

CURRICULUM VITAE

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Date of birth

28 September 1963

Education

Ph.D. (Mathematics) 1991
University of Rochester, Rochester, N. Y.
Thesis title: "Invariant Einstein metrics on
generalized flag manifolds"

M.A. (Mathematics) 1987
University of Rochester, Rochester, N. Y.

B.S. (Mathematics) 1985
University of Athens, Athens, Greece

Military service

Sep. 1992 - Aug. 1994

Served in the Hellenic Navy
(Administration of Naval Education)

Research Interests

Lie groups and geometry of homogeneous spaces (Einstein metrics, homogeneous geodesics)
Submanifold theory (biharmonic submanifolds in pseudo-Euclidean spaces)
Symbolic Computations
Cognitive aspects of the didactics of mathematics

Academic Positions

2014-15

Sabbatical leave
Tufts University (1/9/14 – 31/12/14),
Osaka University (15/3/15 – 26/4/15), with short
visits in Waseda University and Hiroshima
University
University of Athens (during intermediate time)

2014 – today

Associate Professor, University of Patras,
Department of Mathematics

2009 - 2014

Assistant Professor, University of Patras,
Department of Mathematics

2004 – today

Affiliative Educational Staff, Hellenic Open
University

2004-2009	Lecturer, University of Patras, Department of Mathematics
1998-2004	Instructor of Mathematics, The American College of Greece (Deree)
1995-2001	Lecturer of Mathematics, The British Council-Athens & University of Essex-England
1999-00 (Spring semester)	Visiting Assistant Professor of Mathematics University of Patras, Department of Education
1998-99 (Spring semester)	Visiting Assistant Professor of Mathematics University of Patras, Department of Education
1997-1999	Researcher, University of Patras
1994-1995	Visiting Assistant Professor of Mathematics University of Crete, Heraklion, Greece
1991-1992	Mathematics Instructor, University of Rochester, Rochester, N. Y.

Teaching experience

2004- today	University of Patras, Department of Mathematics
<i>Courses taught:</i>	<u>Undergraduate:</u> <i>Linear Algebra I, Linear Algebra II, Real Analysis III, Differentiable Manifolds, Differential Geometry, Differential Geometry II, Tensor Analysis and Geometry, Mathematics for the Departments of Biology and Geology,</i> <u>Post-graduate:</u> <i>Geometry I, Geometry II, Applications of Group Theory in Physics</i> (Department of Physics).
2004 – today	Hellenic Open University
<i>Courses taught:</i>	Mathematics for the degrees "Studies in Physical Sciences", "Studies in Information Science" (undergraduate), "Post-graduate Studies in Mathematics", and supervision of Master theses
1998-2004	The American College of Greece (Deree)
1999-2000	University of Patras, Department of Education, Visiting Position
1995-2001	The British Council-Athens & University of Essex-England
1994-1995	University of Crete, Department of Mathematics, Visiting Position

1993	Hellenic Navy, Anti-submarine war Training School (Part-Time Instructor of Mathematics)
1991-1992	University of Rochester, Rochester, N. Y.
1987-1991	University of Rochester, Rochester, N. Y. (Part-time Instructor)

Supervision of Doctoral Theses

I. Chrysikos: *Homogeneous Einstein Metrics on Generalized Flag Manifolds*, University of Patras 2011.

P. Siasos: *Study of the Dynamic of the Ricci flow on Certain Homogeneous Spaces*, 2013-2017 (quit studies).

N. Souris: *Homogeneous and Two-Step Homogeneous Geodesics in Homogeneous Manifolds*, University of Patras 2018.

M. Statha: *Invariant Einstein Metrics on Stiefel Manifolds and Compact Lie Groups*, University of Patras 2018.

Supervision of post-doctoral researcher

Yu Wang, Sichuan University, China.

She visited University of Patras during 2015-16.

Supervision of Master Theses

S. Seremetaki: *Biharmonic submanifolds of the sphere S^3* , Patras 2006.

I. Chrysikos: *Geometry of Homogeneous Spaces and Generalized Flag Manifolds*, Patras 2007.

D. Stoufis: *An Introduction to Symmetric Spaces*, Patras 2012.

N. Souris: *Homogeneous Geodesics in Generalized Flag Manifolds*, Patras 2012.

M. Statha: *A Study of the Geometry of Spheres and Stiefel Manifolds*, Patras 2013.

M. Kakkava: *Geometry in the Art of Ancient Greece*, Patras 2019.

Participation in 3-member doctoral advising committees

- I. Chrysikos: *Homogeneous Einstein Metrics on Generalized Flag Manifolds* (superv. V. Papantoniou 2008-09)

- K. Petoumenos: *Special surfaces in E_1^3 with $\Delta^{\text{III}}\vec{r} = A\vec{r}$ and biharmonic hypersurfaces*

M_2^3 in E_2^4 , Univ. of Patras 2010 (superv. V. Papantoniou)

- Th. Kouloukas: *Yang-Baxter maps, Poisson structure and Integrability*, Univ. of Patras 2011 (superv. V. Papageorgiou)

- K. Panagiotidou: *Study of Hypersurfaces in Riemannian Manifolds*, Univ. of Thessaloniki 2012 (superv. F. Xenos).

- A. Zachos: *The Fermat-Torricelli Problem and an Inverse Problem in K-Plane and in Closed Polyedra of R^3* , Univ. of Patras 2014 (superv. V. Papageorgiou)

Participation in international Ph.D. committees

- Teresa Arias Marco: *Study of Homogeneous D'Atri Spaces, of the Jacobi Operator on g.o. spaces and the Locally Homogeneous Connections on 2-Dimensional Manifolds with the help of MATHEMATICA[®]*, Departamento de Geometria y Topologia, Universitat de Valencia, 2007 (Advisors: A.M. Naveira – O. Kowalski).

- Reinier Wijnand Storm: *The Classification of Naturally Reductive Homogeneous Spaces in Dimension 7 and 8*, Fachbereich Mathematik und Informatik, Philipps Universität, Marburg, 2017 (Advisor: I. Agricola).

Participation in Doctoral Thesis committees

- D. Zoakos: *Spacelike and timelike consequences of string theory in low dimensions*, General Department, University of Patras 2007.
- P. Xenitides: *Symmetries and Integrability of Differential and Discrete Equations*, Univ. of Patras 2008
- S. Dimas: *Partial Differential Equations, Algebraic Computations and Non Linear Systems*, Univ. of Patras
- E. Vrontakis: *On the Boundary of 2-Dimensional Complexes*, Univ. of Patras 2009
- M. Markellos: *Study of Special Classes of Contact Riemannian Manifolds*, Univ. of Patras 2009
- E. Tsatis: *Geometric Flows and Applications in Physics*, Univ. of Patras, Dept. of Physics 2010.
- E. Moutafi: *Study of Contact Manifolds by using Curvatures*, Univ. of Thessaloniki 2010
- Th. Theofanides: *Study of real hypersurfaces in non Euclidean Complex Spaces Forms*, Univ. of Thessaloniki 2011
- S. Anastassiou: *Topological Classification of Dynamical Systems*, Univ. of Patras 2012
- I. Kaffas: *A Study of Hypersurfaces in E^{n+1} and of Ruled Surfaces in E^3 under the view of Relative Differential Geometry*, Univ. of Thessaloniki 2014.
- G. Itsios: *Studies on String Theory with Applications on non Abelian T-Duality on Supergravity and Ads/CFT Correspondence*, Univ. of Patras 2014.
- M. Kaisari: *Didactic Approaches of the Models of the non Euclidean Geometries under the framework of Higher Education*, Univ. of Patras 2014.
- Ch. R. Onti: *Obstructions to Isometric Immersions*, Univ. of Ioannina 2018.
- I. Rizos: *Introducing High School Students into Two-Dimensional Minkowski Geometry via Teaching Scenarios and Mental Experiments*, Univ. of Patras 2018.
- A. Poulos: *Solution and Problem Posing as a Method to Identify Gifted Students in Mathematics*, Univ. of Patras 2018.
- D. Oikonomou: *Applications of Information Geometry*, Univ. of Patras, Dept. of Physics 2019.

Participation in Master Thesis Committees

- L. Seremeti: *Lie Theory*, Patras 2004
- G. Stathopoulos: *Geometrical Constructions with Ruler and Compass: History and Teaching Aspects*, Patras 2005
- A. Panagopoulou: *Rigid motions and isometries of hypersurfaces in R^{n+1}* , Patras 2006
- Th. Kouloukas: *Actions of Lie groups on Poisson manifolds*, Patras 2006
- S. Anastasiou: *The seven elementary catastrophes and the theory of universal unfolding*, Patras 2007
- E. Efstathiou: *Quantum Mechanics –Field Theory – Yang Mills Field and Gauge Theory*, Patras 2009
- M. Loukopoulou: *The Gauss-Bonnet Theorem*, Patras 2009
- A. Gianakoulis: *The Gamma Function and Riemann's Zeta Function*, Patras 2011
- N. Kavalieratou: *Introduction to Symmetrization with Applications*, Patras 2011
- Th. Kassioumis: *Isometric Immersions of Kaehler Manifolds*, Univ. of Ioannina, 2014
- Th. Ravanou: *Isometric Deformations of Surfaces in R^3 that Preserve Mean Curvature*, Univ. of Ioannina, 2014
- A. Vlachou: *Integrable Non Linear Partial Differential Equations and Differential Geometry*, Patras 2014

- A. Dimopoulos: *From Various Attempts for the Proof of the Euclid's 5th Postulate to the non-Euclidean Geometries*, Patras 2014.
- A. Papandrikopoulou: *Teaching of Geometry in Adult Education*, Patras 2016.
- A. Kotsou: *Prime Numbers and Cryptography*, Patras 2016.
- A. Tsouri: *Minimal Surfaces and the Ricci Condition*, Univ. of Ioannina, 2017.
- D. Lampropoylou: *Fractional Differentiation and Geonetry*, Patras 2018.
- P. Chronias: *Positive Definite Symmetric Real Matrices as Example of Bruhat-Tits Space*, Patras 2018.
- P. Saranti: *Applications of Complex Analysis in Fluid Mechanics and in Special Relativity*, Patras 2018.
- P. Chronias: *The Positive Definite Symmetric Matrices as an Example of a Bruhat-Tits Space*, Patras 2019.
- D. Mastrogiannopoulos: *Classification of 1-dimensional Smooth and Topological Manifolds*, 2019.

Honors and Awards

2018	Research grant awarded from the Empirikion Foundation, Athens-Greece
2004	Honorary Award (with medal) from the Union of Blood VolunTERS of the Hellenic Red Cross
1999	Research grant awarded from the Empirikion Foundation, Athens-Greece
1997	Post-doctoral fellowship from the Greek State Scholarships Foundation (IKY)
1994	Hellenic Mathematical Society: Scientific research award for the most outstanding doctoral thesis in Mathematics in the period 1990-1993
1988-1990	University of Rochester: Dean's Teaching Fellowship
1987-1988	Whittaker Fellowship (University of Rochester)
1985-1990	Fellowship and teaching assistantship from the University of Rochester
1985	Chosen best T.A. of the Mathematics Department at the University of Rochester
1984-1985	Fellowship from the University of Athens for the highest GPA

Research grants-invitations

- 7-days visit at Moscow Independent University. Cooperation with Professor D.V. Alekseevsky, December 2017.
- “C. Karatheodori” research program, 2014-2017, University of Patras (#C. 037).
- 15-days visit in Czech Republic in Masaryk University, under the ERASMUS program. Cooperation with professor D. Alekseevsky, April 2014.

- 15-days visit in Czech Republic in Masaryk University, under the ERASMUS program. Cooperation with professor D. Alekseevsky, February 2013.
- 15-days visit at the Euler International Institute of Mathematics, St. Petersburg (section of V.A. Steklov Inst. of Mathematics of the Russian Academy of Sciences), under the program TET-A-TET in Russia. Cooperation with Yu.G. Nikonorov, August 2012.
- 20-days visit in United States in Universities of Maryland (College Park), Rochester, Tufts. Cooperation with M. Gage (Rochester) and L. Tu (Tufts), April 2012.
- 15-days visit in Czech Republic in Masaryk University, under the ERASMUS program. Cooperation with professors D. Alekseevsky and J. Slovak, December 2012.
- 7-days visit in Czech Republic in Olomouc University under the Greek-Czech Government agreement for scientific exchange. Cooperation with Professor Z. Dušek, November 2010.
- Cooperation with Professor D. V. Alekseevsky in Edinburgh University (UK) for 7 days during January 2009.
- “C. Karatheodori” research program, 2007-2010, University of Patras (#C. 161).
- 15-days visit to Japan (November 2006) at the Universities of Osaka, Hiroshima, and Tokyo Metropolitan University. Cooperations with Professors Y. Sakane, H. Tamaru and M. Guest.
- 15-days visit in United Kingdom in the Universities of Durham, Leeds, and Warwick under the Greek-British Government agreement for scientific exchange. Cooperations with professors W. Klingenberg, J. Wood, D. Elworthy, and M. Micaleff.
- 15-days visit in Tokyo Metropolitan University and cooperation with Professor M. Guest during June 2004.
- Cooperation with Professor D. V. Alekseevsky in Hull University (UK) for 7 days during November 2003.
- Cooperation with Professor D. V. Alekseevsky in Hull University (UK) for 10 days during November 2001.
- “C. Karatheodori” research program, 2000-2003, University of Patras. Under this program I participate in a series of scientific workshops in the Department of Mathematics of the University of Patras, including supervision of two doctorate candidates.
- 1996: Awarded a grant under the “Young Researchers Support Program ‘95 #388 ” (Greek Ministry of Research and Technology). Under this program I gave a series of lectures at the University of Ioannina on Lie groups and geometry.
- Have visited the Oberwolfach Institute (Germany) for two weeks in June 1997. During that time I had a cooperation with Professor E. Rodionov (Altai State University-Russia).

Publications

“*New invariant Einstein metrics on generalized flag manifolds*”, Trans. Amer. Math. Soc. 337 (2) (1993) 981-995

“*Einstein metrics on homogeneous spaces*” (in Greek), Mathematical Review, Greek Math. Soc. 42 (1994) 95-101

“*Homogeneous Einstein metrics on Stiefel manifolds*”, Comment. Math. Univ. Carolinae 37 (3) (1996) 627-634, Erratum in: 37 (4) (1996)

“*SO(n)-invariant Einstein metrics on Stiefel manifolds*”, in: Proceedings of the 6th International Geometry Conference, Brno, Czech Republic (1996) 1-5

“*Einstein equation of an invariant metric on generalized flag manifolds and inner automorphisms*”, Balkan J. Geom. and its Applic. 3 (2) (1998) 17-22

“*Quantum (co)modules for dual quantum groups*” (joint with D. Ellinas), Bull. Greek Math. Soc. 40 (1998) 119-131

“Quantum group (co)actions on G -spaces and quantum modules” (joint with D. Ellinas), Czech. Jour. Physics 46 (12) (1997) 1137-1144.

“Homogeneous spaces: From the classical to the quantum case” (joint with D. Ellinas), in: New Developments in Differential Geometry, Budapest 1996, Kluwer (1998) 39-52.

“(Co)representations of dual quantum groups on quantum homogeneous spaces and other quantum spaces (joint with D. Ellinas), in: Proc. 3rd Panhellenic Geometry Conference, Athens (1997) 53-66.

“From Maxwell’s equations to Yang-Mills equations”, (in Greek), Mathematical Review, Greek Math. Soc. 49-50 (1998) 9-22.

“The Duistermaat-Heckman integration formula on generalized flag manifolds”, in: Proceedings of the 7th International Geometry Conference, Brno, Czech Republic (1998) 303-308

“Jacobi vector fields and geodesic tubes in certain Kähler manifolds” (joint with Chr. Beneki), Rend. Circ. Mat. Pal. 63 (2000) 43-52.

“Tubes and the geometry of Kähler manifolds” (joint with Chr. Beneki, B. Papantoniou, M. Shahid), Bull. Greek Math. Soc. 44 (2000) 59-70.

“Metrics with homogeneous geodesics on flag manifolds”, (joint with D.V. Alekseevsky), Comment. Math. Univ. Carolinae 43 (2) (2002) 189-199.

“A characterization of the Riemannian symmetric space $Sp(n)/U(n)$ ”, (joint with B.J. Papantoniou), Yokohama Math. J. 52 (2006) 81-95.

“Geometry of flag manifolds”, Int. J. Geom. Methods Mod. Phys. 3 (5-6) (2006) 1-18.

“Introducing coordinates in the sphere S^3 of the Euclidean space R^3 ” (joint with Z. Boukouvalas), Mathematical Review, Greek Math. Soc. 65 (2006) 47-59.

“Biharmonic Lorentz hypersurfaces in E_1^4 ” (joint with F. Defever, G. Kaimakamis and B. Papantoniou) Pacific J. Math. 229 (2) (2007) 293-305

“Riemannian flag manifolds with homogeneous geodesics” (joint with D. Alekseevsky) Trans. Amer. Math. Soc. 359 (8) (2007) 3769-3789.

“Hypersurfaces of E_s^4 with proper mean curvature vector” (joint with F. Defever and G. Kaimakamis) J. Math. Soc. Japan 59 (3) (2007) 797-809.

“Chen’s conjecture and generalizations” (Joint with G. Kaimakamis and D. Palamouras), Symposium on the differential geometry of Submanifolds, Valenciennes (France) 2007, 109-112.

“Homogeneous geodesics in the flag manifold $SO(2l+1)/U(l-m) \times SO(2m+1)$ ”, Linear Algebra and its Appl. 428 (4) (2008) 1117-1126.

“Invariant Einstein metrics on quaternionic Stiefel manifolds” (joint with V.V. Dzhepko και Yu.G. Nikonorov) Bull. Greek Math. Soc. 53 (2007) 1-14.

“Invariant Einstein metrics on certain Stiefel manifolds”, (joint with V.V. Dzhepko και Yu.G. Nikonorov), Proceedings of the 9th International Conference on Differential Geometry and its Applications, Olomouc, Czech Republic 2007, World Sci. Sci. Co. (2008) 35-44.

“Lie transformation groups and geometry”, in: *Geometry, Integrability and Quantization*, Proceed. of the Ninth International Conference on Geometry Integrability and Quantization IX, I. Mladenov (ed.) Varna, Bulgaria, June 8-15 2007, 11-34, Sofia 2008.

“Invariant Einstein metrics on some homogeneous spaces of classical Lie groups”, (joint with V.V. Dzhepko and Yu.G. Nikonorov), *Canad. J. Math.* 61 (6) (2009) 1201-1213.

“Horizontal merges of firms under price competition – Bertrand model” (joint with G. Kaimakamis and A. Koulis), *Mathematical Review, Greek Math. Soc.* 69 (2008) 54-63.

“Motion of charged particles and homogeneous geodesics in Kähler C-spaces with two isotropy summands (joint with I. Chrysikos) *Tokyo J. Math.* 32 (2) (2009) 487-500.

“Lorentz hypersurfaces in E_1^4 satisfying $\Delta \vec{H} = \alpha \vec{H}$ ” (joint with G. Kaimakamis and M. Magid) *Illinois J. Math.* . 53 (2) (2009) 581-590.

“Helicoidal surfaces in the Heisenberg 3-space” (joint with G. Kaimakamis) *JP J. Geom. Topol.* 10 (1) (2010)

“Invariant Einstein metrics on flag manifolds with four isotropy summands” (joint with I. Chrysikos) *Ann. Global Anal. Geom.* 37 (2) (2010) 185-219

“Complete description of invariant Einstein metrics on the generalized flag manifold $SO(2n)/U(p) \times U(n-p)$ ” (joint with I Chrysikos and Y. Sakane) *Ann. Global Anal. Geom.* 38 (4) (2010) 413-438.

“Invariant Einstein metrics on generalized flag manifolds with two isotropy summands” (joint with I. Chrysikos) *J. Aust. Math.Soc.* 90 (2) (2011) 237-251.

“Constancy of Jacobi osculating rank of g.o. spaces of compact and non-compact type”, (joint with T. Arias-Marco και A.M. Naveira) *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. (RACSAM)* 105 (1) (2011) 207-221.

“Homogeneous Einstein metrics on the generalized flag manifold $Sp(n)/(U(p) \times U(n-p))$ ” (joint with I. Chrysikos and Y. Sakane) *Differential Geom. Appl.* 29 (2011) S16-S27.

“Homogeneous Einstein metrics on generalized flag manifold $Sp(n)/(U(p) \times U(q) \times Sp(n-p-q))$ ”, (joint with I. Chrysikos and Y. Sakane), in: *Recent Progress in Differential Geometry and its Related Fields, Proceedings of the 2nd International Colloquium on Differential Geometry and its Related Fields, Velico Tarnovo, Bulgaria 2010, World Scientific (2012) 1-24.*

“Recent progress on homogeneous Einstein metrics on generalized flag manifolds”, (joint with I. Chrysikos and Y. Sakane), in: *Mathematical Forum Vol. 5, Studies on Mathematical Analysis and Differential Equations, Vladikavkaz: SMI VSC RAN (2011) 17-28, Proceedings on the IXth International Conference on Operator Theory, Complex Analysis and Mathematical Modeling, Volgodonsk, Russia 2011.*

- “Einstein metrics on compact Lie groups which are not naturally reductive” (joint with K. Mori and Y. Sakane) *Geom. Dedicata* 160 (1) (2012) 261-285.
- “Hypersurfaces of type M_2^3 in E_2^4 with proper mean curvature vector” (joint with G. Kaimakamis) *J. Geom. Phys.* 63 (1) (2013) 99-106.
- “Proving isometry for homogeneous Einstein metrics on flag manifolds by symbolic computation” (joint with I. Chrysikos and Y. Sakane) *J. Symbolic Comput.* 55 (2013) 59-71.
- “Homogeneous Einstein metrics on generalized flag manifolds with G_2 -type \mathfrak{t} -roots”, (joint with I. Chrysikos and Y. Sakane), in: *Prospects in Differential Geometry and its Related Fields, Proceedings of the 3rd International Colloquium on Differential Geometry and its Related Fields, Velico Tarnovo, Bulgaria 2012*, World Scientific (2014) 15-38.
- “Homogeneous Einstein metrics on G_2/T ”, (joint with I. Chrysikos and Y. Sakane) *Proc. Amer. Math. Soc.* 141 (7) (2013) 2485-2499.
- “Homogeneous Einstein metrics on generalized flag manifolds with five isotropy summands” (joint with I. Chrysikos and Y. Sakane) *Internat. J. Math.* 24 (10) (2013) 1350077 (52pp).
- “The Ricci flow on some generalized Wallach spaces”, (joint with N.A. Abiev, Yu.G. Nikonorov and P. Siasos), in: *Geometry and its Applications, Springer Proceedings in Mathematics & Statistics, Vol. 72*, (2014) 3-37.
- “New homogeneous Einstein metrics on Stiefel manifolds”, (joint with Y. Sakane and M. Statha) *Differential Geom. Appl.* 35 (2014) S2-S18.
- “The dynamics of the Ricci flow on generalized Wallach spaces”, (joint with N.A. Abiev, Yu.G. Nikonorov and P. Siasos) *Differential Geom. Appl.* 35 (2014) S26-S43.
- “The normalized Ricci flow on generalized Wallach spaces”, joint with N.A. Abiev, Yu.G. Nikonorov and P. Siasos), in: *Mathematical Forum Vol. 8, Part 1, Studies on Mathematical Analysis, Vladikavkaz: SMI VSC RAS* (2014) 25-42 (in Russian).
- “Geodesics in generalized Wallach spaces”, (joint with N. Souris), *J. Geom.* 106 (3) (2015) 583-603.
- “New Einstein metrics on the Lie group $SO(n)$ which are not naturally reductive”, (joint with Y. Sakane and M. Statha), *Geom. Imaging Comput.* 2 (2) (2015) 77-108.
- “Progress on homogeneous Einstein manifolds and some open problems”, *Bull. Greek Math. Soc.* 58 (2010/15) 75-97.
- “Einstein metrics on the symplectic group which are not naturally reductive”, (joint with Y. Sakane and M. Statha), in: *Current Developments in Differential Geometry and its Related Fields, Proceedings of the 4th International Colloquium on Differential Geometry and its Related Fields, Velico Tarnovo, Bulgaria 2014*, World Scientific (2016), 1--22.
- “Real representations of ancient Greek technology”, *Intern. J. Curr. Research Multidisc.* 1 (4) (2016) 40-49.
- “Two-step homogeneous geodesics in homogeneous spaces”, (joint with N. Souris), *Taiwanese J. Math.* 20 (6) (2016) 1313-1333.

"Relations between mathematics and music", (joint with M. Papadopoulou) (in greek), Mathematical Review, Greek Math. Soc. 87 (2017) 86-101.

"Homogeneous geodesics in generalized Wallach spaces", (joint with Yu Wang), Bull. Belg. Math. Soc. Simon Stevin 24 (2) (2017) 257-270.

"Lorentz hypersurfaces satisfying $\Delta \bar{H} = \alpha \bar{H}$ with non diagonal shape operator", (joint with K. Deepika and R.S. Gupta), São Paulo J. Math. Sci. 11 (1) (2017) 200-214.

"Homogeneous manifolds whose geodesics are orbits. Recent results and some open problems", Irish Math. Soc. Bull. 79 (2017) 5-29

"Riemannian g.o. metrics in certain M-spaces", (joint with Y. Wang and G. Zhao), Differential Geom. Appl. 54 (2017) 59-70.

"Homogeneous Einstein metrics on complex Stiefel manifolds and special unitary groups", (joint with Y. Sakane and M. Statha), in: *Contemporary Perspectives in Differential Geometry and its Related Fields*, Proceedings of the 5th International Colloquium on Differential Geometry and its Related Fields, Velico Tarnovo, Bulgaria 2016, World Scientific (2017), 1--20.

"Biconservative ideal hypersurfaces in Euclidean spaces", (joint with K. Deepika), J. Math. Anal. Appl. 458 (2) (2018) 1147-1165.

"Riemannian M-spaces with homogeneous geodesics", (joint with Y. Wang and G. Zhao), Ann. Glob. Anal. Geom. 54 (3) (2018) 315-328.

"New homogeneous Einstein metrics on quaternionic Stiefel manifolds", (joint with Y. Sakane and M. Statha), Adv. Geom. 18 (4) (2018) 509-524.

"Riemannian generalized C-spaces with homogeneous geodesics", (joint with H. Qin, Y. Wang and G. Zhao), Filomat (2019).

"Invariant Einstein metrics on $SU(N)$ and complex Stiefel manifolds", (joint with Y. Sakane and M. Statha), Tohoku Math. J. (accepted)

"New Einstein metrics on special unitary groups $SU(2n)$ ", (joint with Y. Sakane and M. Statha), in: *Contemporary Perspectives in Differential Geometry and its Related Fields*, Proceedings of the 6th International Colloquium on Differential Geometry and its Related Fields, Velico Tarnovo, Bulgaria 2018, World Scientific (2019), --.

Citations

Y. Sakane: "Homogeneous Einstein metrics on a principal circle bundle", in: *Complex Geometry*, G. Komatsu-Y. Sakane (Eds), Marcel Dekker Inc., Lecture notes in Pure and Applied Mathematics no 143 (1993)

Y. Sakane: "Homogeneous Einstein metrics on flag manifolds", Lobachevskii J. Math. 4 (1999)

K. Mori: "Left invariant Einstein metrics on compact Lie groups", Master Thesis, Osaka University, 1994.

M. M. Kerr: “Some new homogeneous Einstein metrics on symmetric spaces”, Trans. Amer. Math. Soc. 348 (1) (1996) 153-171

V. Apostolov - G. Grantcharov - S. Ivanov: “Orthogonal complex structures on certain Riemannian 6-manifolds”, Diff. Geom. Appl. 11 (3) (1999) 279-296

V. Apostolov - G. Grantcharov - S. Ivanov: “Hermitian structures on twistor spaces”, Ann. Glob. Anal. Geom. 16 (3) (1998) 291-208

M. M. Kerr: “New examples of homogeneous Einstein metrics”, Michigan Math. Jour. 45 (1998) 115-134.

M. Wang: “Einstein metrics from symmetry and bundle constructions”, in: Surveys in Differential Geometry, vol 6, Essays on Einstein Manifolds, C. LeBrun and M. Wang (eds) Intern. Press 2001, 287-325.

Z. Dušek - O. Kowalski - S. Ž Nikčević: “New examples of g.o. spaces in dimension 7”, Diff. Geom. Appl. 21 (1) (2004) 65-78

C. Böhm – M. Wang – W. Ziller: “A variational approach for compact homogeneous Einstein manifolds”, GAFA Geom. Func. Anal. 14 (2004) 681-733

A.M. Lomshakov – Yu.G. Nikonorov – E.V. Firsov: “Invariant Einstein metrics on three-locally-symmetric spaces”, Siberian Adv. Math. 14(3) (2004) 43-62

C. Böhm – M. Kerr: “Low-dimensional homogeneous Einstein manifolds”, Trans. Amer. Math. Soc. 358 (4) (2006) 1455-1468.

S. Gudmundsson – M. Svenson: “Harmonic morphisms from the compact semisimple Lie groups and their non-compact dual”, Diff. Geom. Appl. 24 (4) (2006) 351-366.

F. Greensite: “Partial inverse problems”, Inverse Problems 22 (2) (2006) 461-479.

R. Smirnov, - J. Yue: “Covariants, joint invariants and the problem of equivalence in the invariant theory of Killing tensors defined in pseudo-Riemannian spaces of constant curvature”, J. Math. Phys. 45 (11) (2004) 4141-4163.

P. Holmelin: “Symmetric Spaces”, Master Thesis, Lund University 2005

V. Balashchenko – A. Sakovich: “Invariant f -structures on the flag manifolds $SO(n)/SO(2) \times SO(n-3)$ ”, Intern. J. Math. Math. Sci. Art. ID 89545 (2006) 1-15.

E. Dos Santos – C. Negreiros: “Einstein metrics on flag manifolds”, Rev. Uni. Mat. Argentina 47 (2) (2006) 77-84.

Teresa Arias Marco: *Study of Homogeneous D'Atri Spaces, of the Jacobi Operator on g.o. spaces and the Locally Homogeneous Connections on 2-Dimensional Manifolds with the help of MATHEMATICA[®]*, Doctoral Thesis, Departamento de Geometria y Topologia, Universitat de Valencia 2007.

B-Y. Chen: “Classification of marginally trapped surfaces”, Proceedings of Symposium on the differential geometry of Submanifolds, Valenciennes (France) 2007, 51-65

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E. Güler - Ö. Kişi: *Dini type helicoidal hypersurfaces with timelike axis in Minkowski 4-space E_1^4* , Mathematics (2019).

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L. Huang - Z. Shen: *"Homogeneous Einstein manifolds with vanishing S curvature"*, Canad. Math. Bull. (2019).

Seminars given

"Lie groups, Homogeneous spaces and Geometry", Two weeks seminar in the University of Ioannina supported by a grant from the Greek Ministry of Research and Technology, July 1996 and 1997.

"Symmetric Spaces and Geometry", A series of talks at the University of Patras during June 1998.

Books written

"Lie groups, Homogeneous Spaces and Differential Geometry" (in Greek), Trochalia Publications, Athens (1999)

"An Introduction to Lie Groups and the Geometry of Homogeneous Spaces", American Mathematical Society, Student Mathematical Library 22, 2003 [MR 2004i: 53059] [Bull. London Math. Soc. 38 (4) (2006), A. Fordy (Reviewer)].

"Elementary Differential Geometry" (in Greek), e-book, Ellinika Akadimaika Siggrammata-Kallipos, Athens 2015.

"Geometry of Manifolds. Riemannian Manifolds and Lie Groups" (in Greek), e-book, Ellinika Akadimaika Siggrammata-Kallipos, Athens 2015.

Electronic Lecture Notes – "Open Courses" (<http://opencourses.gr/>)

"Linear Algebra I" *"Linear Algebra II"* *"Differential Geometry"*
"Differential Geometry II" *"Tensor Analysis and Geometry"* (Patras 2014)

Conference Organization

- 10th Panhellenic Geometry Conference, Patras May 2011 (coorganizer)
- Geometry Day, Patras November 2012.
- Geometry Day, Patras October 2015.
- Geometry Day, Patras June 2017.

- Geometry Day, Patras October 2018.

Invitation as main speaker in conferences

-*The Ninth International Conference on Geometry, Integrability and Quantization*, Varna, Bulgaria 2007, Gave a series of 5 talks titled: “*Geometrical Aspects of Lie Groups and Homogeneous Spaces*”.

-International Scientific Conference titled “*Operator Theory, Complex Analysis and Mathematical Modeling – Section I: Real Analysis and Analysis on Manifolds*”, South-Russian State University of Economics and Service, Volgodonsk Institute of Service, Volgodonsk, Russia, July 2011, Gave a talk titled: “*Recent Progress on Homogeneous Einstein Metrics on Generalized Flag Manifolds*”.

- *The 11th Differential Geometry Day at Lund*, May 2015, Lund University, Sweden.

- *Seminars on Teaching 2016 - Union of Teachers in Private High-Schools of Greece*, Patras, November 2016. Title of talk: *Common Characterizations of Some Theorems in Geometry*.

- *The 13th OCAMI-RIRCM Joint Differential Geometry Workshop on Submanifold Geometry and Lie Theory*, March 27-30 2017, Osaka City University, Osaka, Japan.

Special Invitation

Invitation to participate and delive a talk at the *Mini-Workshop: Einstein Metrics, Ricci Solitons and Ricci Flow under Symmetry Assumptions*, Mathematisches Forschungsinstitut Oberwolfach, Germany, September 2014.

Talks given

-International Conference on Differential Geometry, University of California, Los Angeles, July 1990,

-International Congress of Mathematicians, Kyoto, Japan, August 1990

-Geometry Seminar, Tokyo Metropolitan University, August 1990

-Geometry and Topology Conference, Lehigh University, May 1991

-University of Crere, September 1992

-University of Ioannina, March 1993

-University of Patras, Patras, May, October 1993

-Aristotel University of Thessaloniki, December 1993

-Hellenic Mathematical Society, March 1994

-University of the Aegean, April 1994

-1st Panhellenic Conference on Geometry, University of Ioannina, May 1994

-Internanional Conference on Differential Geometry and Applications, Brno, Czech Republic, August-September 1995

-University of Patras, Patras, December 1995

-Agricultural University of Athens, April 1996

-5th Colloquium on Quantum Groups and Integrable systems, Czech Technical University, Prague, June 1996

-2nd European Congress of Mathematics, Budapest, July 1996

-International Conference on Differential Geometry, Eotvos University, Budapest, July 1996

-Seminar on Differential Geometry and Mathematical Physics, University of Rochester, Rochester, NY, April 1997

-3rd Panhellenic Conference of Geometry, University of Athens, May 1997

-International Conference on Differential Geometry and its Applications, Masaryk University, Brno, Czech Republic, August 1998

- 4th Panhellenic Conference of Geometry, University of Patras, May 1999
- American Mathematical Society, Mathematical Challenges for the 21st Century, University of California, Los Angeles, August 2000.
- International Conference on Differential Geometry in memory of Alfred Gray, Bilbao, Spain, September 2000.
- 5th Panhellenic Conference of Geometry, Aristotel University of Thessaloniki, May 2001.
- International Conference on Differential Geometry and its Applications, Silesian University, Opava, Czech Republic, August 2001.
- Yorkshire Differential Geometry Day, University of Hull (UK), November 2001.
- Faculty seminar series, The American College of Greece (Deree), October 2002.
- Greek Mathematical Society – Patras branch, January 2003.
- 6th Panhellenic Conference of Geometry, University of Cyprus, May 2003
- Tokyo Metropolitan University, Department of Mathematics Seminar, June 2004.
- Osaka University, Department of Mathematics Seminar, June 2004.
- Toyama University, Department of Mathematics Seminar, June 2004.
- International Conference on Differential Geometry and its Applications, Charles University, Prague, Czech Republic, August 2004.
- 7th Panhellenic Conference of Geometry, University of the Aegean, Samos, May 2005
- International Conference in Differential Geometry and Physics, Eötvös University, Budapest, August 2005.
- Symmetry in Geometry and Physics, in honor of D.V. Alekseevsky, Università LaSapienza, Rome, September 2005.
- Geometry Seminar, University of Durham, UK, November 2005
- Mathematics Colloquium, University of Leeds, UK, November 2005
- Geometry Seminar, University of Warwick, UK, November 2005
- Mathematics Colloquium, University of Patras, March 2006
- International Congress of Mathematicians, Madrid, Spain, August 2006.
- 8th Panhellenic Conference of Geometry, University of Ioannina, May 2007
- International Conference on Differential Geometry and its Applications, Olomouc, Czech Republic, August 2007.
- Conference on Differential Geometry and Dynamical Systems, Bucharest, October 2007
- 9th Panhellenic Conference of Geometry, University of Crete, May 2009
- Euroscience Mediterranean Event (ESME 2009), “Technopolis”, Athens, October 2009.
- 1st Conference on submanifold geometry, Shimane University, Matsue, Japan, December 2009
- 10th International Conference on Differential Geometry and Applications, Masaryk University, Czech Republic, August 2010
- Geometry Seminar, Palacky University, Olomouc Czech Republic, November 2010
- 10th Meeting of Seminar “Sophus Lie”, Marburg (Castle Rauischholzhausen) Germany, January 2011
- Geometry Seminar, Masaryk University, Brno Czech Republic, December 2011
- International Conference on Complex Analysis, Operator Theory and Mathematical Modeling, Volgodonsk, Russia, June 2011.
- Geometry Seminar, University of Maryland College Park, April 2012.
- Geometry and Topology Seminar, University of Rochester, NY, April 2012.
- Algebraic Geometry Seminar, Tufts University, April 2012.
- Workshop “Geometric structures on manifolds and their applications”, Marburg (Castle Rauischholzhausen) Germany, July 2012.
- The 4th Geometry Meeting (dedicated to the centenary of A.D. Alexandrov), Euler Institute of Mathematics, St. Petersburg, Russia, August 2012.
- Geometry Seminar, Masaryk University, Brno Czech Republic, March 2013.
- 11th Panhellenic Conference of Geometry, University of Athens, May 2013

- 11th International Conference on Differential Geometry and Applications, Masaryk University, Czech Republic, August 2013
- Mathematics Colloquium, University of Cyprus, November 2013.
- Mathematics Colloquium, University of Thessaloniki, January 2014.
- Workshop on Neurogeometry and other (related) problems, Humpolec, Czech Republic, April 2014.
- Panhellenic Algebra Conference, University of Thessaloniki, May 2014.
- Geometry Seminar, Faculty of Mathematics and Computer Science, Philipps-Universität Marburg, May 2014.
- 47th Meeting of Seminar “Sophus Lie”, Marburg (Castle Rauschholzhausen) Germany, May 2014.
- Algebra and Geometry Seminar, Tufts University, September 2014.
- “Every topic seminar”, Brandeis University, October 2014.
- PDE, Complex Analysis and Differential Geometry Seminar, University of Notre Dame, October 2014.
- Geometry and Topology Seminar, Georgia Inst. of Technology (Georgia Tech), School of Mathematics, October 2014.
- Lie Groups Seminar, Massachusetts Inst. of Technology (MIT), Department of Mathematics, October 2014.
- Mathematics Colloquium, Tufts University, Department of Mathematics, November 2014.
- Geometry Seminar, University of Rochester, Rochester NY, November 2014.
- Geometry and Topology Seminar, McMaster University, Hamilton ON, December 2014.
- Geometry Seminar, Hiroshima University, April 2015.
- Geometry Seminar, Waseda University, April 2015.
- 12th Panhellenic Conference of Geometry, University of Thessaloniki, May 2015
- 12th International Conference on Differential Geometry and Applications, Masaryk University, Czech Republic, July 2016.
- Geometry Seminar, Waseda University, March 2017.
- The Mathematical Society of Japan, Annual Meeting 2017 at Tokyo Metropolitan University, March 2017.
- 13th Panhellenic Conference of Geometry, University of Cyprus, May 2017.
- Geometry and Topology Seminar, McMaster University, Hamilton ON, March 2018.
- XX Geometrical Seminar, Vrnjačka Banja, Serbia, May 2018.

Publications on Mathematics Education or of General Interest (in Greek)

“*The Taniyama-Shimura conjecture and Fermat’s last theorem*”, Euclid B’ 20 (1995) Greek Math. Society.

“*Algebra and secret codes*”, Euclid B’ 21 (1996) Greek Math. Society.

“*How long does it take for a snow-ball to melt? (An application of the chain rule)*, Euclid B’ 22 (1996) Greek Math. Society.

“*Would it be possible to teach the notion of curvature in the secondary education level?*”, Euclid Γ’ 46 (13) (1996) Greek Math. Society, 37-46.

“*Mathematical modeling problems*”, Proceedings of the 14th Conference in Mathematics Education, Greek Math. Soc. Mitilini 1997, 136-143.

“*The Mathematica symbolic computation system: from the research experience to the classroom*”, Proceedings of the 15th Conference in Mathematics Education, Greek Math. Soc. Chios 1998, 313-318.

“Understanding and evaluating mathematical concepts in the lyceum”, (joint with F. Paraskeva) Proceedings of the 16th Conference in Mathematics Education, Greek Math. Soc. Larissa 1999, 81-87.

“Recent developments in mathematics and open problems for the twenty first century”, Euclid B’ 34 (1999) Greek Math. Soc.

“Various forms of the infinity”, Euclid B’ 35 (2000) Greek Math. Soc.

“Small secrets of the large numbers”, Euclid B’ 37 (2000) Greek Math. Soc.

“Interaction of ideas between geometry and physics”, Proceedings of the 17th Conference in Mathematics Education, Greek Math. Soc. Athens 2000.

“Mathematics and Radio Frequences”, Euclid B’ 39 (2001) Greek Math. Soc.

“Security in data transfer and the mathematics of cryptography”, Proceedings of the 19th Conference in Mathematics Education, Greek Math. Soc. Komotini 2002.

“Mathematical thinking under the prisma of cognitive learning theories: demands of modern classrooms”, (joint with F. Paraskeva) Euclid Γ’ 59 (13) (2003) Greek Math. Society, 107-119.

“Isomorphisms of mathematical problems”, Proceedings of the 21st Conference in Mathematics Education, Greek Math. Soc. Trikala 2004.

“The Poincaré conjecture: a problem that mathematicians still work on, and after its solution”, Proceedings of the 23rd Conference in Mathematics Education, Greek Math. Soc. Patras 2006.

“Some questions and answers about mathematics”, in: «Honorary», Special volume for Professor Th. Exarchakos, Dept. of Education, Univ. of Athens, 2006 771-778.

“The Poincaré conjecture...was answered positively”, Euclid B’63 (2007) Greek Math. Soc.

“Exponential mathematical models in social sciences”, Proceeding of 8th Panhellenic Conf. on “Mathematics in Social Sciences”, Univ. of Athens, Dept. of Education, Athens 2009, 185 - 193.

“Information retrieval by using methods of linear algebra”, Proceedings of the 25th Conference in Mathematics Education, Greek Math. Soc., Volos 2008, 173-184.

“An application of the theory of curves and surfaces in a construction problem”, Proceedings of the 29th Conference in Mathematics Education, Greek Math. Soc., Kalamata 2012, 76-85.

“Internet search using methods of linear algebra”, Open Education – The Journal for Open and Dist. Educ. and Educ. Technology, 8 (1) (2012) 119-127.

“Finding geodesics on surfaces by using Clairaut’s theorem”, Proceedings of the 30th Conference in Mathematics Education, Greek Math. Soc., Karditsa 2013, 135-145.

“*Application of mathematics in oligopoly markets*”, Proceedings of the 32th Conference in Mathematics Education, Greek Math. Soc., Kastoria 2015, 86-96.

Member in Special Editorial Boards

- Bulletin of the Greek Mathematical Society vol. 44 (2000) (joint with B. Papantoniou). This volume contains the proceedings of the 4th Panhellenic Geometry Conference, held in Patras in May 1999.

- “*Research Experiences in the Teaching of Geometry*”, (joint with B. Papantoniou and D. Potari). Book published (in Greek) by the “Patakis” publ. (2001) which contains the proceedings of the above conferences referred to the teaching of Geometry.

Other activities

2018 Member of the Scientific Committee and co-organizer for the Geometry Session of the *First Congress of Greek Mathematicians*, Hellenic Mathematical Society, Athens, June 2018.

2017 Referee for research proposal from Cyprus Science Foundation.

2016- Member of the Editorial Board of the journal "Bulletin of the Hellenic Mathematical Society (New Series)"

2016 Academic Coordinator for Mathematics in the *Seminars on Teaching 2016 - Union of Teachers in Private High-Schools of Greece*, Patras, November 2016.

2013 Referee for research proposal at the Czech Science Foundation

Refereed papers for the journals *Advances in Geometry*, *Houston Journal of Mathematics*, *Bulletin of the Greek Math. Soc.*, *Open Mathematics Journal*, *Indagationes Mathematicae*, *Mathematische Nachrichten*, *Osaka Journal of Mathematics*, *Journal of Mathematical Physics*, *Analysis and Geometry*, *Bulletin of the Canadian Mathematical Society*, *Journal of Mathematical Analysis and its Applications*, *Journal of Differential Geometry and its Applications*, *Mathematische Zeitschrift*, *Annals of Global Analysis and Geometry*, *Journal of Geometric Analysis*, *Bulletin of the Brazilian Math. Soc.*, *Modern Physics Letters A* and a book for Springer publications

2013- Vice editor-in-chief of the journal “Mathematics Review” of the Greek Math. Soc.

2011- Member of the editorial board of the “Theoretical Mathematics and Applications”.

2010- Member of the editorial board of the “Open Mathematics Journal”.

2010- Member of the editorial board of the journal “Mathematics Review” of the Greek Math. Soc.

2009- Member of the editorial board of the journal “Euclid Γ” of the Greek Math. Soc.

2013 Member of the scientific committee of the conference Differential Geometry and Dynamical Systems, Bucharest, October 2013.

2012 Member of the scientific committee of the 29th Greek Mathematical Society Congress held in Kalamata, November 2012.

2011 Member of the scientific committee of the 28th Greek Mathematical Society Congress held in Athens, November 2011.

2010 Member of the scientific committee of the 27th Greek Mathematical Society Congress held in Chalkida, November 2010.

2009 Member of the scientific committee of the 26th Greek Mathematical Society Congress held in Thessaloniki, November 2009.

2006- Reviewer in Zentralblatt MATH of the European Mathematical Society.

2007 Member of the scientific committee of the conference Differential Geometry and Dynamical Systems, Bucharest, October 2007.

2007 Member of the scientific committee of the 24th Greek Mathematical Society Congress held in Kozani, November 2007.

- 2006 Member of the scientific committee of the 23rd Greek Mathematical Society Congress held in Patras, November 2006.
- 2005 Member of the Organizing Committee of the Summer School “Stochastic Differential Geometry and Applications in Finance”, Thermo-Greece, July 10-17, 2005
- 2004 Member of the organizing committee of the Geometry Day, University of Patras, Department of Mathematics
- 2003 Member of the organizing committee of the 3rd Mediterannian Congress in Mathematics Education, Athens, January 2003.
- 2002 Member of the scientific committee of the 19th Greek Mathematical Society Congress held in Komotini, November 2002.
- 2001 Member of the scientific committee of the 17th Greek Mathematical Society Congress held in Phodes, November 2000.
- 2000- Reviewer in “Mathematical Reviews” of the “American Mathematical Society.
- 2000 Translator for the subjects “Mathematics”, “Physics” and “Astronomy” in the Abridged Dewey Decimal Classification System, Edition 13. Coordinator: National Science Foundation-National Documentation Center.
- 1999- Member of the Editorial Board of the journal “Mathematics Reviews” of the Greek Mathematical Society
- 1999 Member of the organizing and scientific committee of the 4th Panhellenic Geometry Conference held in Patras.

Professional Memberships

American Mathematical Society, Hellenic Mathematical Society

Hobbies

Classical Guitar (Diploma), fine arts, photography