



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



FREDERIC SYLVAIN MASSET

Datos Generales

Nombre: FREDERIC SYLVAIN MASSET

Máximo nivel de estudios: DOCTORADO

Antigüedad académica en la UNAM: 14 años

Nombramientos

Vigente: INVESTIGADOR TITULAR C TC Definitivo
Instituto de Ciencias Físicas
Desde 01-09-2017

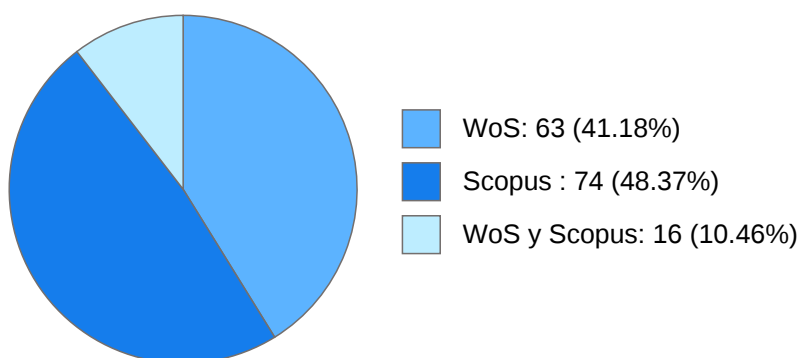
Estímulos, programas, premios y reconocimientos

SNI III 2022 - VIGENTE
SNI II 2015 - 2021
PRIDE D 2016 - 2024
PRIDE C 2011 - 2016
PASPA Estancias Sabáticas 2021 - 2022

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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Dust rings trap protoplanets on eccentric orbits and get consumed by them	FREDERIC SYLVAIN MASSET David A. Velasco-Romero Alessandro Morbidelli et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2024
2	A Thermodynamic Criterion for the Formation of Circumplanetary Disks	FREDERIC SYLVAIN MASSET Leonardo Krapp Kaitlin M. Kratter et al.	ASTROPHYSICAL JOURNAL	2024
3	Pebble-driven migration of low-mass planets in the 2D regime of pebble accretion	FREDERIC SYLVAIN MASSET O. Chrenko R. O. Chametla et al.	ASTRONOMY & ASTROPHYSICS	2024
4	A Close Pair of Orbiters Embedded in a Gaseous Disk: The Repulsive Effect	FRANCISCO JAVIER SANCHEZ SALCEDO FREDERIC SYLVAIN MASSET SONIA CORNEJO PATIÑO	ASTROPHYSICAL JOURNAL	2024
5	Evolution of the eccentricity and inclination of low-mass planets subjected to thermal forces: a numerical study	FREDERIC SYLVAIN MASSET SEBASTIEN MICKAEL MARC FROMENTEAU Cornejo S. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2023

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6	On the interaction of pebble accreting embryos with the gaseous disc: importance of thermal forces	SONIA CORNEJO PATIÑO FREDERIC SYLVAIN MASSET FRANCISCO JAVIER SANCHEZ SALCEDO	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2023
7	A low-mass star with a large-mass planet	FREDERIC SYLVAIN MASSET	Science	2023
8	How the planetary eccentricity influences the pebble isolation mass	FREDERIC SYLVAIN MASSET Raul O. Chametla Clement Baruteau et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2022
9	Eccentricity driving of pebble accreting low-mass planets	FREDERIC SYLVAIN MASSET David A. Velasco Romero Romain Teyssier	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2022
10	Numerical study of coorbital thermal torques on cold or hot satellites	FREDERIC SYLVAIN MASSET Raul O. Chametla	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2021
11	The importance of thermal torques on the migration of planets growing by pebble accretion	FREDERIC SYLVAIN MASSET Guilera O.M. Miller Bertolami M.M. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2021
12	Dynamical friction with radiative feedback - II. High-resolution study of the subsonic regime	FREDERIC SYLVAIN MASSET David A. Velasco Romero	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2020
13	Numerical study of dynamical friction with thermal effects - I. Comparison to linear theory	FREDERIC SYLVAIN MASSET Velasco Romero D.A.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2019
14	Impact of thermal effects on the evolution of eccentricity and inclination of low-mass planets	SEBASTIEN MICKAEL MARC FROMENTEAU FREDERIC SYLVAIN MASSET	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2019

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15	Thermal torque effects on the migration of growing low-mass planets	FREDERIC SYLVAIN MASSET Guilerá O.M. Cuello N. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2019
16	Planet-disc interactions with discontinuous Galerkin methods using GPUs	FREDERIC SYLVAIN MASSET Romero D.A.V. Veiga M.H. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2018
17	Dynamical friction on hot bodies in gaseous, opaque media, and application to embedded protoplanets	FREDERIC SYLVAIN MASSET Velasco Romero D.A. Eklund H.	4TH EUROPEAN SYMPOSIUM ON FIRE SAFETY SCIENCE	2018
18	Dynamical friction on hot bodies in opaque, gaseous media	FREDERIC SYLVAIN MASSET Romero, D.A.V.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2017
19	Planetary Torque in 3D Isentropic Disks	FREDERIC SYLVAIN MASSET JUAN DAVID VELASCO CASTILLO Fung, Jeffrey et al.	ASTRONOMICAL JOURNAL	2017
20	Evolution of eccentricity and inclination of hot protoplanets embedded in radiative discs	FREDERIC SYLVAIN MASSET Eklund, Henrik	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2017
21	Gap formation by inclined massive planets in locally isothermal three-dimensional discs	FRANCISCO JAVIER SANCHEZ SALCEDO FREDERIC SYLVAIN MASSET Chametla, Raul O. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2017
22	Orbital Advection with Magnetohydrodynamics and Vector Potential	FREDERIC SYLVAIN MASSET Lyra, Wladimir McNally, Colin P. et al.	ASTRONOMICAL JOURNAL	2017
23	Improved torque formula for low- and intermediate-mass planetary migration	FREDERIC SYLVAIN MASSET Alejandra Jimenez, Maria	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2017

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24	ECCENTRICITY AND INCLINATION EVOLUTION OF HOT PROTOPLANETARY EMBRYOS IN PROTOPLANETARY DISCS	FREDERIC SYLVAIN MASSET Eklund, H. Romero, D. A. Velasco	REVISTA MEXICANA DE ASTRONOMIA Y ASTROFISICA, SERIE DE CONFERENCIAS	2017
25	Coorbital thermal torques on low-mass protoplanets	FREDERIC SYLVAIN MASSET	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2017
26	HORSESHOE DRAG IN THREE-DIMENSIONAL GLOBALLY ISOTHERMAL DISKS	FREDERIC SYLVAIN MASSET Benitez-Llambay, P.	ASTROPHYSICAL JOURNAL	2016
27	Circumplanetary disc or circumplanetary envelope?	FREDERIC SYLVAIN MASSET Szulagyi, J. Lega, E. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2016
28	FARGO3D: A NEW GPU-ORIENTED MHD CODE	FREDERIC SYLVAIN MASSET Benitez-Llambay, Pablo	ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES	2016
29	LONG-TERM AND LARGE-SCALE HYDRODYNAMICAL SIMULATIONS OF MIGRATING PLANETS	FREDERIC SYLVAIN MASSET Benitez-Llambay, Pablo Ramos, Ximena S. et al.	ASTROPHYSICAL JOURNAL	2016
30	Planet Formation Imager (PFI): Science vision and key requirements	FREDERIC SYLVAIN MASSET Kraus, Stefan Monnier, John D. et al.	OPTICS, PHOTONICS, AND DIGITAL TECHNOLOGIES FOR IMAGING APPLICATIONS VIII	2016
31	Planet heating prevents inward migration of planetary cores	FREDERIC SYLVAIN MASSET GLORIA SUZANNE KOENIGSBERGER HOROWITZ BenitezLlambay, Pablo et al.	Nature	2015
32	The Explosion Mechanism of Core-Collapse Supernovae: Progress in Supernova Theory and Experiments	FREDERIC SYLVAIN MASSET Foglizzo, Thierry Kazeroni, Remi et al.	PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF AUSTRALIA	2015
33	Accretion of jupiter-mass planets in the limit of vanishing viscosity	FREDERIC SYLVAIN MASSET Szulagyi, J. Morbidelli, A. et al.	ASTROPHYSICAL JOURNAL	2014

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34	Recent developments in planet migration theory	FREDERIC SYLVAIN MASSET Baruteau C.	Lecture Notes in Physics	2013
35	Shallow Water Analogue of the Standing Accretion Shock Instability: Experimental Demonstration and a Two-Dimensional Model	FREDERIC SYLVAIN MASSET Foglizzo, Thierry Guilet, Jerome et al.	PHYSICAL REVIEW LETTERS	2012
36	No snowplough mechanism during the rapid hardening of supermassive black hole binaries	FREDERIC SYLVAIN MASSET Baruteau, Clement Ramirez-Ruiz, Enrico	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2012
37	Low-mass planets in nearly inviscid disks: numerical treatment	FREDERIC SYLVAIN MASSET Kley, W. Mueller, T. W. A. et al.	ASTRONOMY & ASTROPHYSICS	2012
38	Analysis of the evolution of traps for protoplanets considering disk photoevaporation	FREDERIC SYLVAIN MASSET ANTIGONA SEGURA PERALTA RAMIRO ALVAREZ MERAZ	REVISTA MEXICANA DE ASTRONOMIA Y ASTROFISICA, SERIE DE CONFERENCIAS	2011
39	The mass-period distribution of close-in exoplanets	FREDERIC SYLVAIN MASSET Benitez-Llambay, P. Beauge, C.	ASTRONOMY & ASTROPHYSICS	2011
40	Corotation torques experienced by planets embedded in weakly magnetized turbulent discs	FREDERIC SYLVAIN MASSET Baruteau, C. Fromang, S. et al.	ASTRONOMY & ASTROPHYSICS	2011
41	On type-I migration near opacity transitions. A generalized Lindblad torque formula for planetary population synthesis	FREDERIC SYLVAIN MASSET	CELESTIAL MECHANICS & DYNAMICAL ASTRONOMY	2011
42	Meridional circulation in turbulent protoplanetary disks	FREDERIC SYLVAIN MASSET Fromang, S. Lyra, W.	ASTRONOMY & ASTROPHYSICS	2011
43	A shallow water analogue of asymmetric core-collapse, and neutron star kick/spin	FREDERIC SYLVAIN MASSET Foglizzo T. Guilet J. et al.	Iau Symposium Proceedings Series	2011
44	Saturated torque formula for planetary migration in viscous disks with thermal diffusion: Recipe for protoplanet population synthesis	FREDERIC SYLVAIN MASSET Casoli J.	ASTROPHYSICAL JOURNAL	2010
45	The dynamical role of the circumplanetary disc in planetary migration	FREDERIC SYLVAIN MASSET Crida, A. Baruteau, C. et al.	ASTRONOMY & ASTROPHYSICS	2009
46	ON THE HORSESHOE DRAG OF A LOW-MASS PLANET. I. MIGRATION IN ISOTHERMAL DISKS	FREDERIC SYLVAIN MASSET Casoli, J.	ASTROPHYSICAL JOURNAL	2009

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47	ON THE HORSESHOE DRAG OF A LOW-MASS PLANET. II. MIGRATION IN ADIABATIC DISKS	FREDERIC SYLVAIN MASSET Casoli, J.	ASTROPHYSICAL JOURNAL	2009
48	LONG RANGE OUTWARD MIGRATION OF GIANT PLANETS, WITH APPLICATION TO FOMALHAUT b	FREDERIC SYLVAIN MASSET Crida, Aurelien Morbidelli, Alessandro	ASTROPHYSICAL JOURNAL LETTERS	2009
49	Type I planetary migration in a self-gravitating disk	FREDERIC SYLVAIN MASSET Baruteau C.	ASTROPHYSICAL JOURNAL	2008
50	Building giant-planet cores at a planet trap	FREDERIC SYLVAIN MASSET Morbidelli, A. Crida, A. et al.	ASTRONOMY & ASTROPHYSICS	2008
51	On the corotation torque in a radiatively inefficient disk	FREDERIC SYLVAIN MASSET Baruteau, C.	ASTROPHYSICAL JOURNAL	2008
52	Planet-disk interactions	FREDERIC SYLVAIN MASSET	Eas Publications Series	2008
53	Simulating planet migration in globally evolving disks	FREDERIC SYLVAIN MASSET Crida A. Morbidelli A.	ASTRONOMY & ASTROPHYSICS	2007
54	Type i planetary migration in a self-gravitating disk	FREDERIC SYLVAIN MASSET Baruteau C.	Iau Symposium Proceedings Series	2007
55	On type i planetary migration in adiabatic disks	FREDERIC SYLVAIN MASSET Baruteau C.	Iau Symposium Proceedings Series	2007
56	Planetary migration in gaseous protoplanetary disks	FREDERIC SYLVAIN MASSET	Iau Symposium Proceedings Series	2007
57	Visualization of astrophysical simulations using IDL Object Graphics	FREDERIC SYLVAIN MASSET Pomarède D. Audit E. et al.	Computer Graphics, Imaging And Visualisation: New Advances, Cgiv 2007	2007
58	On the width and shape of gaps in protoplanetary disks	FREDERIC SYLVAIN MASSET Crida A. Morbidelli A.	Icarus	2006
59	Disk surface density transitions as protoplanet traps	FREDERIC SYLVAIN MASSET Morbidelli A. Crida A. et al.	ASTROPHYSICAL JOURNAL	2006
60	A comparative study of disc-planet interaction	FREDERIC SYLVAIN MASSET De Val-Borro M. Edgar R.G. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2006
61	On the migration of protogiant solid cores	FREDERIC SYLVAIN MASSET D'Angelo G. Kley W.	ASTROPHYSICAL JOURNAL	2006

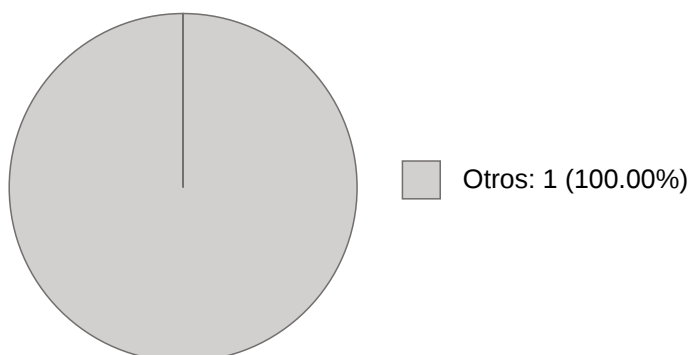
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62	A top-down scenario for the formation of massive Tidal dwarf Galaxies	FREDERIC SYLVAIN MASSET Duc P.-A. Bournaud F.	ASTRONOMY & ASTROPHYSICS	2004
63	On the saturation of corotation resonances: A numerical study	FREDERIC SYLVAIN MASSET Ogilvie G.I.	ASTROPHYSICAL JOURNAL	2004
64	On the spiral structure of NGC 2915 and dark matter	FREDERIC SYLVAIN MASSET Bureau M.	ASTROPHYSICAL JOURNAL	2003
65	Runaway migration and the formation of hot Jupiters	FREDERIC SYLVAIN MASSET Papaloizou J.C.B.	ASTROPHYSICAL JOURNAL	2003
66	The large extent of dark matter haloes probed by the formation of tidal dwarf galaxies	FREDERIC SYLVAIN MASSET Bournaud F. Duc P.-A.	ASTRONOMY & ASTROPHYSICS	2003
67	The co-orbital corotation torque in a viscous disk: Numerical simulations	FREDERIC SYLVAIN MASSET	ASTRONOMY & ASTROPHYSICS	2002
68	Orbital eccentricity growth through disc-companion tidal interaction	FREDERIC SYLVAIN MASSET Papaloizou J.C.B. Nelson R.P.	ASTRONOMY & ASTROPHYSICS	2001
69	On the co-orbital corotation torque in a viscous disk and its impact on planetary migration	FREDERIC SYLVAIN MASSET	ASTROPHYSICAL JOURNAL	2001
70	Reversing type II migration: Resonance trapping of a lighter giant protoplanet	FREDERIC SYLVAIN MASSET Snellgrove M.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2001
71	The migration and growth of protoplanets in protostellar discs	FREDERIC SYLVAIN MASSET Nelson R.P. Papaloizou J.C.B. et al.	MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY	2000
72	FARGO: A fast eulerian transport algorithm for differentially rotating disks	FREDERIC SYLVAIN MASSET	ASTRON ASTROPHYS SUP	2000
73	Non-linear generation of warps by spiral waves in galactic disks	FREDERIC SYLVAIN MASSET Tagger M.	ASTRONOMY & ASTROPHYSICS	1997
74	Non-linear coupling of spiral waves in disk galaxies: A numerical study	FREDERIC SYLVAIN MASSET Tagger M.	ASTRONOMY & ASTROPHYSICS	1997
75	Propagation of warps in moderately thick disks	FREDERIC SYLVAIN MASSET Tagger M.	ASTRONOMY & ASTROPHYSICS	1996

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN

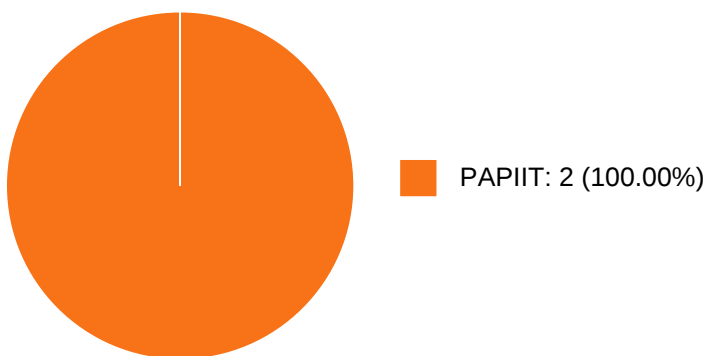


#	Título	Autores	Alcance	Año	ISBN
1	Planet-Disk Interaction on the GPU: The FARGO3D code	FREDERIC SYLVAIN MASSET Pablo Benítez-Llambay NV Pogorelov et al.	Proceedin gs Paper	2015	9781583818800

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PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos



#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Protoplanetas en discos: la tercera dimensión	FREDERIC SYLVAIN MASSET	Recursos PAPIIT	01-01-2016	31-12-2018
2	Discos protoplanetarios con vientos MHD	FREDERIC SYLVAIN MASSET	Recursos PAPIIT	01-01-2023	31-12-2025



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PARTICIPACIÓN EN TESIS

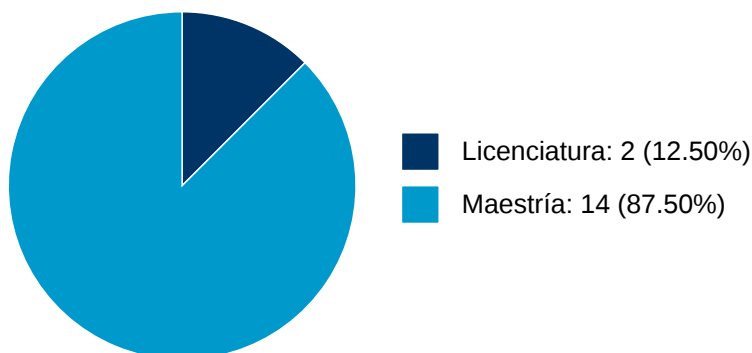
No se encuentran registros en la base de datos de TESIUNAM asociados a:

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DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Maestría	DINÁMICA DE GASES EN ASTROFÍSICA DEL CAMPO DE CONOCIMIENTO TEORÍA, OBSERVACIONAL	Instituto de Astronomía	2	2024-2
2	Licenciatura	TALLER INVEST.CIENCIAS ESPACIAL.II	Facultad de Ciencias	4	2023-2
3	Licenciatura	TALLER INVEST.CIENCIAS ESPACIAL.I	Facultad de Ciencias	4	2023-1
4	Maestría	PROBLEMAS CONTEMPORÁNEOS DE DINÁMICA DE GASES EN ASTROFÍSICA DEL CAMPO DE CONOCIMIENTO TEORICA	Instituto de Astronomía	2	2021-2
5	Maestría	DINÁMICA Y ESTRUCTURA DE GALAXIAS	Instituto de Astronomía	8	2021-1
6	Maestría	DINÁMICA Y ESTRUCTURA DE GALAXIAS	Instituto de Astronomía	4	2020-1
7	Maestría	SEMINARIO DE GRADUACIÓN	Instituto de Astronomía	1	2019-2
8	Maestría	SEMINARIO DE INVESTIGACIÓN II DE LOS CAMPOS DE CONOCIMIENTO TEOR,OBSV,CPAR	Instituto de Astronomía	1	2019-1
9	Maestría	MECÁNICA CLÁSICA	Instituto de Ciencias Físicas	4	2019-1
10	Maestría	SEMINARIO DE INVESTIGACIÓN I DE LOS CAMPOS DE CONOCIMIENTO TEOR,OBSV,CPAR	Instituto de Astronomía	1	2018-2
11	Maestría	MECANICA CLASICA	Instituto de Ciencias Físicas	1	2016-2
12	Maestría	MECANICA CLASICA	Instituto de Ciencias Físicas	2	2013-2



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13	Maestría	MECANICA CLASICA	Instituto de Ciencias Físicas	4	2012-2
14	Maestría	TEMAS SELECTOS	Instituto de Ciencias Físicas	1	2012-2
15	Maestría	TEMAS SELECTOS	Instituto de Ciencias Físicas	2	2012-1
16	Maestría	MECANICA CLASICA	Instituto de Ciencias Físicas	4	2011-2



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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