Dr. Łukasz Tychoniec

Postdoctoral Researcher, Leiden Observatory, Leiden University

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## EMPLOYMENT

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01/11/2023 - ongoing **Postdoctoral researcher** at Leiden Observatory, Leiden University, Netherlands

- Research projects on star and planet formation with JWST and ALMA
- MIRI/MRS support scientist for the Netherlands

01/11/2020 – 31/10/2023 **ESO Fellow** - European Southern Observatory, Garching, Germany

- 75% independent research projects
- 25% functional duties for the observatory
- Fellow at ALMA Regional Center EU:

- helpdesk and contact scientist
- visiting Astronomer on Duty
- development study: Bayesian Reconstruction by Adaptive Image Notion (PI: Dr. F. Guglielmetti)

01/09/2016 – 31/10/2020 **PhD Candidate** - Leiden University, Leiden, The Netherlands

- Supervisor:* Prof. Ewine F. van Dishoeck
  - 90% research in observational astrophysics
  - 10% teaching duties (Galaxies & Cosmology, BSc 2nd year)
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## EDUCATION

09/2016 – 10/2020 **PhD Astronomy** - Leiden University, Leiden, The Netherlands

- Supervisor:* Prof. Ewine F. van Dishoeck
- Thesis:* Protostellar jets and planet-forming disks: witnessing the formation of Solar System analogues with interferometry

10/2014 – 07/2016 **MSc Astronomy** - Adam Mickiewicz University, Poznań, Poland

- Supervisor:* Dr. Agata Karska
- Thesis:* First stages of star formation in Perseus molecular cloud observed in the infrared and radio wavelengths

10/2011 – 06/2014 **BSc Astronomy** - Adam Mickiewicz University, Poznań, Poland

- Specialization:* Artificial Satellites Applications
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## WORK VISITS

- 02/2023 MIRI European Consortium meeting  
3 days, Leuven, Belgium
- 09/2022 Joint ALMA Observatory, Chile  
3 weeks, Astronomer on Duty shifts at ALMA
- 07/2022 Observatoire de Paris, Paris-Saclay, France  
1 week, host: Dr. Benoit Tabone
- 06/2022. Leiden Observatory, Netherlands  
1 week, host: Prof. Ewine van Dishoeck
- 02/2022 Konkoly Observatory, Hungary  
1 week, host: Dr. Eleonora Fiorellino
- 10/2019 European Southern Observatory, Germany

- 1 week, host: Dr. Carlo Manara
- 05/2019 MIRI European Consortium meeting,  
2 days, Copenhagen, Denmark
- 10/2017 Nicolaus Copernicus University, Poland  
1 week, host: Dr. Agata Karska
- 06/2017 MIRI European Consortium meeting,  
3 days, Dublin, Ireland
- 02/2017 MIRI European Consortium meeting,  
2 days, , Heidelberg, Germany

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## SERVICES

- 03/2020 Co-organizer of JWST Day in Netherlands, (online)
- 03/2020 Tutor at JWST Masterclass in Poland
- 2019 — ongoing Referee for MNRAS, ApJ and A&A
- 03/2021 — ongoing Co-organiser of Informal Discussions at ESO
- 03/2021 Lecture for primary school in Nowogard (online)
- 10/2020 — ongoing Organiser of Star and Planet Formation Webinar at ESO
- 2021 — 2022 Scientific Assistant for Observing Program Committee at ESO
- 2021 — 2022 Chair at three Hypatia Colloquiums at ESO (online)
- 05/2022 Mentor at the DUSTBUSTERS school
- 11/2021 LOC for Threats From The Surroundings Workshop at ESO (online)
- 2017 — 2018 Co-organizer of the Leiden Observatory PhD interview days
- 06/2017 Outreach events in primary and high-school in Nowogard
- 2017 — 2019 Teaching assistant for a Bachelor's course Galaxies and Cosmology,  
Leiden, Netherlands
- 2018 — 2019 Contribution to mentoring a student in a bachelors project, Toruń, Poland
- 2019 — 2020 Mentoring of two Master student's projects, Leiden, Netherlands
- 2019 — 2020 Co-organizer of Star Formation and Disks bi-monthly discussions,  
Leiden, Netherlands

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## TALKS & PRESENTATIONS

### Seminars & Colloquiums:

- 10/2022 IOA Weekly Seminar, Poznań, Poland
- 10/2022 IA UMK professors association seminar, Toruń, Poland
- 04/2022 IA UMK Seminar, Toruń, Poland
- 01/2022. ALMA-JAO Colloquium, Santiago, Chile
- 11/2021 Warsaw Observatory Seminar, Warsaw, Poland
- 09/2021. UCL Astrophysics Group Seminar, London, UK
- 05/2020. IOA Weekly Seminar, Poznań, Poland
- 03/2020. Opening seminar at JWST MasterClass, Toruń, Poland
- 09/2017 Toruń Astrophysics Summer Program (TAPS) Seminar, Poland

### Invited talks:

- 06/2023 Star@Lyon 2023, Lyon, France
- 01/2023 VLT/ALMA interferometry workshop, Garching, Germany
- 11/2022 ESO Day, Toruń, Poland
- 11/2021 RUTD, kick-off meeting Phase II, (online)
- 10/2021 MIAPP workshop: Gaps, Rings, Spirals, and Vortices: Structure Formation  
in Planet-Forming Disks, Garching, Germany
- 05/2021 11th IMPRS Student Symposium (online)

**Contributed talks:**

- 11/2022 Disks and Planets with ESO facilities, Garching, Germany
- 10/2022 From Clouds to Planets II, Berlin, Germany
- 07/2022 MaxEnt2022, Paris, France
- 09/2021 Chemical processes in Solar-type star forming regions, Torino, Italy
- 09/2021 Life and Space 2021, online
- 10/2020 Europlanet Science Congress, online
- 07/2020 European Astronomical Society Annual Meeting, online
- 06/2020 IAU Astrochemical Frontiers, online
- 09/2019 NOVA network meeting, Amsterdam, The Netherlands
- 03/2019. NOVA network meeting, Leiden, The Netherlands
- 07/2018 Astrochemistry - Past, Present, and Future, Pasadena, USA
- 11/2018 Allegro ALMA day, Leiden, The Netherlands
- 09/2017 Polish Astronomical Society meeting - Zielona Góra, Poland
- 09/2016 Shocks 2016 - Toruń, Poland,
- 10/2015 Astrophysics and Cosmology, Kraków, Poland
- 09/2015 OSSA (Polish Astronomy Student's Assembly), Poznań, Poland

**Posters:**

- 07/2021 European Astronomical Society Annual Meeting, online
- 12/2020 Five Years of HL Tau Workshop, online
- 10/2020 Planetesimal formation meeting, online
- 06/2019 From Stars to Planets II, Gothenburg, Sweden
- 03/2017 IAU Symposium 332, Astrochemistry VII, Puerto Varas, Chile
- 09/2016 Shocks 2016 - Toruń, Poland
- 04/2016 Water in the Universe, Katwijk, The Netherlands
- 09/2015 Polish Astronomical Society meeting - Poznań, Poland

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**SCHOLARSHIPS & AWARDED TELESCOPE TIME**

- 2023 FINCA fellowship, Turku, Finland (declined)
- 2020 ESO Fellowship, Garching, Germany
- 2020 PSF Fellowship, Heidelberg, Germany (declined)
- 2015 LEAPS summer student
- 2015 Scholarship, Polish Minister of Science and Higher Education
- 2015 Scholarship, Rector of Adam Mickiewicz University, Poland

**Awarded telescope time proposals as a PI:**

- 2022 Cycle 9 ALMA, Grade B: (12m - 16.6 hrs, 7m - 36.6 hrs)
- 2021 Cycle 8, ALMA, Grade A (12m - 6.8 hrs)
- 2019 Cycle 7, ALMA, Grade C (12m - 6.8 hrs)
- 2018 Cycle 6, ALMA, Grade B (7m - 28.8 hrs)
- 2017 Cycle 5, ALMA, Grade C (12m: 5.7 hrs, 7m: 21 hrs)

**Awarded telescope time proposals as a co-PI:**

- 2021 JWST Cycle I: 3 proposals
- 2020 JWST Guaranteed Time Observations (55 hrs)
- 2020 — 2022 VLT: A-priority PENELLOPE Large Program
- VLT: B-priority 1 proposal

2017 — 2022 ALMA A-priority: 5 proposals  
ALMA B-priority: 1 proposal  
ALMA C-priority: 2 proposals  
2016 — 2019 VLA A-priority (43 hrs), B-priority (340 hrs)  
2018 SOFIA Priority 2: (8 hrs)

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## SKILLS & EXPERTISE

Observations: ALMA, VLA, APEX, JWST-MIRI, X-SHOOTER, Herschel-PACS  
ALMA data calibration, pipeline and imaging; preparations of the James  
Webb Space Telescope Guaranteed Time Observations within the MIRI  
European Consortium.

Programming: Writing dedicated modules for analysis of large datasets, data  
visualisation, statistical analysis (Python, IDL);

Software: CASA, astrochemical modelling (RADEX, CASSIS, CLOUDY), Latex

Languages: English (fluent), Polish (native), German (basic)

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## PUBLICITY

07/2022 popular articles on JWST first data release  
[projekt pulsar.pl](http://projekt pulsar.pl), [polityka.pl](http://polityka.pl)

02/2022 appearance in polish TV show Astronarium on JWST ([youtube](https://www.youtube.com/watch?v=...))

12/2021 popular article on JWST in Urania ([Urania](http://Urania))

07/2019 press release following article on disk masses and exoplanets  
[science.org](http://science.org), [tvppworld](http://tvppworld), [universal-sci](http://universal-sci), [NOVA](http://NOVA) press release

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## TRAINING

09/2022 Astronomer on Duty training at ALMA observatory, Santiago, Chile

06/2019 NOVA 3rd year PhD weekend, Amersfoort, The Netherlands  
*Soft skills:* effective presentation, job applications

11/2017 ALMA data reduction training day

11/2016 NOVA Fall School, course on Extragalactic Astrophysics,  
*Soft skills:* time management, science communication, ethics in science

05/2015 Cloudy Workshop, Warsaw, Poland.  
*Speaker:* Prof. Gary Fernland, CLOUDY software tutorials and  
lectures on ISM