

# Dana Simard

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## Education

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09/2015 - Present	<b>PhD</b> in Astronomy & Astrophysics Expected completion: 2019	University of Toronto
09/2014 - 08/2015	<b>MSc</b> in Physics	University of Toronto
09/2010 - 04/2014	<b>Hons BSc</b> in Physics	Queen's University at Kingston

## Publications

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### Journal Articles

Predicting Pulsar Scintillation from Refractive Current Sheets

**D. Simard** & U.-L. Pen

*Monthly Notices of the Royal Astronomical Society*, Volume 478, Issue 1, p.983-994

### Conference Proceedings

The Stellar Mass of M31 as inferred by the Andromeda Optical and Infrared Disk Survey

J. Sick, S. Courteau, J.-C. Cuillandre, ..., **D. Simard**, et al.

*Proceedings of the International Astronomical Union*, 10(S311), 82-85.

## Selected Academic Presentations

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A Predictive, Physical Model of Scintillation

**D. Simard**

Invited talk, Workshop on Fast Radio Bursts, McGill University, Montreal, Canada, June 2017

Predicting Pulsar Scintillation

**D. Simard**

Contributed talk, Scintillometry Workshop 2017, Max Planck Institut für Radioastronomie, Bonn, Germany, September 2016

Predictive Modelling of Pulsar Scintillation

**D. Simard**

NRAO DSOC Lunch Series, Socorro, NM

## Selected Awards

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09/2016 - Present	Postgraduate Scholarship - \$21000/yr	NSERC
09/2015 - 08/2017	Dunlap Institute Graduate Fellowship - \$5000/yr	Dunlap Institute

01/2017                      Allen Yen Award - \$1000                      University of Toronto  
*For students who have undertaken particularly notable research*

## Successful PI Proposals

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Evolution of the Scattering Screen of PSR B1133+16 Cycle 33	GMRT 48 hours
Scintillation of FRB121102 and the associated persistent radio source Cycle 17B	VLBA/HSA 50 hours
Measuring the scattering screen of PSR B1508+55 Director's discretionary time during cycle 33	GMRT 5 hours

## Research Experience

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09/2015 - Present	<b>PhD Thesis</b> Advisor: Ue-Li Pen	University of Toronto Department of Astronomy & Astrophysics
	Investigation of the phenomenon of scintillation arcs in pulsar secondary spectra via analysis of multi-epoch, large bandwidth pulsar observations and modelling of scattering within the ISM.	
09/2014 - 08/2015	<b>MSc Thesis</b> Advisor: Ue-Li Pen	University of Toronto Department of Physics
	Explored the use of semi-analytical models in the stiff approximation to calculate the evolution of the neutrino power spectrum in a $\Lambda$ CDM cosmology.	
04/2012 - 08/2014	<b>NSERC USRA &amp; BSc Thesis</b> Advisor: Stéphane Courteau	Queen's University at Kingston Department of Physics, Engineering Physics, and Astronomy
	Constrained multi-component mass models of M31 using kinematic data and multi-band luminosity profiles coupled with Bayesian statistical techniques.	
04/2013 - 08/2013	<b>NSERC USRA</b> Advisor: Roberto Abraham	University of Toronto Department of Astronomy & Astrophysics
	Developed an automated procedure for the rapid reduction of optical observational data from the Dragonfly Array, a telescope array optimized for low surface brightness imaging of galaxies.	

## Teaching Experience

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Winter 2018	<b>AST222 - Galaxies and Cosmology</b> Teaching assistant - responsible for planning and leading tutorials, holding help session, marking	University of Toronto Department of Astronomy & Astrophysics
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Fall 2015 Fall 2016 Fall 2017	<b>AST 101 - The Sun and Its Neighbours</b> Teaching assistant - responsible for leading and facilitating tutorials, marking term projects, and mentoring students	University of Toronto Department of Astronomy & Astrophysics
Winter 2016 Winter 2017	<b>AST201 - Stars and Galaxies</b> Teaching assistant - responsible for leading tutorials and marking term projects	University of Toronto Department of Astronomy & Astrophysics
Fall 2014 Winter 2015	<b>PHY132 - Introduction to Physics</b> Teaching assistant - responsible for leading tutorials and mentoring students	University of Toronto Department of Physics

## Advising Experience

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05/2017 - 08/2017	<b>Béatrice Déry</b> Co-supervised with Prof. Ue-Li Pen	Undergraduate summer project <i>Reconstructing the scattered image of PSR B0834+06</i>
09/2017 - 04/2018	<b>Ariel Amaral</b> Co-supervised with Prof. Ue-Li Pen	1st year PhD project <i>Using ARO and DRAO observations to measure the scattering screen of PSR B1133+16</i>
05/2018 - 08/2018	<b>Fardin Syed</b> Co-supervised with Prof. Ue-Li Pen	Undergraduate summer project <i>Searching for evidence of pulsars resolved by interstellar scattering screens</i>

## Outreach & Service

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04/2017 - Present	<b>Graduate Astronomy Student Association Mental Health Committee Member</b> Duties included organizing mental health workshops for graduate students, and coordinating with faculty and post-docs to facilitate similar workshops tailored towards them.
09/2015 - 11/2017	<b>UofT AstroTours - Co-Director, Personnel Manager</b> AstroTours is a graduate student outreach initiative that includes monthly public lectures and open-house events. Duties included planning and coordinating events, marketing AstroTours, and overseeing the AstroTours team.
07/2017	<b>Uncovering Pulsars from Algonquin Park</b> Public talk at Astronomy on Tap TO, organized by the Dunlap Institute, Toronto, ON.
09/2015 - 09/2016	<b>UofT AstroTours - Personnel Manager</b> Duties included recruiting and training volunteers and managing volunteers during larger AstroTours events.