

## GARCIA QUINTERO, CRISTHIAN JOSE ANGEL

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### EDUCATION

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2012 -2017	UNIVERSIDAD AUTONOMA DE SINALOA, Culiacan, Sinaloa, Mexico <b>B. Sc.</b> in physics, advisor: Dr. Juan Antonio Nieto Garcia.
2018 - 2020	UNIVERSITY OF TEXAS AT DALLAS, Richardson, Texas <b>M. Sc.</b> in physics, advisor: Dr. Mustapha Ishak-Boushaki
2018 -	UNIVERSITY OF TEXAS AT DALLAS, Richardson, Texas <b>Ph.D.</b> candidate in physics, advisor: Dr. Mustapha Ishak-Boushaki

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### AWARDS

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2015	<b>Mexican Academy of Science (AMC) fellowship</b> , Mexican Academy of Science, Mexico.
2016	<b>UT-Dallas Mexican summer research program award</b> , joint program from the U.S. embassy in Mexico – ANUIES – UT-Dallas.
2018-2023	<b>CONACYT Graduate Fellowship</b> , CONACYT (the National Science Foundation of Mexico), Mexico.

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### RESEARCH INTERESTS

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July – August 2014	UNIVERSITY OF GUANAJUATO, IFUG (Instituto de Fisica de la Universidad de Guanajuato), Leon, Guanajuato, Mexico. <b>PROJECT:</b> Time-varying cosmological term in anisotropic (Dr. Jose Socorro Garcia Diaz)
July – August 2015	UNIVERSITY OF GUADALAJARA, CUCEI (Centro Universitario de Ciencias Exactas e Ingenieria), Guadalajara, Jalisco, Mexico. <b>PROJECT:</b> Theoretical study of gravitational waves (Dr. Claudia Moreno Gonzalez)

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## PUBLICATIONS

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- 1 **Cristhian Garcia-Quintero**, Mustapha Ishak, Logan Fox, Jasson Dossett  
*Testing deviations from GR at cosmological scales including dynamical dark energy, massive neutrinos, functional or binned parametrizations, and spatial curvature.*  
**Phys.Rev.D** 100 (2019) 10. arXiv: 1908.00290 (DOI: 10.1103/PhysRevD.100.103530)  
**GitHub Repository of Software Package:** <https://github.com/mishakb/ISiTGR>
  
- 2 **Cristhian Garcia-Quintero**, Mustapha Ishak, Logan Fox, Weikang Lin  
*Cosmological discordances. III. More on measure properties, large-scale-structure constraints, the Hubble constant and Planck data.*  
**Phys.Rev.D** 100 (2019) 12. arXiv: 1910.01608 (DOI: 10.1103/PhysRevD.100.123538)
  
- 3 **Cristhian Garcia-Quintero**, Mustapha Ishak, Orion Ning  
*Current constraints on deviations from General Relativity using binning in redshift and scale*  
**JCAP** 12 (2020) 018. arXiv: 2010.12519 (DOI: 10.1088/1475-7516/2020/12/018)
  
- 4 **Cristhian Garcia-Quintero**, Mustapha Ishak  
*Singling out modified gravity parameters and data sets reveals a dichotomy between Planck and lensing*  
**Mon.Not.Roy.Astron.Soc.** 506 (2021) 2, 1704-1714. arXiv: 2009.01189  
(DOI: 10.1093/mnras/stab1773)
  
- 5 DESI Collaboration. R. Ruggeri, C. Blake, J. DeRose, **C. Garcia-Quintero**, et al.  
*A data compression and optimal galaxy weights scheme for Dark Energy Instrument and weak lensing datasets*  
**Under review for publication at Monthly Notices of the Royal Astronomical Society.**  
arXiv: 2208.01031
  
- 6 DESI Collaboration. B. Abareschi et al.  
*Overview of the Instrumentation for the Dark Energy Spectroscopic Instrument*  
**Accepted for publication in The Astronomical Journal**  
arXiv: 2205.10939
  
- 7 J. A. Nieto, E. A. Leon, **C. Garcia-Quintero**  
*Cosmological-static metric correspondence and Kruskal type solutions from transformations*  
**Rev.Mex.Fis.** 68 (2022) 4, 040701 (DOI: 10.31349/RevMexFis.68.040701)
  
- 8 **C. Garcia-Quintero**, A. Ortiz, J. A. Nieto  
*New reflections on higher dimensional linearized gravity.*  
Vol. 65 No. 5 Sept-Oct (2019): **Revista Mexicana de Física.** arXiv: 1904.07019  
(DOI: 10.31349/RevMexFis.65.536)

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## TALKS

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December 9 <sup>th</sup> , 2022	<b>Large scale modeling for lensing x clustering (joint talk)</b> Dark Energy Spectroscopic Instrument (DESI) Collaboration meeting – Cancun, Mexico.
December 7 <sup>th</sup> , 2022	<b>BAO HOD systematics project: Summary and plans (joint talk)</b> Dark Energy Spectroscopic Instrument (DESI) Collaboration meeting – Cancun, Mexico.
June 24 <sup>th</sup> , 2022	<b>DESI lensing likelihood pipelines (joint talk)</b> Dark Energy Spectroscopic Instrument (DESI) Collaboration meeting – San Francisco, United States.
December 08 <sup>th</sup> , 2021	<b>Lensing Mock Challenge (joint talk)</b> Dark Energy Spectroscopic Instrument (DESI) Collaboration meeting – Virtual
November 14 <sup>th</sup> , 2020	<b>Current constraints on deviations from General Relativity binning in redshift and scale</b> 2020 Joint Fall Meeting of the Texas Section of the APS, Texas Section of the AAPT – Virtual
November 18 <sup>th</sup> , 2019	<b>Modified Gravity (MG) demos using the Core Cosmolgy Library</b> LSST-DESC collaboration sprint week meeting – Texas A&M University
October 19 <sup>th</sup> , 2018	<b>Constraints on modified gravity parameters from Planck and data sets</b> 2018 Joint Fall Meeting of the Texas Section of the APS, Texas Section of the AAPT, and Zone 13 of the Society of Students – University of Houston
October 26 <sup>th</sup> , 2016	<b>Cosmological Parameters Constraints Using Observational</b> XXIII Week of Science and Technology – FCFM UAS
October 7 <sup>th</sup> , 2015	<b>Gravitational Waves: Theory and Experiment</b> Institutional Seminary – FCFM UAS
March 4 <sup>th</sup> , 2015	<b>Anisotropic Cosmology and the Cosmological Term</b> Institutional Seminary – FCFM UAS

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## SPECIALIZED SCHOOLS/MEETINGS

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August 4 <sup>th</sup> to 9 <sup>th</sup> , 2014	IX FUNDAMENTAL PHYSICS SCHOOL, Sinaloa, Mexico - FCFM UAS
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June 29 <sup>th</sup> to July 3 <sup>th</sup> , 2015	FIRST SUMMER SCHOOL OF MATHEMATICS, Guadalajara, Mexico - CUCEI
November 7 <sup>th</sup> to 11 <sup>th</sup> , 2016	I SCHOOL OF GENERAL RELATIVITY AND GRAVITATIONAL WAVES (ERGOG), Guadalajara, Mexico – CUCEI
May 8 <sup>th</sup> to 12 <sup>th</sup> , 2017	II MEXICAN ASTRO-COSMO-STATISTICS SCHOOL (MACSS), León, Guanajuato, México

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## MEMBERSHIPS AND ASSOCIATIONS

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Member of *Dark Energy Spectroscopic Survey (DESI)* collaboration. Since 2020.

Member of *Large Synoptic Survey Telescope – Dark Energy Science Collaboration (LSST-DESC)*. Since 2018.

Member of *Astronomy Association of Sinaloa (ASA)*. Participate and develop activities from 2012 to 2018.

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## TEACHING EXPERIENCE

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<b>Research Mentor (Summer 2021)</b>	Assisted Dr. Mustapha Ishak-Boushaki to mentor an undergraduate student (Lael Verace) in using a project of cosmological parameter constraints
<b>Research Mentor (Summer 2020)</b>	Assisted Dr. Mustapha Ishak-Boushaki to mentor an undergraduate student (Orion Ning) in using a project of cosmological parameter constraints and modified gravity using binning methods
<b>Teaching Assistant (Summer 2021)</b>	The University of Texas at Dallas. College Physics II (PHYS 1302). Supervisor: Dr. Anton Malko
<b>Teaching Assistant (Fall 2018)</b>	The University of Texas at Dallas. Electromagnetism and Waves (PHYS 2326). Supervisor: Dr. Russel Stoneback

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## SERVICE

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- Co-lead of the DESI C<sup>3</sup> topical group (from January 2023-present)
- Member of Early Career Scientist (ECS) committee. Since September 2022.
- Event Assistant, Building Astronomy in Texas Symposium 2019, January 26-27, 2019.
- Local organizer of the outreach astronomy event “*noche de las estrellas*” from 2012 to 2017, Culiacan, Sinaloa, Mexico.

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**OTHERS**

CONACYT Support grant for being assistant of SNI level 3 researcher (Dr. Juan Antonio Nieto Garcia), during 2014-2017, Mexico.