

Joel Meyers

CONTACT INFORMATION	CITA University of Toronto 60 St. George Street Toronto, ON M5S 3H8, Canada	<i>Phone:</i> (647) 606-8246 <i>E-mail:</i> jmeyers@cita.utoronto.ca <i>Citizenship:</i> U.S. Citizen
RESEARCH INTERESTS	Early Universe Cosmology, Cosmic Microwave Background, Theoretical High Energy Physics	
RESEARCH EXPERIENCE	Canadian Institute for Theoretical Astrophysics (CITA) University of Toronto, 2012 - Present Senior Research Associate, Theoretical Cosmology Weinberg Theory Group and Texas Cosmology Center University of Texas at Austin, 2006 - 2012 Theoretical Cosmology, Dissertation research conducted with Prof. Steven Weinberg.	
COLLABORATIONS	CMB Stage IV <ul style="list-style-type: none">• August 2015 - Present• Among primary contributors of forecasts and content for Neutrinos and Light Relics Simons Observatory <ul style="list-style-type: none">• September 2016 - Present• Member of High-ℓ Science and Lensing working groups	
EDUCATION	The University of Texas at Austin , Austin, Texas, USA Ph.D. in Physics, August 2012 <ul style="list-style-type: none">• Dissertation Topic: <i>Inflation: Connecting Theory to Observation</i>• Advisor: Professor Steven Weinberg University of Wisconsin , Madison, Wisconsin, USA B.S. in Physics and Mathematics, May 2006 <ul style="list-style-type: none">• Thesis Topic: <i>Cosmic Superstrings</i>• Thesis Advisor: Professor Gary Shiu	
HONORS AND AWARDS	<ul style="list-style-type: none">• Beatrice and Vincent Tremaine Fellowship, 2016 - 2017• Texas Cosmology Center Summer Research Fellowship, 2010• A.D. Hutchison Student Endowment Fellowship, 2009 - 2010• Phi Beta Kappa, University of Wisconsin, 2006• Mike Litvinov Memorial Academic Scholarship, 2002 - 2006	

INVITED TALKS

- *Kavli CMB Lensing Workshop*, Stanford University, September 2017
- *CMB-S4 Collaboration Workshop, Harvard-2017*, Harvard University, August 2017
- *Phenomenology 2017 Symposium*, Plenary Talk, University of Pittsburgh, May 2017
- University of California Riverside Seminar, March 2017
- University of Illinois Theory Seminar, February 2017
- University of Texas at Austin Theory Group Seminar, January 2017
- Boston University Theory Seminar, October 2016
- *CMB-S4 / Future Cosmic Surveys*, University of Chicago, September 2016
- *Cosmology with CMB-S4*, University of Chicago, September 2016
- *US Radio/Millimeter/Submillimeter Science Futures II*, Baltimore, Maryland, August 2016
- *Neutrinos and Light Particles in Cosmology*, University of California Berkeley, June 2016
- Lawrence Berkeley National Laboratory Cosmology Lunch, March 2016
- *Cosmology with CMB-S4 Workshop*, Lawrence Berkeley National Laboratory, March 2016
- Johns Hopkins University Theory Seminar, November 2015
- *Cosmology with CMB-S4*, University of Michigan, September 2015
- California Institute of Technology TAPIR Seminar, June 2015
- Perimeter Institute Seminar, May 2015
- *Testing Inflation with Large Scale Structure*, CITA, October 2014
- University of Texas at Austin Theory Group Seminar, May 2014
- Istituto Nazionale di Fisica Nucleare Theory Seminar, April 2014
- St. Mary's University Astrophysics Seminar, February 2014
- University of Nevada, Las Vegas Theory Seminar, December 2013
- University of British Columbia Cosmology Seminar, August 2013
- Kavli Institute for Cosmological Physics Seminar, University of Chicago, May 2013
- University of Nottingham Cosmology Seminar, April 2013
- Kavli Institute for the Physics and Mathematics of the Universe Seminar, November 2012
- CITA Seminar, University of Toronto, July 2012

CONFERENCE
CONTRIBUTIONS

- *COSMO-16*, University of Michigan, August 2016
- *Rencontres de Moriond Cosmology*, March 2016
- *Cosmology on Safari*, January 2015
- *New Challenges for Early Universe Cosmologists*, Lorentz Center, August 2013
- *The Universe as Seen by Planck*, European Space Agency/European Space Research and Technology Centre, April 2013
- *Gravity and Cosmology 2012*, Yukawa Institute for Theoretical Physics, December 2012
- *Critical Tests of Inflation Using Non-Gaussianity*, Max Planck Institute for Astrophysics, November 2012
- *Inflationary Theory and its Confrontation with Data in the Planck Era*, Aspen Center for Physics, February 2012
- *DEUS: Current and Future Challenges of the Dark and Early Universes*, Dark Cosmology Centre, Niels Bohr Institute, August 2011
- *Cosmological Non-Gaussianity: Observations Confront Theory Workshop*, University of Michigan, May 2011
- *Primordial Features and Non-Gaussianities*, Harish-Chandra Research Institute, May 2011
- *Texas Cosmology Network Meeting*, University of Texas at Austin, October 2009

STUDENTS
SUPERVISED

Connor Sheere, Co-supervision with Alex van Engelen and Daan Meerburg, Summer Undergraduate Research Program 2016 and 2017 at CITA

Brayden Mon, Co-supervision with Daan Meerburg and Alex van Engelen, Summer Undergraduate Research Program 2017 at CITA

Matthew Wilson, Co-supervision with Dick Bond, Master's student in University of Toronto Physics Department, January - August 2016

Harrison Winch, Co-supervision with Daan Meerburg and Alex van Engelen, Summer Undergraduate Research Program 2016 at CITA

Vivian Britto, Summer Undergraduate Research Program 2014 at CITA

Derek Inman, Co-supervision with Ue-Li Pen, Ph.D. Student at CITA, September 2013 - August 2014

Shenglin Jing, Co-supervision with Ido Ben-Dayana, Undergraduate Student at CITA, September 2012 - August 2013

TEACHING
EXPERIENCE**Instructor**

- SLAC Summer Institute 2017, August 2017, SLAC
- Scientific Computing - Symbolic Computing, May 2016 and May 2017, CITA
- MCAT Physics, June 2007 - March 2009, Princeton Review, Austin, Texas

Tutor

- General Physics, June 2011 - August 2012, Austin, Texas
- Astronomy, August 2011 - August 2012, Austin, Texas
- MCAT Physics, August 2008 - January 2009, Princeton Review, Austin, Texas
- Calculus, Fall 2007, Austin, Texas

Teaching Assistant

- University of Texas at Austin, Fall 2006 - Spring 2012
- General physics, History of Science, Undergraduate Quantum Mechanics, Graduate Quantum Mechanics, Quantum Field Theory

SERVICE AND
LEADERSHIP

CITA Cosmology Discussion: Co-organizer and frequent contributor, 2012 - present

CITA Blackboard Discussion: Co-organizer and frequent contributor, 2013 - present

Postdoc Hiring Committee: Member, 2013 - present

CITA Jamboree: Co-organizer, 2014 - 2015

Journal Referee:

- Physical Review Letters
- Physical Review D
- Physical Review X
- Journal of Cosmology and Astroparticle Physics

WORKSHOPS
ORGANIZED

Neutrinos and (G)astrophysics in Large-Scale Structure, CITA, December 2016

PUBLICATIONS

Note: All author lists are alphabetical except those with an asterisk (*)

1. (*) J. Meyers, P. D. Meerburg, A. van Engelen and N. Battaglia, “Probing Reionization with Remote Quadrupole Measurements,” To Appear
2. J. Frazer, S. Hotinli, A. H. Jaffe, J. Meyers, L. C. Price and E. R. M. Tarrant, “Predictions After N-field Reheating,” To Appear
3. P. D. Meerburg, J. Meyers and A. van Engelen, “Reconstructing the Primary CMB Dipole,” arXiv:1704.00718 [astro-ph.CO].
4. P. D. Meerburg, J. Meyers, K. M. Smith and A. van Engelen, “Reconstructing CMB Fluctuations and the Mean Reionization Optical Depth,” Phys. Rev. D **95**, no. 12, 123538 (2017) arXiv:1701.06992 [astro-ph.CO].
5. (*) C. Sheere, A. van Engelen, P. D. Meerburg and J. Meyers, “Establishing the origin of CMB B-mode polarization,” Phys. Rev. D **96**, no. 6, 063508 (2017) arXiv:1610.09365 [astro-ph.CO].
6. K. N. Abazajian *et al.* [CMB-S4 Collaboration], “CMB-S4 Science Book, First Edition,” arXiv:1610.02743 [astro-ph.CO].
7. R. de Putter, O. Doré, D. Green and J. Meyers, “Single-Field Inflation and the Local Ansatz: Distinguishability and Consistency,” Phys. Rev. D **95**, no. 6, 063501 (2017) arXiv:1610.00785 [hep-th].
8. D. Green, J. Meyers and A. van Engelen, “CMB Delensing Beyond the B Modes,” arXiv:1609.08143 [astro-ph.CO].
9. J. Meyers, “Cosmic Neutrinos and Other Light Relics,” arXiv:1605.05575 [astro-ph.CO].
10. (*) P. D. Meerburg, J. Meyers, A. van Engelen and Y. Ali-Haïmoud, “CMB B-Mode Non-Gaussianity,” Phys. Rev. D **93**, 123511 (2016) arXiv:1603.02243 [astro-ph.CO].
11. D. Baumann, D. Green, J. Meyers and B. Wallisch, “Phases of New Physics in the CMB,” JCAP **1601**, 007 (2016) arXiv:1508.06342 [astro-ph.CO].
12. (*) P. D. Meerburg, R. Hložek, B. Hadzhiyska and J. Meyers, “Multiwavelength Constraints on the Inflationary Consistency Relation,” Phys. Rev. D **91**, no. 10, 103505 (2015) arXiv:1502.00302 [astro-ph.CO].
13. M. Alvarez *et al.*, “Testing Inflation with Large Scale Structure: Connecting Hopes with Reality,” arXiv:1412.4671 [astro-ph.CO].
14. V. Britto and J. Meyers, “Monthly Modulation in Dark Matter Direct-Detection Experiments,” JCAP **1511**, 006 (2015) arXiv:1409.2858 [astro-ph.CO].
15. J. Meyers and E. R. M. Tarrant, “Perturbative Reheating After Multiple-Field Inflation: The Impact on Primordial Observables,” Phys. Rev. D **89**, no. 6, 063535 (2014) arXiv:1311.3972 [astro-ph.CO].
16. J. Meyers, “Non-Gaussian Correlations Outside the Horizon in Local Thermal Equilibrium,” arXiv:1212.4438 [astro-ph.CO].
17. J. Meyers and N. Sivanandam, “Adiabaticity and the Fate of Non-Gaussianities: The Trispectrum and Beyond,” Phys. Rev. D **84**, 063522 (2011) arXiv:1104.5238 [astro-ph.CO].
18. J. Meyers and N. Sivanandam, “Non-Gaussianities in Multifield Inflation: Superhorizon Evolution, Adiabaticity, and the Fate of f_{nl} ,” Phys. Rev. D **83**, 103517 (2011) arXiv:1011.4934 [astro-ph.CO].
19. W. Fischler and J. Meyers, “Dark Radiation Emerging After Big Bang Nucleosynthesis?,” Phys. Rev. D **83**, 063520 (2011) arXiv:1011.3501 [astro-ph.CO].