

# Emma K. Jarvis

Department of Astronomy & Astrophysics  
University of Toronto  
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## EDUCATION

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UNIVERSITY OF TORONTO	SEP 2023 -
<i>PhD, Astronomy &amp; Astrophysics</i>	

UNIVERSITY OF TORONTO	SEP 2018 - JUN 2022
<i>H.B.Sc., Astronomy &amp; Physics (High Distinction)</i>	
THESIS: <i>The effect of star cluster formation on future star formation in the Serpens South protocluster.</i>	
SUPERVISOR: Prof. Rachel Friesen	

## PUBLICATIONS

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Friesen, R., **Jarvis, E.**, , “The stability of dense cores near the Serpens South protocluster”, 2023, to be submitted to MNRAS.

## AWARDS

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<b>Graduate Entrance Scholarship</b>	
Mary Louise & Ronald Laidlaw Martin Scholarship (\$3,000)	SEP 2023
<b>Summer Undergraduate Research Program Award</b>	
David A. Dunlap Department of Astronomy & Astrophysics (\$9,500)	SUMMER 2022
<b>Dean’s List Scholar</b>	
University of Toronto	JUN 2022
<b>Regents In-Course Scholarship</b>	
Victoria College, University of Toronto (\$1,000)	AUG 2021
<b>Undergraduate Summer Research Fellowship</b>	
Canadian Institute for Theoretical Astrophysics (\$8,500)	SUMMER 2021
<b>The Doris Preston Scholarship</b>	
Victoria College, University of Toronto (\$3,000)	SEP 2018

## RESEARCH EXPERIENCE

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<b>Summer Undergraduate Researcher</b>	
David A. Dunlap Department of Astronomy & Astrophysics, SURP	MAY - AUG 2022
Supervisor: Prof. Rachel Friesen	
<i>The stability of dense cores near the Serpens South protocluster.</i>	
Characterizing the gravitational stability of dense cores in the Serpens South protocluster and surrounding filaments of dense molecular gas.	
<b>Undergraduate Research Course</b>	
University of Toronto	SEP 2021 - APR 2022
Supervisor: Prof. Rachel Friesen	
<i>Star formation near the Serpens South protocluster.</i>	
Studying the hierarchical structure, kinematic properties and gravitational stability of dense molecular gas in the nearby, young, clustered, star-forming region, Serpens South.	

### Summer Undergraduate Researcher

Canadian Institute for Theoretical Astrophysics, SURP

MAY - AUG 2021

Supervisor: Dr. Almog Yalinewich

*Simulating the core collapse supernova explosion mechanism in one dimension.*

Using diffusion to model the effect of turbulence in one dimensional simulations of the core collapse supernova explosion mechanism.

### PRESENTATIONS

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#### Dunlap Summer Undergraduate Presentations

University of Toronto

*The stability of dense cores near the Serpens South protocluster.*

2022

#### Undergraduate Astronomy Research Course Presentations

University of Toronto

*The effect of star clusters on future star formation.*

2022

#### CITA Summer Undergraduate Presentations

University of Toronto

*Simulating the core collapse supernova explosion mechanism.*

2021

### TEACHING EXPERIENCE

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#### Teaching Assistant, University of Toronto

FALL 2023

*AST101: The Sun and Its Neighbours*

Lead tutorials, conducted oral interviews, and invigilated the midterm and exam.

#### Math and Science Tutor

SEP 2019 - JUN 2020

*The Math Guru*

Instructed physics, astronomy, calculus, functions, math and chemistry to a total of over 40 students in grades 5-12.

#### Math Instructor

MAY 2019 - OCT 2019

*Mathnasium*

Instructed math to a total of over 100 students in grades 1-12.

Marked and monitored assessments.

### OUTREACH

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#### AstroTours Executive

2023 - 2024

*University of Toronto*

Promote monthly public talks by UofT astronomers.