

# Taylor L. J. Kutra

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## EDUCATION

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UNIVERSITY OF TORONTO <i>Ph.D. in Astronomy &amp; Astrophysics</i>	2018-2023
QUEST UNIVERSITY CANADA <i>B.A.S. pertaining to the question <i>Are We Alone in the Galaxy?</i></i>	2013-2017

## DOCTORAL THESIS

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TITLE: *Origins of Gaps and Rings in Protoplanetary Disks*  
SUPERVISOR: Prof. Yanqin Wu

## PUBLICATIONS

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**Kutra, T.** & Wu, Y., "Kepler Planets and Metallicity", 2019, *In Prep.*.

## AWARDS

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<b>Faculty of Arts and Science Graduate Admissions Award</b> University of Toronto	2018
<b>Keystone Distinction Award</b> Quest University Canada For excellent undergraduate thesis work.	2017
<b>Showcase Award</b> Quest University Canada For exceptional presentation of undergraduate thesis.	2017
<b>President's List</b> Quest University Canada	2014, 2015
<b>Canadian Academic Performance Scholarship</b> Quest University Canada	2013-2017
<b>Presidential Scholarship</b> Quest University Canada	2013-2017

## CONFERENCE TALKS

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<b>Emerging Researchers in Exoplanet Science V</b> <i>Kepler Planets and Metallicity</i>	Cornell University 2019
<b>Our_Futures</b> <i>Our_Cosmos</i> (invited)	Quest University Canada 2018
<b>Quest Scholarship Conference</b> <i>The Precision Transit Survey</i>	Quest University Canada 2016

## CONFERENCE POSTERS

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**Kutra, T.**, Boley, A., Hughes, A., Hickson, P. (2017). *Follow-up Observations of WASP-36. American Astronomical Society, AAS Meeting 230, Id.118.01, 230.*

## RESEARCH EXPERIENCE

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### GRADUATE

#### ***Hydrodynamic Instabilities in Protoplanetary Disks***

University of Toronto, Current  
*Supervisor:* Prof. Yanqin Wu  
Finding hydrodynamic origins for gaps in ALMA protoplanetary disks.

#### ***Kepler Planets and Metallicity***

University of Toronto 2018-2019  
*Supervisor:* Prof. Yanqin Wu  
Characterizing relationships between host star mass, metallicity and planet size and constraining the occurrence rates of the *Kepler* planets.

#### ***Water Production in a Magma Ocean***

University of Toronto & Center for Space and Habitability at the University of Bern 2019  
*Supervisors:* Prof. Diana Valencia and Dr. Dan J. Bower  
Modeling water production in terrestrial magma oceans during crystalization.

### UNDERGRADUATE

#### ***Follow-up Observations of WASP-36***

University of British Columbia & Quest University Canada 2012-2013  
*Supervisors:* Prof. Aaron Boley and Prof. Ian Hoffman  
Constraining transit timing variations for WASP-36b.

#### ***The Precision Transit Survey***

University of British Columbia 2012  
*Supervisor:* Prof. Aaron Boley  
Characterizing a new telescope to conduct a large follow-up transit search.

## OUTREACH

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### ASTROTOURS

**Co-Director** Current  
Organizing and hosting the monthly outreach event

**Planetarium Director** 2018-2019  
Training students to use the planetarium and make an accessible show.

### DUNLAP INSTITUTE

**Astronomy on Tap** 2018-Current  
Roaming astronomer, collecting and marking audience game sheets.

**Planet Gazing Party** September 2018 & 2019  
Cellphone photos of the moon, crowd control, prize table, greeter, take down.

## TEACHING EXPERIENCE

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### **Senior Tutorial Teaching Assistant**

*AST101: The Sun and Its Neighbours* Fall 2019  
Lead 4 tutorials per week  
Teach new grad students how to lead tutorials  
Planetarium shows

Invigilate midterm and final exams  
Mark final exam

**In-class Teaching Assistant**

*AST251: Life on Other Worlds*

Winter 2019

Attend lectures and answer questions during activities, the break and after class

Mark all assignments and final exam

Invigilate midterm and final exams

**Tutorial Teaching Assistant**

*AST101: The Sun and Its Neighbours*

Fall 2018

Lead 3 tutorial sections per week

Planetarium shows

Marking observing projects

Assist with observing nights

Invigilate midterm and final exams

## WORKSHOPS

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**SURP Professional Development Workshop**

*Organizer & Facilitator*

August 2019

Organized and facilitated a workshop for Summer Undergraduate Research Program (SURP) students titled 'Becoming a Graduate Student'.

**ComSciConCan**

*Participant*

June 2019

Attended and participated in Canada's first conference on science communication. Produced an original piece of science communication to workshop at the conference.

**Atmospheric Escape Workshop**

*Attendee*

April 2019

Attended and participated in the Centre for Planetary Science at the University of Toronto, Scarborough's workshop on atmospheric escape.

## GRANTS AND BURSARIES

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*Funding for Equity, Diveristy and Inclusion Meetings*

2019

Dunlap Institute

*ComSciConCan Travel Award*

2019

McMaster University

*Reinhardt Travel Award*

2019

University of Toronto

*Quest University Student Research Fund*

2017

Quest University Canada

*Quest University Bursary*

2013-2017

Quest University Canada

## MEDIA APPEARENCES

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*Celebrating Earth Hour*

March 30, 2019

City News Toronto, broadcast interview