

## Jerome Quintin – Curriculum Vitae

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Citizenship: Canadian

Languages: French, English, German (intermediate)

EMPLOYMENT	<b>Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Potsdam, Germany</b> (AEI-Potsdam) Postdoctoral Researcher	Sep 2019-present
EDUCATION	<b>Ph.D. and M.Sc. in Physics, McGill U.</b> Thesis Supervisor: <a href="#">Robert Brandenberger</a> GPA: 4.0/4.0	Sep 2013-Jun 2019
	<b>B.Sc. in Physics and Mathematics, Bishop's U.</b> Research Advisor: <a href="#">Lorne Nelson</a> GPA: 95.74/100 <i>Recipient of the <a href="#">Governor General's Silver Medal</a> (student graduating with the highest grade point average in the university at the undergraduate level)</i>	Sep 2010-Apr 2013
RESEARCH EXPERIENCE	<b>AEI-Potsdam</b> , Postdoctoral Researcher with <a href="#">Jean-Luc Lehnert</a> <b>McGill</b> , Ph.D. Student with Robert Brandenberger <b>ETH-ITS Zurich</b> , Visiting Graduate Research Student <b>McGill</b> , M.Sc. Student with Robert Brandenberger & <a href="#">Yi-Fu Cai</a> <b>Bishop's</b> , Honors Student with Lorne Nelson & <a href="#">Saul Rappaport (MIT)</a> <b>Mont-Megantic Observatory</b> , Visiting Scientist <b>MIT</b> , Visiting Undergraduate Research Student	2019-present 2015-19 Oct-Nov 2015 2013-15 2011-13 Aug 2011-12-13, May 2012 May 2011
SELECTED HONORS AND AWARDS	<a href="#">NSERC</a> Postdoctoral Fellowship <a href="#">FRQNT</a> Postdoctoral Research Scholarship Kavli IPMU Postdoctoral Fellowship, Tokyo (declined) Nordita Postdoctoral Fellowship, Stockholm (declined) <a href="#">Vanier Canada Graduate Scholarship</a> , NSERC Reinhardt C. Fellowship, McGill Walter C. Sumner Memorial Fellowship, McGill NSERC Alexander Graham Bell Graduate Scholarship - CGS D (declined) FRQNT Doctoral Research Scholarship FRQNT Masters Research Scholarship NSERC Alexander Graham Bell Graduate Scholarship - CGS M Lorne Trottier Accelerator Award, McGill NSERC Undergraduate Student Research Award (USRA, 3 times) Captain Melville Greenshields Memorial Scholarship, Bishop's Richard Tomlinson Scholarship, Bishop's	2019-21 2019-21   2016-19 2017 2015-17  2015-16 2014-15 2013-14 2013 2011-13 2011-12 2010-11
PUBLICATIONS	<ol style="list-style-type: none"><li>21. C. Ganguly and <b>J. Quintin</b>, <i>Microphysical manifestations of viscosity and consequences for anisotropies in the very early universe</i>, <a href="#">arXiv:2109.11701 [gr-qc]</a></li><li>20. <b>J. Quintin</b>, H. Bernardo and G. Franzmann, <i>Cosmology at the top of the <math>\alpha'</math> tower</i>, <a href="#">JHEP <b>07</b>, 149 (2021)</a>, <a href="#">arXiv:2105.01083 [hep-th]</a></li><li>19. C. Jonas, J.-L. Lehnert and <b>J. Quintin</b>, <i>Cosmological consequences of a principle of finite amplitudes</i>, <a href="#">PRD <b>103</b>, 103525</a>, <a href="#">arXiv:2102.05550 [hep-th]</a></li><li>18. J.-L. Lehnert and <b>J. Quintin</b>, <i>Quantum circuit complexity of primordial perturbations</i>, <a href="#">PRD <b>103</b>, 063527</a>, <a href="#">arXiv:2012.04911 [hep-th]</a></li></ol>	

17. Y. Sakakihara, D. Yoshida, K. Takahashi and **J. Quintin**, *Theories with limited extrinsic curvature and a nonsingular anisotropic universe*, [PRD \*\*102\*\*, 084004](#), [arXiv:2005.10844 \[gr-qc\]](#)
16. **J. Quintin** and D. Yoshida, *Cuscuton gravity as a classically stable limiting curvature theory*, [JCAP \*\*2002\*\*, 016](#), [arXiv:1911.06040 \[gr-qc\]](#)
15. **J. Quintin**, R. H. Brandenberger, M. Gasperini and G. Veneziano, *Stringy black-hole gas in  $\alpha'$ -corrected dilaton gravity*, [PRD \*\*98\*\*, 103519](#), [arXiv:1809.01658 \[hep-th\]](#)
14. D. Yoshida and **J. Quintin**, *Maximal extensions and singularities in inflationary spacetimes*, [CQG \*\*35\*\*, 155019](#), [arXiv:1803.07085 \[gr-qc\]](#)
13. C. Lin, **J. Quintin** and R. H. Brandenberger, *Massive gravity and the suppression of anisotropies and gravitational waves in a matter-dominated contracting universe*, [JCAP \*\*1801\*\*, 011](#), [arXiv:1711.10472 \[hep-th\]](#)
12. L. Santos, W. Zhao, E. G. M. Ferreira and **J. Quintin**, *Constraining interacting dark energy with CMB and BAO future surveys*, [PRD \*\*96\*\*, 103529](#), [arXiv:1707.06827 \[astro-ph.CO\]](#)
11. D. Yoshida, **J. Quintin**, M. Yamaguchi and R. H. Brandenberger, *Cosmological perturbations and stability of nonsingular cosmologies with limiting curvature*, [PRD \*\*96\*\*, 043502](#), [arXiv:1704.04184 \[hep-th\]](#)
10. Y. B. Li, **J. Quintin**, D. G. Wang and Y. F. Cai, *Matter bounce cosmology with a generalized single field: non-Gaussianity and an extended no-go theorem*, [JCAP \*\*1703\*\*, 031](#), [arXiv:1612.02036 \[hep-th\]](#)
9. B. Kalomeni, L. Nelson, S. Rappaport, M. Molnar, **J. Quintin** and K. Yakut, *Evolution of cataclysmic variables and related binaries containing a white dwarf*, [ApJ \*\*833\*\*, 83](#), [arXiv:1610.03051 \[astro-ph.SR\]](#)
8. **J. Quintin** and R. H. Brandenberger, *Black hole formation in a contracting universe*, [JCAP \*\*1611\*\*, 029](#), [arXiv:1609.02556 \[astro-ph.CO\]](#)
7. **J. Quintin**, Z. Sherkatghanad, Y. F. Cai and R. H. Brandenberger, *Evolution of cosmological perturbations and the production of non-Gaussianities through a nonsingular bounce: Indications for a no-go theorem in single field matter bounce cosmologies*, [PRD \*\*92\*\*, 063532](#), [arXiv:1508.04141 \[hep-th\]](#)
6. Y. F. Cai, E. G. M. Ferreira, B. Hu and **J. Quintin**, *Searching for features of a string-inspired inflationary model with cosmological observations*, [PRD Rapid Communications \*\*92\*\*, 121303](#), [arXiv:1507.05619 \[astro-ph.CO\]](#)
5. S. F. Bramberger, R. H. Brandenberger, P. Jreidini and **J. Quintin**, *Cosmic string loops as the seeds of super-massive black holes*, [JCAP \*\*1506\*\*, 007](#), [arXiv:1503.02317 \[astro-ph.CO\]](#)
4. Y. F. Cai, F. Chen, E. G. M. Ferreira and **J. Quintin**, *New model of axion monodromy inflation and its cosmological implications*, [JCAP \*\*1606\*\*, 027](#), [arXiv:1412.4298 \[hep-th\]](#)
3. E. G. M. Ferreira, **J. Quintin**, A. A. Costa, E. Abdalla and B. Wang, *Evidence for interacting dark energy from BOSS*, [PRD \*\*95\*\*, 043520](#), [arXiv:1412.2777 \[astro-ph.CO\]](#)
2. **J. Quintin**, Y. F. Cai and R. H. Brandenberger, *Matter creation in a nonsingular bouncing cosmology*, [PRD \*\*90\*\*, 063507](#), [arXiv:1406.6049 \[gr-qc\]](#)
1. Y. F. Cai, **J. Quintin**, E. N. Saridakis and E. Wilson-Ewing, *Nonsingular bouncing cosmologies in light of BICEP2*, [JCAP \*\*1407\*\*, 033](#), [arXiv:1404.4364 \[astro-ph.CO\]](#)

INVITED TALKS  
(long-term visits  
of  $\gtrsim 2$  weeks  
denoted by \*\*)

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| 32. <a href="#">McGill U. Theoretical High Energy Journal Club</a>                             | Dec 2021 |
| 31. <a href="#">Perimeter Institute Cosmology Seminar</a>                                      | Nov 2021 |
| 30. <a href="#">U. of New Brunswick Gravity Group Meeting</a>                                  | Nov 2021 |
| 29. <a href="#">Lisbon U. Institute of Astrophysics and Space Science Seminar</a>              | Nov 2021 |
| 28. <a href="#">Copernicus Webinar Series</a>  | Oct 2021 |
| 27. <a href="#">Jagiellonian U. Theoretical Cosmology Group Meeting</a>                        | Jul 2021 |
| 26. <a href="#">Canadian Association of Physicist (CAP) Congress</a>                           | Jun 2021 |
| 25. <a href="#">U. of Science and Technology of China Particle Cosmology Webinar</a>           | Feb 2021 |
| 24. <a href="#">ICTS Workshop - Physics of the Early Universe</a>                              | Sep 2021 |
| 23. <a href="#">Quantum Aspects of Space-Time and Matter (QASTM) Online Talk</a>               | Apr 2020 |
| 22. <a href="#">U. of Cambridge DAMTP Cosmology Journal Club</a>                               | Nov 2019 |
| 21. <a href="#">Autumn Workshop on Gravity and Cosmology at Warsaw U.</a>                      | Nov 2019 |
| 20. <a href="#">Dartmouth College Cosmology Seminar</a>  | Apr 2019 |
| 19. <a href="#">Ohio State U. High Energy Physics Seminar</a>                                  | Oct 2018 |
| 18. <a href="#">**Harvard-ITC Luncheon</a>   | Sep 2018 |
| 17. <a href="#">**Harvard-ITC Prof. Avi Loeb Group Meeting</a>                                 | Sep 2018 |
| 16. <a href="#">Princeton U. New Directions in Cosmology and Gravitational Theory Talk</a>     | Jan 2018 |
| 15. <a href="#">Institut d'Astrophysique de Paris (IAP) GRECO Seminar</a>                      | Sep 2017 |
| 14. <a href="#">Imperial College London 3-PAC Seminar</a>                                      | May 2017 |
| 13. <a href="#">U. of Cambridge DAMTP Cosmology Journal Club</a>                               | May 2017 |
| 12. <a href="#">King's College London Theoretical Particle Physics &amp; Cosmology Seminar</a> | May 2017 |
| 11. <a href="#">Queen Mary U. of London Cosmology and Relativity Seminar</a>                   | May 2017 |
| 10. <a href="#">Portsmouth U. Institute of Cosmology and Gravitation Seminar</a>               | May 2017 |
| 9. <a href="#">Tufts U. Institute of Cosmology Seminar</a>                                     | Apr 2017 |
| 8. <a href="#">U. of Pennsylvania Astrophysics and Cosmology Group Talk</a>                    | Apr 2017 |
| 7. <a href="#">**U. of Tokyo Research Center for the Early Universe Seminar</a>                | Jun 2016 |
| 6. <a href="#">**U. of Science and Technology of China Astronomy Colloquium</a>                | Jun 2016 |
| 5. <a href="#">Fundan U. Cosmology Seminar</a>   | Jun 2016 |
| 4. <a href="#">Tokyo Institute of Technology Cosmology Seminar</a>                             | Jun 2016 |
| 3. <a href="#">U. of Geneva Cosmology and Astroparticle Physics Journal Club</a>               | Oct 2015 |
| 2. <a href="#">**ENS-Lyon Centre de Recherche Astrophysique de Lyon Seminar</a>                | Oct 2015 |
| 1. <a href="#">Bishop's U. Physics Seminar</a>   | Sep 2015 |

<b>CONTRIBUTED TALKS</b>	9. <a href="#">YITP (Kyoto U.) Quantum Cosmology Workshop</a>	Nov 2021
	8. <a href="#">Alternative Gravities and Fundamental Cosmology Conference</a>	Sep 2021
	7. <a href="#">Northeast Cosmology Workshop at McGill U.</a>	Mar 2018
	6. <a href="#">COSMO-17 at Paris U.</a>	Sep 2017
	5. <a href="#">Beyond <math>\Lambda</math>CDM Conference</a>	Jan 2015
	4. <a href="#">Centre for Research in Astrophysics of Qubec (CRAQ) Meeting</a>	May 2013
	3. <a href="#">American Astronomical Society (AAS) Meeting #221</a>	Jan 2013
	2. <a href="#">Canadian Undergraduate Physics Conference (CUPC)</a>	Oct 2012
	1. <a href="#">Centre for Research in Astrophysics of Qubec (CRAQ) Meeting</a>	May 2012
<b>INTERNAL TALKS</b>	• <a href="#">AEI-Potsdam (2019-present): 5 talks</a>	
	• <a href="#">McGill U. Centre for High Energy Physics (2013-2019): 14 talks</a>	
	• <a href="#">McGill Space Institute (2017-2019): 2 talks</a>	
	• <a href="#">Bishop's U. Department of Physics: 3 talks</a>	
<b>WORKSHOPS, SCHOOLS AND ADDITIONAL CONFERENCES ATTENDED</b>	<a href="#">Regular Black Holes in Quantum Gravity and Beyond, Online Workshop</a>	Oct 2021
	<a href="#">First Meeting of the International Society for Quantum Gravity, Online</a>	Oct 2021
	<a href="#">Black Holes Inside and Out, Online Conference</a>	Sep 2021
	<a href="#">Cosmological Frontiers in Fundamental Physics, Online Conference</a>	May 2021
	<a href="#">Gravitational-Wave Primordial Cosmology, Online Workshop</a>	May 2021
	<a href="#">The Quantum &amp; The Gravity, Online Workshop</a>	April 2021
	<a href="#">Current Challenges in Gravitational Physics, Online Workshop</a>	April 2021
	<a href="#">Quantum Gravity, Higher Derivatives and Nonlocality, Online Workshop</a>	Mar 2021
	<a href="#">10th Central European Relativity Seminar @ AEI</a>	Feb 2020
	<a href="#">Advanced Winter School on Theoretical Cosmology @ Nordita</a>	Jan 2020
	<a href="#">Workshop on Geometry and Duality @ AEI</a>	Dec 2019
	<a href="#">Symposium on History for Physics: Quantum Gravity @ AEI</a>	Nov 2019
	<a href="#">XI International Symposium: Quantum Theory and Symmetries @ UdeM</a>	Jul 2019
	<a href="#">XIX International Congress on Mathematical Physics @ Montréal</a>	Jul 2018
	<a href="#">Northeast Cosmology Workshop @ McGill</a>	Mar 2018
	<a href="#">Gravity in the Early Universe @ Princeton-PCTS</a>	Jan 2018
	<a href="#">McGill-Dartmouth Cosmology Day @ McGill</a>	May 2017
	<a href="#">100 Years, General Theory of Relativity, Einstein Symposium @ ETH Zurich</a>	Nov 2015
	<a href="#">Workshop on AdS/CFT and the Resolution of Cosmological Singularities @ CRM</a>	Jul 2015
	<a href="#">Summer School on Cosmology @ ICTP</a>	Aug 2014
	<a href="#">Theory Canada 8 Conference @ Bishop's</a>	May 2013
	<a href="#">AAS Meeting @ Boston</a>	May 2011
<b>OUTREACH TALKS</b>	Public talk (in French), “Astronomie en Fût” ( <a href="#">Astronomy on Tap</a> ), <i>L'univers a-t-il eu un commencement? (Did the universe have a beginning?)</i> @ Montréal	Apr 2017
	Speaker and guide for tours at the <a href="#">Bishop's University Observatory</a>	2011-13
<b>PRESS COVERAGE</b>	<a href="#">Semeando buracos negros supermassivos (Sowing supermassive black holes)</a> by Rua Josephine in Cientistas Feministas (in Portuguese)	
	<a href="#">Evolution of cataclysmic variables and related binaries containing accreting white dwarfs</a> in Phys.org	
	<a href="#">The ‘Dark’ Universe May Be Full of Strange Interactions</a> by Charles Q. Choi in NOVA	

<b>PROFESSIONAL ACTIVITIES AND COMMUNITY</b>	Referee for PRD, PRL, JCAP, PLB, CQG, EPJ C, MPLA, LHEP, Physica Scripta, and Ap&SS	
	Member of the SOC for the <a href="#">Nordita Winter School on Theoretical Cosmology</a>	Jan 2020
	Reviewed a grant proposal for the National Science Center of Poland	Dec 2018
	<a href="#">McGill HEP-th Journal Club organizer</a>	Sep 2017-Dec 18
	Helped with the organization of the <a href="#">Northeast Cosmology Workshop @ McGill</a>	Mar 2018
	Helped with the organization of the <a href="#">McGill-Dartmouth Cosmology Day @ McGill</a>	May 2017
	Helped with the organization of the <a href="#">Theory Canada 8 Conference @ Bishop's</a>	May 2013
<b>SUPERVISION AND TEACHING</b>	AEI	
	• Co-supervised PhD student <a href="#">Caroline Jonas</a>	Oct 2019-Feb 2021
	McGill U.	
	• Substitute Lecturer <i>Very Early Universe</i>	Sep 2017
	• Mentor for the <a href="#">MGAPS</a> mentorship program	Sep-Dec 2016
	• Teaching Assistant <i>General Relativity and Cosmology, Modern Physics and Relativity, Electromagnetic Waves, Introductory Physics – Mechanics, Honours Classical Mechanics 2, Honours Classical Mechanics 1, Topics in Classical Mechanics, Modern Physics and Relativity</i>	Sep 2013-Apr 2017
	Bishop's U.	
	• Tutor at the Bishop's University Physics Help Centre	Sep 2012-Apr 13
	• Teaching Assistant <i>Introduction to Mechanics, Differential Equations, Thermal and Fluid Physics</i>	Jan 2012-Apr 2013
	Private mathematics and physics tutor (high school and college level)	2009-11, 2015
<b>PROGRAMMING</b>	• Languages: Python (including NumPy, SciPy, Matplotlib, etc.), Fortran, C/C++, Java, UNIX shell scripts, Perl, Mathematica, Maple	
	• Codes: <a href="#">CAMB</a> , <a href="#">MultiModeCode</a> , <a href="#">PyTransport</a> , <a href="#">CosmicPy</a> , <a href="#">Pyflation</a> , <a href="#">MathGR</a> , <a href="#">xPand</a> , <a href="#">MESA</a>	