



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



GUSTAVO CARLOS MARTINEZ MEKLER

Datos Generales

Nombre: GUSTAVO CARLOS MARTINEZ MEKLER

Máximo nivel de estudios: DOCTORADO

Antigüedad académica en la UNAM: 45 años

Nombramientos

Vigente: INVESTIGADOR TITULAR C TC Definitivo
Instituto de Ciencias Físicas
Desde 01-01-2008 (fecha inicial de registros en el SIIA)

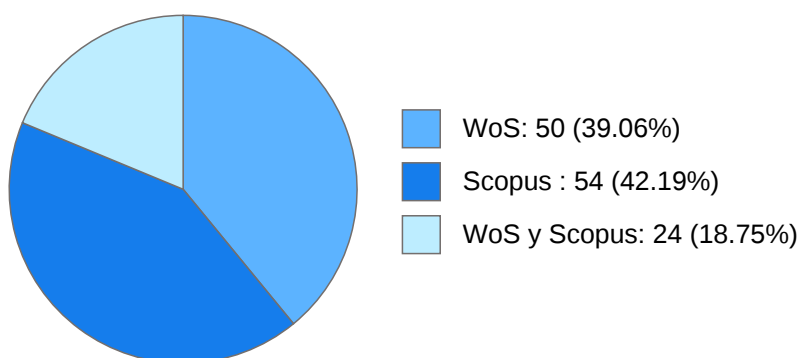
Estímulos, programas, premios y reconocimientos

SNI III - VIGENTE
PRIDE D - 2024
PASPA Estancias Sabáticas 2012 - 2013

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DOCUMENTOS EN REVISTAS

Histórico de Documentos



#	Título	Autores	Revista	Año
1	Fourier phase index for extracting signatures of determinism and nonlinear features in time series	WADY ALEXANDER RIOS HERRERA GLORIA VILACLARA FATJO GUSTAVO CARLOS MARTINEZ MEKLER et al.	Chaos	2024
2	Nonlinear comparative analysis of Greenland and Antarctica ice cores data	ALBERTO ISAAC AGUILAR HERNANDEZ GUSTAVO CARLOS MARTINEZ MEKLER Rojo-Garibaldi B.	Chaos	2024
3	Reviewing mathematical models of sperm signaling networks	MAXIMINO ALDANA GONZALEZ GUSTAVO CARLOS MARTINEZ MEKLER ALBERTO DARSZON ISRAEL et al.	MOLECULAR REPRODUCTION AND DEVELOPMENT	2024
4	Opportune warning of COVID-19 in a Mexican health care worker cohort: Discrete beta distribution entropy of smartwatch physiological records	Galileo Escobedo Markus F. Mueller JOSE DAMIAN CARRILLO RUIZ et al.	BIOMEDICAL SIGNAL PROCESSING AND CONTROL	2023
5	High Incidence Rate of SARS-CoV-2 Infection in Health Care Workers at a Dedicated COVID-19 Hospital: Experiences of the Pandemic from a Large Mexican Hospital	JOSE DAMIAN CARRILLO RUIZ RENE MARQUEZ FRANCO EIRA VALERIA BARRON PALMA et al.	Healthcare	2022

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6	On Fourier phases and their relevance for nonlinear time series analysis	MARIA ASUNCION DEL CARMELO CORSI CABRERA GUSTAVO CARLOS MARTINEZ MEKLER WADY ALEXANDER RIOS HERRERA et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2022
7	Discrete Dynamic Model of the Mammalian Sperm Acrosome Reaction: The Influence of Acrosomal pH and Physiological Heterogeneity	ANDRES ALDANA GONZALEZ GUSTAVO CARLOS MARTINEZ MEKLER ALBERTO DARSZON ISRAEL et al.	FRONTIERS IN PHYSIOLOGY	2021
8	Mathematical model reveals that heterogeneity in the number of ion transporters regulates the fraction of mouse sperm capacitation	ANDRES ALDANA GONZALEZ ALBERTO DARSZON ISRAEL GUSTAVO CARLOS MARTINEZ MEKLER et al.	PLOS ONE	2021
9	Modular analysis of the control of flagellar Ca ²⁺ -spike trains produced by CatSper and CaV channels in sea urchin sperm	ALBERTO DARSZON ISRAEL ADAN OSWALDO GUERRERO CARDENAS TAKUYA NISHIGAKI SHIMIZU et al.	PLOS COMPUTATIONAL BIOLOGY	2020
10	Arrow of time across five centuries of classical music	GUSTAVO CARLOS MARTINEZ MEKLER Alfredo Gonzalez-Espinoza Lucas Lacasa	Physical Review Research	2020
11	PRIMER initiative: PRomoting interdisciplinary methodologies in education and research	GUSTAVO CARLOS MARTINEZ MEKLER Díaz-Nafria J.M. Díez-Gutiérrez E. et al.	CEUR Workshop Proceedings	2019
12	Rank ordered beta distributions of nonlinear map symbolic dynamics families with a first-order transition between dynamical regimes	ADONIS GERMINAL COCHO GIL GUSTAVO CARLOS MARTINEZ MEKLER Alvarez-Martinez R.	Chaos	2018
13	Multiple scaling behaviour and nonlinear traits in music scores	HERNAN LARRALDE RIDAURA GUSTAVO CARLOS MARTINEZ MEKLER González-Espinoza A. et al.	Royal Society Open Science	2017
14	Network model predicts that CatSper is the main Ca ²⁺ channel in the regulation of sea urchin sperm motility	Jesus Espinal Enriquez ALBERTO DARSZON ISRAEL MA. DEL CARMEN BELTRAN NUÑEZ et al.	SCIENTIFIC REPORTS	2017
15	On the dynamics of Liesegang-type pattern formation in a gaseous system	GUSTAVO CARLOS MARTINEZ MEKLER Ramirez-Alvarez, Elizeth Montoya, Fernando et al.	SCIENTIFIC REPORTS	2016
16	Irregular Liesegang-type patterns in gas phase revisited. II. Statistical correlation analysis	GUSTAVO CARLOS MARTINEZ MEKLER Torres-Guzman, Jose C. Mueller, Markus F.	JOURNAL OF CHEMICAL PHYSICS	2016
17	Irregular Liesegang-type patterns in gas phase revisited. I. Experimental setup, data processing, and test of the spacing law	GUSTAVO CARLOS MARTINEZ MEKLER Torres-Guzman, Jose C. Buhse, Thomas et al.	JOURNAL OF CHEMICAL PHYSICS	2016

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18	Birth and death master equation for the evolution of complex networks	ROBERTO CARLOS ALVAREZ MARTINEZ ADONIS GERMINAL COCHO GIL ROSALIO RODRIGUEZ ZEPEDA et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2014
19	In Silico determination of the effect of multi-target drugs on calcium dynamics signaling network underlying sea urchin spermatozoa motility	Jesus Espinal Enriquez ALBERTO DARSZON ISRAEL ADAN OSWALDO GUERRERO CARDENAS et al.	PLOS ONE	2014
20	Niflumic acid disrupts marine spermatozoan chemotaxis without impairing the spatiotemporal detection of chemoattractant gradients	ADAN OSWALDO GUERRERO CARDENAS Jesus Espinal CHRISTOPHER DAVID WOOD et al.	JOURNAL OF CELL SCIENCE	2013
21	Order-disorder transition in conflicting dynamics leading to rank-frequency generalized beta distributions	ROBERTO CARLOS ALVAREZ MARTINEZ GUSTAVO CARLOS MARTINEZ MEKLER ADONIS GERMINAL COCHO GIL	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2011
22	How sperm find the egg	ALBERTO DARSZON ISRAEL ALFONSO ELEAZAR GUERRERO TAPIA MAXIMINO ALDANA GONZALEZ et al.	FEBS JOURNAL	2011
23	Discrete Dynamics Model for the Speract-Activated Ca ²⁺ Signaling Network Relevant to Sperm Motility	Jesus Espinal MAXIMINO ALDANA GONZALEZ ADAN OSWALDO GUERRERO CARDENAS et al.	PLOS ONE	2011
24	Boolean threshold networks: Virtues and limitations for biological modeling	MAXIMINO ALDANA GONZALEZ GUSTAVO CARLOS MARTINEZ MEKLER Zañudo J.G.T.	Intelligent Systems Reference Library	2011
25	Diatom-inferred palaeoenvironmental changes of a Pliocene lake disturbed by volcanic activity	GLORIA VILA CLARA FATJO GUSTAVO CARLOS MARTINEZ MEKLER ESTELA CUNA PEREZ et al.	JOURNAL OF PALEOLIMNOLOGY	2010
26	Universality of Rank-Ordering Distributions in the Arts and Sciences	GUSTAVO CARLOS MARTINEZ MEKLER ROBERTO CARLOS ALVAREZ MARTINEZ LUIS MANUEL BELTRAN DEL RIO CABALLERO et al.	PLOS ONE	2009
27	A Primitive RNA Transition Scenario Without Cytosine and with Peptides Interacting with RNA: Implications for the Origin of the Genetic Code	LUIS JOSE DELAYE ARREDONDO ARTURO CARLOS II BECERRA BRACHO GUSTAVO CARLOS MARTINEZ MEKLER et al.	ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES	2009
28	Occurrence and robustness of current reversals in overdamped deterministic ratchets under symmetric forcing	R. Salgado Garcia GUSTAVO CARLOS MARTINEZ MEKLER MAXIMINO ALDANA GONZALEZ	PHYSICAL REVIEW E	2008

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29	Analytical approach to the time-dependent probability density function in tilted periodic potentials	R. Salgado Garcia FRANCOIS ALAIN LEYVRAZ WALTZ GUSTAVO CARLOS MARTINEZ MEKLER	PHYSICAL REVIEW E	2008
30	Power spectrum crossover in sediments of a paleolake disturbed by volcanism	GUSTAVO CARLOS MARTINEZ MEKLER GLORIA VILACLARA FATJO Ugalde E.	EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS	2007
31	Deterministic ratchets, circle maps, and current reversals	MAXIMINO ALDANA GONZALEZ GUSTAVO CARLOS MARTINEZ MEKLER Salgado-García R.	PHYSICAL REVIEW LETTERS	2006
32	Scaling and extended scaling in sediment registers of a paleolake perturbed by volcanic activity	GUSTAVO CARLOS MARTINEZ MEKLER GLORIA VILACLARA FATJO Ugalde E.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2006
33	Synchronization phenomena for a pair of locally coupled chaotic electrochemical oscillators: A survey	GUSTAVO CARLOS MARTINEZ MEKLER Rivera M. Parmananda P.	Chaos	2006
34	Role of a spatial distribution of IP3 receptors in the Ca ²⁺ dynamics of the Xenopus embryo at the mid-blastula transition stage	GUSTAVO CARLOS MARTINEZ MEKLER Díaz J. Pastor N.	DEVELOPMENTAL DYNAMICS	2005
35	Interaction of the IP3-Ca ²⁺ and MAPK signaling systems in the Xenopus blastomere: A possible frequency encoding mechanism for the control of the Xbra gene expression	GUSTAVO CARLOS MARTINEZ MEKLER Díaz J.	BULLETIN OF MATHEMATICAL BIOLOGY	2005
36	Parameter space reduction criteria to search for synchronization domains in coupled discrete systems	GUSTAVO CARLOS MARTINEZ MEKLER Escalona J. Govindan T.E. et al.	PHYSICAL REVIEW E	2004
37	Translocation properties of primitive molecular machines and their relevance to the structure of the genetic code	MAXIMINO ALDANA GONZALEZ ADONIS GERMINAL COCHO GIL HERNAN LARRALDE RIDAURA et al.	JOURNAL OF THEORETICAL BIOLOGY	2003
38	Replication ratchets: Polymer transport enhanced by complementarity	ADONIS GERMINAL COCHO GIL ARTURO ALVAREZ CRUZ GUSTAVO CARLOS MARTINEZ MEKLER et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2003
39	Interaction of the IP3-Ca ²⁺ and the FGF-MAPK signaling pathways in the Xenopus laevis embryo: A qualitative approach to the mesodermal induction problem	GUSTAVO CARLOS MARTINEZ MEKLER Díaz J. Baier G. et al.	BIOPHYSICAL CHEMISTRY	2002

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40	Physica D: Nonlinear Phenomena - Editorials	HERNAN LARRALDE RIDAURA GUSTAVO CARLOS MARTINEZ MEKLER RAUL MAURICIO RECHTMAN SCHRENZEL	PHYSICA D-NONLINEAR PHENOMENA	2002
41	Transport properties of the diluted Lorentz slab	HERNAN LARRALDE RIDAURA FRANCOIS ALAIN LEYVRAZ WALTZ GUSTAVO CARLOS MARTINEZ MEKLER et al.	PHYSICAL REVIEW E	2001
42	Synchronization and cluster periodic solutions in globally coupled maps	GUSTAVO CARLOS MARTINEZ MEKLER Gelover-Santiago A.L. Lima R.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	2000
43	Synchronization in globally coupled maps	GUSTAVO CARLOS MARTINEZ MEKLER Gelover-Santiago A.L. Lima R.	INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS	2000
44	Statistical characterization of random electrostatic potentials	MAXIMINO ALDANA GONZALEZ HERNAN LARRALDE RIDAURA GUSTAVO CARLOS MARTINEZ MEKLER	PHYS REV E	2000
45	Primitive molecular machine scenario for the origin of the three base codon composition	GUSTAVO CARLOS MARTINEZ MEKLER MAXIMINO ALDANA GONZALEZ FEDERICO JESUS CAZAREZ BUSH et al.	ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES	1999
46	Primordial synthesis machines and the origin of the genetic code	MAXIMINO ALDANA GONZALEZ FEDERICO JESUS CAZAREZ BUSH ADONIS GERMINAL COCHO GIL et al.	PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS	1998
47	Transmission and scattering of a Lorentz gas on a slab	HERNAN LARRALDE RIDAURA FRANCOIS ALAIN LEYVRAZ WALTZ GUSTAVO CARLOS MARTINEZ MEKLER et al.	PHYS REV E	1998
48	Coupled trivial maps	GUSTAVO CARLOS MARTINEZ MEKLER Bunimovich L.A. Livi R. et al.	Chaos	1992
49	Asymmetric solubility loops and anomalous geometry at the lower critical point in a model micellar solution.	ALBERTO ROBLEDO NIETO GUSTAVO CARLOS MARTINEZ MEKLER CARMEN JOSEFA LUCIANA VAREA Y GILABERT	EPL	1991
50	On a coupled map lattice formulation of the evolution of genetic sequences	ADONIS GERMINAL COCHO GIL GUSTAVO CARLOS MARTINEZ MEKLER	PHYSICA D-NONLINEAR PHENOMENA	1991

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51	Uncommon source of corrections to scaling for micellar solution critical behavior	GUSTAVO CARLOS MARTINEZ MEKLER ALBERTO ROBLEDO NIETO Al-Noaimi G.F.	PHYSICAL REVIEW A	1990
52	Periodic orbits and long transients in coupled map lattices	GUSTAVO CARLOS MARTINEZ MEKLER Livi R. Ruffo S.	PHYSICA D-NONLINEAR PHENOMENA	1990
53	Basin-structure invariance of circle maps with bistable dynamics	GUSTAVO CARLOS MARTINEZ MEKLER Mondragn R. Pérez R.	PHYSICAL REVIEW A	1986
54	Systematic blobbing procedure for the calculation of universal polymer properties	GUSTAVO CARLOS MARTINEZ MEKLER Al-Noaimi G.F. Velasco R.M.	JOURNAL OF CHEMICAL PHYSICS	1983
55	DIFFUSION OF A POLYMER IN A RANDOM MEDIUM.	GUSTAVO CARLOS MARTINEZ MEKLER Moore M.A.	J Phys (paris) Lett	1981
56	DYNAMICAL SCALING EXPONENT z FOR A SINGLE POLYMER CHAIN BY RENORMALIZATION ALONG THE CHAIN.	GUSTAVO CARLOS MARTINEZ MEKLER Al-Noaimi G.F. Wilson C.A.	J Phys (paris) Lett	1978

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LIBROS Y CAPITULOS CON ISBN

Obras con registro ISBN

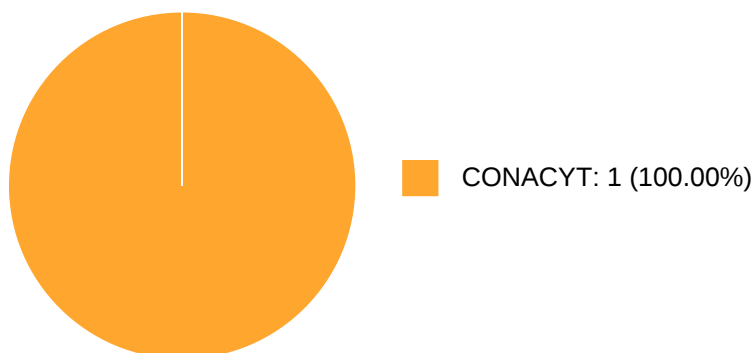


#	Título	Autores	Alcance	Año	ISBN
1	Encuentros con la complejidad	JORGE ANDRES FLORES VALDES GUSTAVO CARLOS MARTINEZ MEKLER	Libro Completo	2011	9786070302787
2	Robustez y Evolución en Redes Genéticas	MAXIMINO ALDANA GONZALEZ JORGE ANDRES FLORES VALDES GUSTAVO CARLOS MARTINEZ MEKLER	Capítulo de un Libro	2011	9786070302787

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PARTICIPACIÓN EN PROYECTOS

Histórico de participación en proyectos



#	Nombre	Participantes	Fuente	Fecha inicio	Fecha fin
1	Motilidad y Quimiotaxis en Espermatozoides: Un Estudio desde la Biología de Sistemas.	GUSTAVO CARLOS MARTINEZ MEKLER	Recursos CONACYT	28-11-2016	28-05-2020



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PARTICIPACIÓN EN TESIS

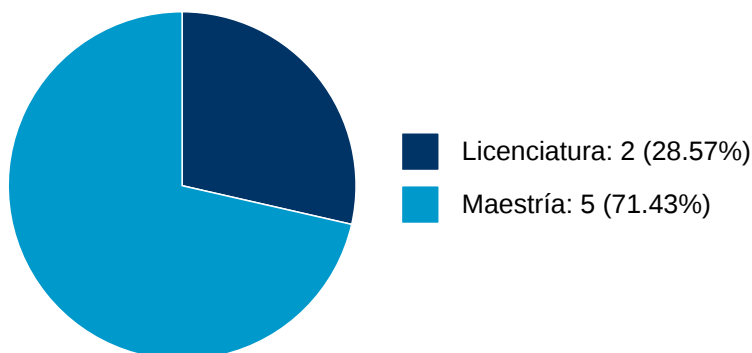
No se encuentran registros en la base de datos de TESIUNAM asociados a:

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DOCENCIA IMPARTIDA

Histórico de docencia



#	Nivel titulación	Asignatura	Entidad	Alumnos	Semestre
1	Licenciatura	INTRODUCC. A LOS SISTEMAS COMPLEJOS	Facultad de Ciencias	11	2023-1
2	Maestría	TEMAS SELECTOS MODELACIÓN DE PROCESOS BIOLÓGICOS DESDE LA FÍSICA: UN ENFOQUE DE SISTEMAS COMPLEJOS	Centro de Nanociencias y Nanotecnología en la UNAM	1	2021-2
3	Licenciatura	GENOMICA INTEGRATIVA 2	Instituto de Biotecnología	1	2021-1
4	Maestría	TEMAS SELECTOS	Instituto de Ciencias Físicas	2	2016-1
5	Maestría	FISICA NO LINEAL Y SISTEMAS COMPLEJOS	Instituto de Ciencias Físicas	1	2016-1
6	Maestría	FISICA NO LINEAL Y SISTEMAS COMPLEJOS	Instituto de Ciencias Físicas	1	2014-2
7	Maestría	FISICA NO LINEAL Y SISTEMAS COMPLEJOS	Instituto de Ciencias Físicas	1	2012-2



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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