

Geometría y Topología

Áreas de conocimiento: Geometría y Topología

Director: Miguel Ortega Titos

Secretario: Leonor Ferrer Martínez

Página web: <https://geometry.ugr.es/>

Profesorado: CU: 15, PTU: 6, PDI Contratado y Otros: 12

Tesis leídas

- Variations for Submanifolds of fixed degree
Doctorando: Gianmarco Giovannardi
Director: Manuel María Ritore Cortés, Giovanna Citti
Fecha de lectura: 18 de junio de 2020

Grupos de Investigación.

- FQM324 GEOMETRIA DIFERENCIAL Y SUS APLICACIONES
- Responsable: CEFERINO RUIZ GARRIDO
- FQM325 Problemas variacionales en Geometría
- Responsable: FRANCISCO URBANO PÉREZ-ARANDA

Dirección y participación en Proyectos I+D

- 2021 Red Española de Análisis Geométrico (REAG), Acciones de dinamización "Redes de Investigación". Convocatoria 2018., 01/01/2020-31/12/2021
Coordinador ANTONIO ALARCÓN LÓPEZ
- 2020 GEOMETRIA SEMI-RIEMANNIANA Y PROBLEMAS VARIACIONALES EN FISICA MATEMATICA, Competitivo PROYECTOS DE INVESTIGACIÓN DEL PLAN NACIONAL, CONVOCATORIA 2016, 30/12/2016-29/12/2020
Investigador/a ALFONSO ROMERO SARABIA
Investigador/a MIGUEL ORTEGA TITOS
Responsable MIGUEL SANCHEZ CAJA
- 2020 SUPERFICIES Y ECUACIONES EN DERIVADAS PARCIALES GEOMETRICAS, Competitivo PROYECTOS DE INVESTIGACIÓN DEL PLAN NACIONAL, CONVOCATORIA 2016, 30/12/2016-29/12/2020
Responsable JOSÉ ANTONIO GÁLVEZ LÓPEZ
Investigador/a ANTONIO MARTINEZ LOPEZ
Investigador/a FRANCISCO MILÁN LÓPEZ
- 2020 UNIDAD DE EXCELENCIA: IEMATH-GR, Competitivo PROYECTOS PLAN PROPIO UGR 2017, 01/09/2017-31/08/2020
Responsable JOAQUIN PÉREZ MUÑOZ
- 2020 'PROBLEMAS VARIACIONALES GEOMETRICOS, ANALISIS GEOMETRICO Y APLICACIONES', Competitivo PROYECTOS DE INVESTIGACIÓN DEL PLAN NACIONAL, CONVOCATORIA 2017, 01/01/2018-31/12/2020
Responsable MANUEL CÉSAR ROSALES LOMBARDO
Responsable MANUEL MARÍA RITORÉ CORTÉS
- 2020 ANALISIS GEOMETRICO, Competitivo PROYECTOS DE INVESTIGACIÓN DEL PLAN NACIONAL, CONVOCATORIA 2017, 01/01/2018-31/12/2020
Responsable ANTONIO ALARCÓN LÓPEZ
Responsable JOAQUIN PÉREZ MUÑOZ

Publicaciones en revistas

- 2021 Artículo: Structure of globally hyperbolic spacetimes with timelike boundary, Revista Matemática Iberoamericana, 37, 1, 45-94
MIGUEL SANCHEZ CAJA
- 2021 Artículo: On the geometry of stationary Galilean spacetimes, General Relativity and Gravitation, 53, , 1-15
JOSE ANTONIO SANCHEZ PELEGRIN
- 2021 Artículo: Area Maximizing Surfaces in Lorentzian Spaces, Mediterranean Journal of Mathematics, 18, , 1-13
JOSE ANTONIO SANCHEZ PELEGRIN
- 2021 Artículo: New conditions on normal Jacobi operator of real hypersurfaces in the complex quadric, Bulletin of the Malaysian Mathematical Society, 44, , 891-903
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2021 Artículo: Rotational symmetry of Weingarten spheres in homogeneous three-manifolds, Journal fuer die Reine und Angewandte Mathematik, 2021, 773, 21-66
JOSÉ ANTONIO GÁLVEZ LÓPEZ
- 2021 Artículo: Applications of cone structures to the anisotropic rheonomic Huygens' principle, Nonlinear

- Analysis, Theory, Methods and Applications, 209, , 112337-
MIGUEL SANCHEZ CAJA
- 2020 Articulo: New complex analytic methods in the study of non-orientable minimal surfaces in R_n ,
Memoirs of the American Mathematical Society, 264, 1283, -
ANTONIO ALARCÓN LÓPEZ
FRANCISCO JOSE LOPEZ FERNANDEZ
- 2020 Articulo: Complex curves in pseudoconvex Runge domains containing discrete subsets, Journal
d'Analyse Mathématique, 140, 1, 207-226
ANTONIO ALARCÓN LÓPEZ
- 2020 Articulo: Affine Connections on 3-Sasakian Homogeneous Manifolds, Mathematische Zeitschrift, , , 1-
52
MIGUEL ORTEGA TITOS
- 2020 Articulo: Calabi-Bernstein type results for complete constant mean cur- vature spacelike
hypersurfaces in spatially open Generalized Robertson-Walker spacetimes, Revista de la Real
Academia de Ciencias Exactas, Físicas y Naturales - Serie A: Matemáticas, 114, 1, -
JOSE ANTONIO SANCHEZ PELEGRIN
- 2020 Articulo: Minimal and weakly trapped submanifolds in standard static spacetimes, Journal of
Mathematical Analysis and Applications, 480, 2, -
JOSE ANTONIO SANCHEZ PELEGRIN
- 2020 Articulo: Rotational hypersurfaces of prescribed mean curvature, Journal of Differential Equations,
268, 5, 2394-2413
JOSÉ ANTONIO GÁLVEZ LÓPEZ
- 2020 Articulo: The global geometry of surfaces with prescribed mean curvature in R^3 , American
Mathematical Society. Transactions, 373, 6, 4437-4467
JOSÉ ANTONIO GÁLVEZ LÓPEZ
- 2020 Articulo: The indefinite affine Cauchy problem, Nonlinear Analysis, Theory, Methods and
Applications, 196, , -
FRANCISCO MILÁN LÓPEZ
- 2020 Articulo: Derivatives of the operator $\mathcal{A}\phi - \phi \mathcal{A}$ on a real hypersurface in non-flat complex space
forms, Bulletin of the Malaysian Mathematical Society, 43, 1, 267-282
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2020 Articulo: Some real hypersurfaces in complex and complex hyperbolic quadrics, Bulletin of the
Malaysian Mathematical Society, 43, 2, 1709-1718
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2020 Articulo: A characterization of ruled real hypersurfaces in non-flat complex space forms,
Mathematics, 8, 642, 1-12
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2020 Articulo: On the definition and examples of cones and Finsler spacetimes, Revista de la Real
Academia de Ciencias Exactas, Físicas y Naturales - Serie A: Matemáticas, 114, , -
MIGUEL SANCHEZ CAJA
- 2020 Articulo: The Ehlers-Kundt Conjecture about Gravitational Waves and Dynamical Systems, Journal of
Differential Equations, 268, 12, 7505-7534
MIGUEL SANCHEZ CAJA
- 2020 Articulo: Foundations of Finsler Spacetimes from the observer's viewpoint, Universe, 6, 4, 55-
MIGUEL SANCHEZ CAJA
- 2020 Articulo: Open Mathematics, Open Mathematics, 18, , 749-770
ILDEFONSO CASTRO-INFANTES
- 2020 Articulo: Parabolicity criteria and characterization results for submanifolds of bounded mean
curvature in model manifolds with weights, Nonlinear Analysis, Theory, Methods and Applications,
192, , 111681-
ANA MARÍA HURTADO CORTEGANA
MANUEL CÉSAR ROSALES LOMBARDO
- 2020 Articulo: Intrinsic and extrinsic comparison results for isoperimetric quotients and capacities in
weighted manifolds, Journal of Mathematical Analysis and Applications, 492, 2, 124488-
ANA MARÍA HURTADO CORTEGANA
MANUEL CÉSAR ROSALES LOMBARDO
- 2020 Articulo: An instability criterion for volume-preserving area-stationary surfaces with singular curves
in sub-Riemannian 3-space forms, Calculus of Variations and Partial Differential Equations, 59, , 165-
ANA MARÍA HURTADO CORTEGANA
MANUEL CÉSAR ROSALES LOMBARDO
- 2020 Articulo: Derivatives of normal Jacobi operator on real hypersurfaces in the complex quadric, Bulletin
of the London Mathematical Society, 52, 6, 1122-1133
JUAN DE DIOS PÉREZ JIMÉNEZ

- 2020 Artículo: Hypersurfaces in complex Grassmannians whose geodesics are circles and straight lines, Houston Journal of Mathematics, 46, 3, 681-693
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2020 Artículo: Lie derivatives and structure Jacobi operator on real hypersurfaces in complex projective spaces II, Differential Geometry and Its Applications, 73, 101685, 1-10
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2020 Artículo: A foliation of the ball by complete holomorphic discs, Mathematische Zeitschrift, 296, 1-2, 169-174
ANTONIO ALARCÓN LÓPEZ
- 2020 Artículo: Uniqueness of immersed spheres in three-manifolds, Journal of Differential Geometry, 116, 3, 459-480
JOSÉ ANTONIO GÁLVEZ LÓPEZ

Libros (con ISBN)

- 2021 Minimal Surfaces from a Complex Analytic Viewpoint: Springer International Publishing, CHAM, 2021, 978-3-030-69055-7
FRANCISCO JOSE LOPEZ FERNANDEZ
ANTONIO ALARCÓN LÓPEZ

Capítulos de libros (con ISBN)

- 2020 Título Capítulo: On a Problem of David Singer about Prescribing Curvature for Curves., Título Libro: Twenty First International Conference on Geometry, Integrability and Quantization: Ivailo M. Mladenov, Vladimir Pulov and Akira Yoshioka Editors., Avangard Prima, Sofia, 2020, 1314-3247
ILDEFONSO CASTRO-INFANTES
- 2020 Título Capítulo: Distance Geometric Analysis on Manifolds, Título Libro: Global Riemannian Geometry: Curvature and Topology: Birkhäuser, Cham, , 2020, 978-3-030-55292-3
ANA MARÍA HURTADO CORTEGANA

Contribuciones en congresos

- 2021 Sesión no plenaria en Congreso: Constant mean curvature spacelike hypersurfaces in Generalized Robertson-Walker spacetimes, X International Meeting on Lorentzian Geometry, 01/02/2021, Córdoba, España, Congreso
JOSE ANTONIO SANCHEZ PELEGRIN
- 2021 Comunicación en congreso: Covariant and Lie derivatives on real hypersurfaces in complex projective space, Riemannian Geometry and Applications, 15/01/2021, On line (Bucarest, debido a la pandemia), Congreso
JUAN DE DIOS PÉREZ JIMÉNEZ
- 2021 Sesión no plenaria en Congreso: Solitones de traslación en el Minkowski invariantes ortogonal y ortocrono, V Encuentro Conjunto de la Real Sociedad Matemática Española (RSME) y la Sociedad Matemática Mexicana (SMM), 14/06/2021, Guanajuato, México, Congreso
MIGUEL ORTEGA TITOS
- 2021 Ponencia en Congreso: Boundaries of globally hyperbolic spacetimes, SCRI 21 Singularity theorems, causality, and all that. A tribute to Roger Penrose, 14/06/2021, Online, <https://sites.google.com/unifi.it/scri21/welcome?authuser=0>, Congreso
MIGUEL SANCHEZ CAJA
- 2020 Comunicación en taller de trabajo: The Classification of Semigraphical Translators for Mean Curvature Flow, Copenhagen Curvature Flow Day - Winter 2020, 03/02/2020, Copenhagen, Dinamarca, Taller de trabajo
FRANCISCO MARTIN SERRANO
- 2020 Sesión plenaria en Congreso: Lorentzian vs Riemannian completeness and Ehlers-Kundt conjecture, Dynamical aspects of semi-Riemannian Geometry, 02/03/2020, Braga, Portugal, Congreso
MIGUEL SANCHEZ CAJA