



# CAMILLE LANDRI

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📍 Institute of Theoretical Physics, Faculty of Mathematics and Physics, Charles University

V Holešovičkách 2, 180 00 Praha 8, Czech Republic

## EDUCATION

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**PhD student in Astrophysics**, Charles University, Prague, Czechia

*Since October 2020*

In the Time-domain Astronomy group of Dr. Ondřej Pejcha.

Thesis topic: Theory and observation of strong stellar interactions.

Thesis advisor: Dr. Ondřej Pejcha

**M.Sc. in Astrophysics** Uppsala University, Uppsala, Sweden

*September 2017 - January 2020*

Thesis title: The Peculiar IR Emission of SN2014dt.

Thesis advisor: Dr. Joel Johansson

**B.Sc. in Physics**, Université Grenoble Alpes, Grenoble, France

*September 2014 - June 2017*

Final year at Umeå University, Sweden with the Erasmus Program

## RESEARCH PROJECTS

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**Charles University, Prague, Czechia**

*January 2021 - present*

*Simulating stellar interactions with SPH*

- Simulation of stellar fly-bys with the SPH code PHANTOM. The ensuing mass loss will be used to estimate the transient caused by the collision.

- Simulation of RSG envelope grazed by a compact companion star with PHANTOM.

- Tools: SPH, PHANTOM, Fortran, Python, HPC

**Charles University, Prague, Czechia**

*October 2020 - September 2022*

*Characterisation of a peculiar cataclysmic variable.*

- Photometric and spectroscopic analysis of a candidate cataclysmic variable showing unusually long outbursts recurring every 3 years. The photometry shows traces of an outbursting disc and the object is somewhat similar to U Gem dwarf novae. A possible interpretation is that this system is an extreme dwarf nova. (*Landri et al. 2022, MNRAS*)

- Tools: Python, PHOEBE, IRAF

**Uppsala University, Uppsala, Sweden**

*January 2019 - June 2019*

*Master Thesis: The Peculiar IR Emission of SN2014dt.*

- Study of late time optical to mid-infrared photometry of the Type Ia Supernova 2014dt. A clear excess is detected from 300 to 700 days post-explosion in near and mid-IR observations, which cannot be reproduced using basic radioactive decay models. Warm dust models successfully reproduce the spectral energy distribution, possible heating scenarios for pre-existing dust are discussed.

- **Tools:** Python

- **Advisor:** Dr. Joel Johansson, Stockholm University

**Uppsala University, Uppsala, Sweden**

*January 2018 - June 2019*

*Academic Project: Constraining the Warm Dark Matter mass using high-redshift galaxies.*

- Forecast of the constraints on Warm Dark Matter masses obtained using JWST observations of high-redshift galaxies.

- **Tools:** Fortran, Python, HPC

- **Advisor:** Dr. Martin Sahlén, Uppsala University

## OUTREACH

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**Scientific Game Jam**, Grenoble, France

*March 2019*

48 hour-long contest to design a game that explains a topic of scientific research to the general public. Participation in the design of two games themed around:

- Supernovae

- Tunnel Magnetoresistance

## CONTRIBUTIONS

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- **The Impact of Binaries on Stellar Evolution**, MPA, Garching, Germany (Poster) *November 2022*
- **Week of Doctoral Students**, Charles University, Prague, Czechia (Talk) *June 2021*

## PUBLICATIONS

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- **OGLE-BLG504.12.201843: A possible extreme dwarf nova**, *Camille Landri, Ondřej Pejcha, Michał Pawlak, Andrzej Udalski, Jose L. Prieto, Manuel Barrientos, Jay Strader and Subo Dong, MNRAS, 2022*
- **The complex dynamical past and future of double eclipsing binary CzeV343: misaligned orbits and period resonance**, *Ondřej Pejcha, Pavel Cagaš, Camille Landri, Michael M. Fausnaugh, Gisella De Rosa, Jose L. Prieto, Zbyněk Henzl, Milan Peta, A&A, 2022*

## SKILLS

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<b>Languages:</b>	French (native), English (C1), Swedish (A2), German (A2)
<b>Programming:</b>	Python, Fortran, C/C++, Java, Matlab, HTML/CSS
<b>Other:</b>	Unix, L <sup>A</sup> T <sub>E</sub> X, git, SQL

## REFERENCES

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### **Dr. Joel Johansson**

The Oskar Klein Centre for Cosmoparticle Physics,  
Stockholm University,  
Stockholm, Sweden  
joeljo@fysik.su.se

### **Dr. Martin Sahlén**

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Uppsala University,  
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### **Dr. Ondřej Pejcha**

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