



Sistema Integral de Información Académica
Coordinación de Planeación, Evaluación y
Simplificación de la Gestión Institucional
Reporte individual



ALEJANDRO AVILES CERVANTES

Datos Generales

Nombre: ALEJANDRO AVILES CERVANTES

Máximo nivel de estudios: LICENCIATURA

Antigüedad académica en la UNAM: 5 años

Nombramientos

Vigente: INVESTIGADOR TITULAR A TC No Definitivo
Instituto de Ciencias Físicas
Desde 01-12-2023

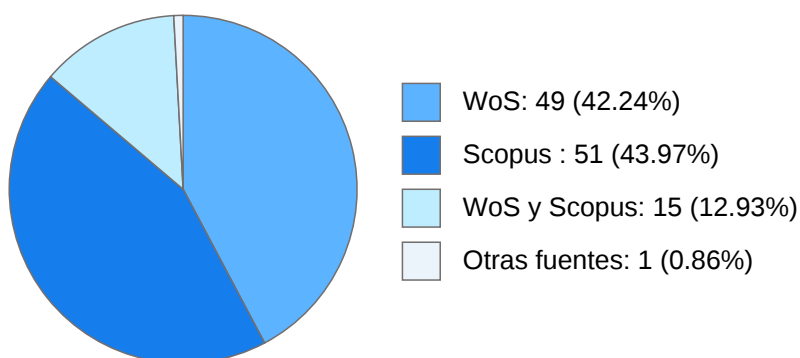
Estímulos, programas, premios y reconocimientos

SNI IIVIGENTE
SNI I 2014 - 2024
EQUIVALENCIA PRIDE B 2024 - 2024

ALEJANDRO AVILES CERVANTES

DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Testing gravity with the full-shape galaxy power spectrum: First constraints on scale-dependent modified gravity	ALEJANDRO AVILES CERVANTES	PHYSICAL REVIEW D	2025
2	A comparison between ShapeFit compression and Full-Modelling method with PyBird for DESI 2024 and beyond	ALEJANDRO AVILES CERVANTES AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL MARIANA VARGAS MAGAÑA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
3	Full Modeling and parameter compression methods in configuration space for DESI 2024 and beyond	MARIANA VARGAS MAGAÑA SEBASTIEN MICKAEL MARC FROMENTEAU ALEJANDRO AVILES CERVANTES et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
4	Comparing Compressed and Full-Modeling analyses with FOLPS: implications for DESI 2024 and beyond	ALEJANDRO AVILES CERVANTES SEBASTIEN MICKAEL MARC FROMENTEAU MARIANA VARGAS MAGAÑA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025

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5	A comparison of effective field theory models of redshift space galaxy power spectra for DESI 2024 and future surveys	ALEJANDRO AVILES CERVANTES SEBASTIEN MICKAEL MARC FROMENTEAU MARIANA VARGAS MAGAÑA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
6	An analysis of parameter compression and Full-Modeling techniques with Velocileptors for DESI 2024 and beyond	ALEJANDRO AVILES CERVANTES AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL MARIANA VARGAS MAGAÑA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
7	Unveiling neutrino masses: Insights from a robust BOSS and eBOSS data analysis and prospects for DESI and beyond	ALEJANDRO AVILES CERVANTES Hernan E. Noriega	PHYSICAL REVIEW D	2025
8	DESI 2024 III: baryon acoustic oscillations from galaxies and quasars	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
9	DESI 2024 VI: cosmological constraints from the measurements of baryon acoustic oscillations	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2025
10	Galaxy bias in the era of LSST: perturbative bias expansions	ALEJANDRO AVILES CERVANTES Nicola A. Hadzhiyska B. et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2024
11	fkPT: constraining scale-dependent modified gravity with the full-shape galaxy power spectrum	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA Rodríguez-Meza M.A. et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2024
12	Full shape cosmology analysis from BOSS in configuration space using neural network acceleration	SEBASTIEN MICKAEL MARC FROMENTEAU MARIANA VARGAS MAGAÑA ALEJANDRO AVILES CERVANTES et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2024
13	Modeling the 3-point correlation function of projected scalar fields on the sphere: The LSST Dark Energy Science collaboration	ALEJANDRO AVILES CERVANTES JUAN CARLOS HIDALGO CUELLAR Arvizu A. et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2024

ALEJANDRO AVILES CERVANTES

14	Galaxy three-point correlation function in modified gravity	ALEJANDRO AVILES CERVANTES Niz G.	PHYSICAL REVIEW D	2023
15	Impact of a rapid diluted energy density on the halo mass function	ALEJANDRO AVILES CERVANTES AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL V Gomez-Navarro	PHYSICAL REVIEW D	2023
16	Exploring the potential of the ammine complexes $M(NH_3)(n)(+)$ ($M = Zr, Re$) to activate NH_3	ALEJANDRO AVILES CERVANTES FERNANDO COLMENARES LANDIN	NEW JOURNAL OF CHEMISTRY	2022
17	Overview of the Instrumentation for the Dark Energy Spectroscopic Instrument	ALEJANDRO AVILES CERVANTES AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL SEBASTIEN MICKAEL MARC FROMENTEAU et al.	ASTRONOMICAL JOURNAL	2022
18	Fast computation of non-linear power spectrum in cosmologies with massive neutrinos	ALEJANDRO AVILES CERVANTES SEBASTIEN MICKAEL MARC FROMENTEAU MARIANA VARGAS MAGAÑA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2022
19	Impact of cosmological signatures in two-point statistics beyond the linear regime	ALEJANDRO AVILES CERVANTES AXEL RICARDO DE LA MACORRA PETTERSSON MORIEL V Gomez-Navarro et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2021
20	Modeling the marked spectrum of matter and biased tracers in real- And redshift-space	ALEJANDRO AVILES CERVANTES Philcox O.H.E. Massara E.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2021
21	Redshift space power spectrum beyond Einstein-de Sitter kernels	ALEJANDRO AVILES CERVANTES Valogiannis G. Rodriguez-Meza M. et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2021
22	Effects of dark energy anisotropic stress on the matter power spectrum	JORGE LUIS CERVANTES COTA ULISES NUCAMENDI GOMEZ ALEJANDRO AVILES CERVANTES et al.	PHYSICS OF THE DARK UNIVERSE	2020
23	An accurate perturbative approach to redshift space clustering of biased tracers in modified gravity	ALEJANDRO AVILES CERVANTES Valogiannis G. Bean R.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2020

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24	Marked correlation functions in perturbation theory	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA Koyama K. et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2020
25	Low-Energy Pathways Found for the NH ₃ Activation and H-2 Elimination by the Werner-Type Complexes M(NH ₃)(4)(+) (M=Fe, Ru and Os).	ALEJANDRO AVILES CERVANTES ANA ELIZABETH TORRES HERNANDEZ FERNANDO COLMENARES LANDIN	Chemistryselect	2020
26	Screenings in modified gravity: a perturbative approach	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA Mota D.F.	ASTRONOMY & ASTROPHYSICS	2019
27	Renormalization of Lagrangian bias via spectral parameters	ALEJANDRO AVILES CERVANTES	PHYSICAL REVIEW D	2018
28	Explaining the singlet complexes detected for the reaction Zr(3F) + CH ₃ CH ₃ through a non-spin flip scheme	ALEJANDRO AVILES CERVANTES ANA ELIZABETH TORRES HERNANDEZ FERNANDO COLMENARES LANDIN et al.	JOURNAL OF MOLECULAR MODELING	2018
29	Nonlinear evolution of initially biased tracers in modified gravity	ALEJANDRO AVILES CERVANTES JOSUE DE SANTIAGO SANABRIA JORGE LUIS CERVANTES COTA et al.	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	2018
30	Cosmography with the hubble rate: The eis approach	ALEJANDRO AVILES CERVANTES Klapp, J. Luongo, O.	Communications in Computer and Information Science	2017
31	Lagrangian perturbation theory for modified gravity	ALEJANDRO AVILES CERVANTES JORGE LUIS CERVANTES COTA	PHYSICAL REVIEW D	2017
32	Computational simulation of the hemodynamic behavior of a blood vessel network	ALEJANDRO AVILES CERVANTES Weinstein N. Gitler I. et al.	Communications in Computer and Information Science	2017
33	Lymphoma and pregnancy	ALEJANDRO AVILES CERVANTES NATIVIDAD NERI MUÑOZ Nambo M.-J.	JPN J CLIN ONCOL	2017
34	Dark matter dispersion tensor in perturbation theory	ALEJANDRO AVILES CERVANTES	PHYSICAL REVIEW D	2016

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35	KRAS mutation as the biomarker of response to chemotherapy and EGFR-TKIs in patients with advanced non-small cell lung cancer: Clues for its potential use in second-line therapy decision making	ALEJANDRO AVILES CERVANTES OSCAR GERARDO ARRIETA RODRIGUEZ Campos-Parra A.D. et al.	AMERICAN JOURNAL OF CLINICAL ONCOLOGY-CANCER CLINICAL TRIALS	2015
36	Emerging the dark sector from thermodynamics of cosmological systems with constant pressure	ALEJANDRO AVILES CERVANTES Orlando Luongo Cruz, Norman et al.	GENERAL RELATIVITY AND GRAVITATION	2015
37	Interferon and low doses of methotrexate versus interferon and retinoids in the treatment of refractory/relapsed cutaneous t-cell lymphoma	ALEJANDRO AVILES CERVANTES NATIVIDAD NERI MUÑOZ LUIS OCTAVIO SILVA PEREYRA et al.	Hematology	2015
38	Precision cosmology with Padé rational approximations: Theoretical predictions versus observational limits	ALEJANDRO AVILES CERVANTES Capozziello S. Luongo O. et al.	PHYSICAL REVIEW D	2014
39	Probing two approaches to unified dark dynamics	ALEJANDRO AVILES CERVANTES JOSUE DE SANTIAGO SANABRIA Cervantes-Cota J.L.	AIP Conference Proceedings	2013
40	Updated constraints on $f(R)$ gravity from cosmography	ALEJANDRO AVILES CERVANTES Orlando Luongo Capozziello, Salvatore et al.	PHYSICAL REVIEW D	2013
41	Cosmographic reconstruction of $f(T)$ cosmology	ALEJANDRO AVILES CERVANTES Orlando Luongo Capozziello, Salvatore et al.	PHYSICAL REVIEW D	2013
42	Multiwavelength observations of V479 Andromedae: A close compact binary with an identity crisis	D. Gonzalez Buitrago GAGIK TOVMASIAN SERGUEI JARIKOV et al.	ASTRONOMY & ASTROPHYSICS	2013
43	Randomized clinical trial of zoledronic acid in multiple myeloma patients undergoing high-dose chemotherapy and stem-cell transplantation	ALEJANDRO AVILES CERVANTES NATIVIDAD NERI MUÑOZ MARIA DE JESUS NAMBO LUCIO et al.	CURRENT ONCOLOGY	2013
44	Author's reply: Chemotherapy during first trimester of pregnancy	ALEJANDRO AVILES CERVANTES NATIVIDAD NERI MUÑOZ MARIA DE JESUS NAMBO LUCIO	INTERNATIONAL JOURNAL OF CANCER	2013
45	Extending the generalized Chaplygin gas model by using geometrothermodynamics	ALEJANDRO AVILES CERVANTES Aztlan Bastarrachea Almodovar Lorena Campuzano et al.	PHYSICAL REVIEW D	2012
46	Cosmography and constraints on the equation of state of the Universe in various parametrizations	ALEJANDRO AVILES CERVANTES Orlando Luongo HERNANDO QUEVEDO CUBILLOS et al.	PHYSICAL REVIEW D	2012
47	Dark matter from dark energy-baryonic matter couplings	ALEJANDRO AVILES CERVANTES Cervantes-Cota, Jorge L.	PHYSICAL REVIEW D	2011

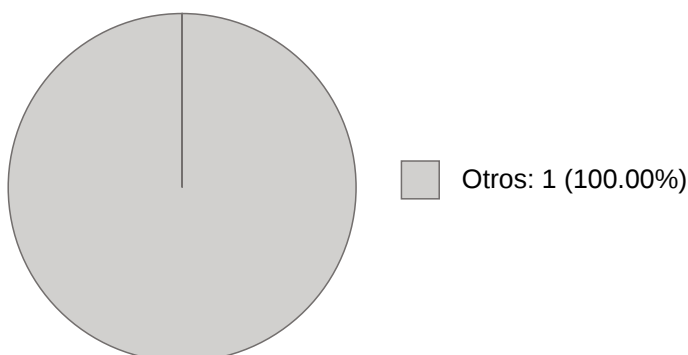
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48	Dark degeneracy and interacting cosmic components	ALEJANDRO AVILES CERVANTES Cervantes-Cota, Jorge L.	PHYSICAL REVIEW D	2011
49	Holographic dark matter and dark energy with second order invariants	ALEJANDRO AVILES CERVANTES Orlando Luongo HERNANDO QUEVEDO CUBILLOS et al.	PHYSICAL REVIEW D	2011
50	Erratum: Dark degeneracy and interacting cosmic components (Physical Review D – Particles, Fields, Gravitation and Cosmology (2011) 84 (083515))	ALEJANDRO AVILES CERVANTES Cervantes-Cota J.L.	PHYSICAL REVIEW D	2011
51	SDSS J123813.73 – 033933.0: A cataclysmic variable evolved beyond the period minimum	ALEJANDRO AVILES CERVANTES S. Zharikov GAGIK TOVMASIAN et al.	ASTROPHYSICAL JOURNAL	2010
52	Cyclic brightening in the short-period WZ Sge-type cataclysmic variable SDSS J080434.20+510349.2	S. V. Zharikov GAGIK TOVMASIAN RAUL MICHEL MURILLO et al.	ASTRONOMY & ASTROPHYSICS	2008

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN

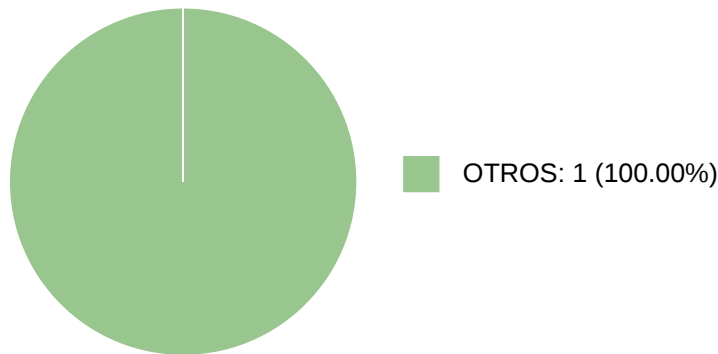


#	Título	Autores	Alcance	Año	ISBN
1	Constraints from cosmography in various parametrizations	ALEJANDRO AVILES CERVANTES HERNANDO QUEVEDO CUBILLOS Gruber C. et al.	Conferenc e Paper	2015	9789814612142

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PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos

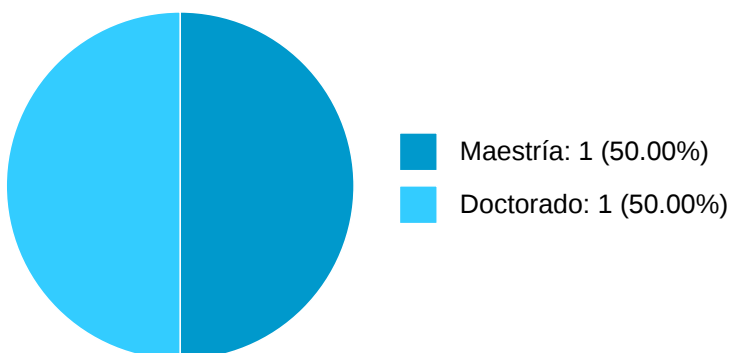


#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Estadísticas de n puntos en la era de multipruebas cosmológicas	ALEJANDRO AVILES CERVANTES	Recursos CONAHCyT	13-06-2024	30-11-2026

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PARTICIPACIÓN EN TESIS

Histórico de Colaboraciones en Tesis

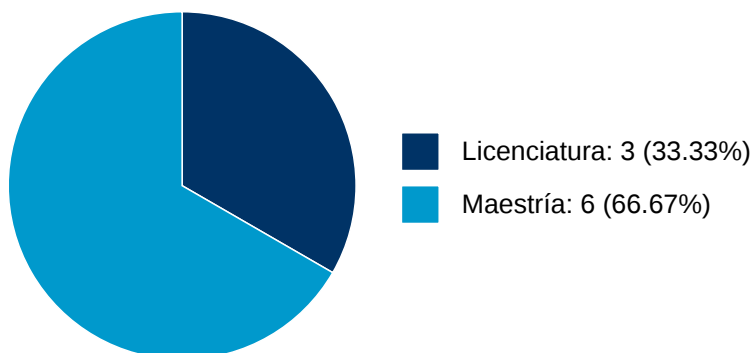


#	Título del documento	Tipo de Tesis	Sinodales	Autores	Entidad	Año
1	Observación de neutrinos masivos a través de lentes gravitacionales débiles	Tesis de Maestría	ALEJANDRO AVILES CERVANTES,	Morales Moreno, Rafael,		2023
2	Impact of dark energy on the large-scale structure of the universe	Tesis de Doctorado	ALEJANDRO AVILES CERVANTES,	AXEL RICARDO DE LA MACORRA PETERSSON MORIEL, Gómez Navarro, Dante Virgilio,	Instituto de Física,	2022

ALEJANDRO AVILES CERVANTES

DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	TEMAS SELECTOS TEORÍA DE PERTURBACIONES NO LINEALES PARA EL ESTUDIO DE LA FORMACIÓN DE ESTRUCTURA COSMOLÓGICA A	Instituto de Física	1	2024-2
2	Maestría	COSMOLOGÍA (F. DE ALTAS ENERGÍAS, F. NUCLEAR, GRAVITACIÓN Y F. MATEMÁTICA)	Instituto de Física	4	2024-1
3	Maestría	SEMINARIO DE INVESTIGACIÓN II	Instituto de Física	1	2023-2
4	Maestría	SEMINARIO DE INVESTIGACIÓN I	Instituto de Física	1	2023-1
5	Maestría	COSMOLOGÍA (F. DE ALTAS ENERGÍAS, F. NUCLEAR, GRAVITACIÓN Y F. MATEMÁTICA)	Instituto de Física	5	2022-1
6	Maestría	TEMAS SELECTOS TEORÍA DE PERTURBACIONES NO LINEALES PARA EL ESTUDIO DE LA FORMACIÓN DE ESTRUCTURA COSMOLÓGICA A	Instituto de Física	3	2021-1
7	Licenciatura	RELATIVIDAD	Facultad de Ciencias	7	2011-1
8	Licenciatura	RELATIVIDAD	Facultad de Ciencias	15	2010-2
9	Licenciatura	RELATIVIDAD	Facultad de Ciencias	14	2010-1



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PATENTES

No se encuentran registros en la base de datos de patentes asociados a:

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FUENTES DE INFORMACIÓN

Internos

#	Información	Fuente	Sistema	Periodo
1	Grupos ordinarios y resumen de historias académicas	DGAE	SIAE	2008-2025
2	Nombramientos, datos generales, estímulos, premios y reconocimientos	DGAPA	RUPA	2008-2025
3	Producción Académica	CH	Humanindex	2008-2021
4	Producción Académica	CIC	SCIC	2000-2017
5	Proyectos	DGPO	SISEPRO	2018-2022
6	Tesis	DGB	TESIUNAM	2008-2025
7	Tutorías en Posgrado	CGEP	SIIPosgrado	2008-2021

Externos

#	Información	Fuente	Sistema	Periodo
8	Documentos Indexados	Elsevier	Scopus	2008-2025
9	Documentos Indexados	Thomson Reuters	WoS	2008-2025
10	Obras con registro ISBN	INDAUTOR	Agencia ISBN	2008-2025
11	Patentes	IMPI	SIGA	2008-2024