Seyed Mohammad Bagher Kashani
Professor of Mathematics

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Profile

Professor of Mathematics specializing in Differential Geometry and Topology. Over 30 years of academic and research experience, supervising about 100 M.Sc. and 12 PhD students. Active contributor to the mathematical community through editorial board roles, publications, administrative and professional affiliations.

Education
• Ph.D. in Pure Mathematics, University of Leeds, U.K., 1988

Dissertation: Isoparametric Submanifolds in Pseudo-Riemannian Spaces (Supervisor: Prof. Alan West)

• M.Sc. in Pure Mathematics, University of Warwick, U.K., 1985

Dissertation: The Classification of Germs of Low Codimension and Whitney's Theorem (Supervisor: Prof. Ian Stewart)

• B.Sc. in Pure Mathematics, Sharif University of Technology, Tehran, Iran, 1980

Professional Memberships
• American Mathematical Society (AMS)

• London Mathematical Society (LMS)

• Iranian Mathematical Society (IMS)

Editorial Activities
• Bulletin of Iranian Mathematical Society (2004–2007, 2010–2016)

• Journal of Sciences, Islamic Republic of Iran (2015–2018)

• J. Mathematical culture and thought for more than 9 years

  Mathematical Reviewer of the American Math. Soc.

Academic Positions

• Professor, Tarbiat Modares University (2006–Present)

• Associate Professor, Tarbiat Modares University (2000–2006)

• Assistant Professor, Tarbiat Modares University (1989–2000)

• Assistant Professor, Sharif University of Technology (1988–1989)

Sabbaticals

- Sabbatical leave for 3 months at Math. Inst. of Warwick Univ., England, UK., June-Sep. 2017
- Sabbatical leave for 6 months at Math. Inst. of Warwick Univ., England, UK., Feb-Sep. 2007
- Sabbatical leave for 9 months at ICTP., Trieste, Italy, July1995-April 1996 (awarding monthly financial support from ICTP at about 1500 Us dollars)

Talks at the following conferences and awarding full/partial financial support from the organizers for my participation:

- Int. Mathematische Arbeitstagung 10-19 June 2005 and 5-11 June 2009 and 8-12 July 2019, MPIM, Bonn, Germany
- ICTP School on geometry and gravity, 15-26 July 2019, Trieste, Italy and many other ICTP schools/workshops/conferences before 2019
- Poisson 2012: Summer school and conference23 July- 03 Aug 2012, Utrecht, Netherland and Poisson 2016, 27 June-8 July 2016, Geneva, Zurich, Switzerland
- CIMPA-UNESCO-China School differential geometry: theory and applications, 7/8-18/8/2006, Shanghai, China
- Conference Geometrie hyperbolique complexe 15-19 July 2003, CIRM, Luminy, France
- Int. congress of mathematicians, 20-28 Aug 2002, Beijing, China
- CIMPA summer school Geometric methods for quantum field theory, 12-30 July 1999, Villa de Leyva, Colombia
- Inter. congress of mathematicians, 17-27 Aug 1998, Berlin, Germany
- Inter. congress of mathematicians, Aug 21-29, 1990, Kyoto, Japan

Courses Taught

• Undergraduate: Analysis 1 & 2 & 3, General Topology, differential geometry of curves and surfaces

• Graduate: Geometry of manifolds 1& 2 & 3, Algebraic topology 1 & 2, differential topology and differential geometry (homogeneous and symmetric spaces) , Gauge Theory

Research Interests

• Geometry

• Topology

Supervision

• Supervising about 100 MSc and 12 PhD students.

Translations into Persian

- Math. Encyclopedia (translation from English into Persian) Inst. for Humanities and cultural Studies, Faculty of Encyclopedia Research, vols 1-5, years 2010, 2014,2016, 2019, 2024 , Tehran, Iran
- All the following papers appeared in J. Mathematical Culture and Thought
- Quantum Spaces and Their Non-commutative Topology
- Leaving Mathematics for Philosophy
- The Road to Reality
- Conjectures No More?
- The Nature of Space

Publications

No	Title	Journal	co-authors
1	On quadratic isoparametric functions and submanifold	Bulletin of Iranian mathematical society.vol .18,no.2 (1992) 31-39	----
2	Minimal surfaces (in Persian)	*Nashr-I-Ryazy.vol4,no.3(1992)10-17*	----
3	Four manifolds (in Persian)	*Nashr-I-Ryazyvol.6,no.1,2(1994)8-12*	----
4	Isoparametric Functions and Submanifolds	Glasgow Math. J.35(1993)145-152	----
5	Quadratic Isoparametric Systems in R_{p}^{n+m}	Glasgow Math. J.35(1993)135-143	----
6	Codimension isometric immersions between pseudo spheres	Geom. Ded.56:263-268.1995	----
7	Hypersurfaces in IR1n satisfying $\Delta X=AX+B$	*Alg groups and geom..13,81-91(1996)*	----
8	On the existence of MFD intermediate shock waves for rectilinear motion in somemodels of plasma	Bulletin of Iranian mathematical society.vol.22,no.2.pp.1-18(1996)	Hsaraki-M
9	On some submanifolds with flat space like normal bundle in pseudo Riemannian	*Southeast Asian Bull of Math.(1999)23:19-31*	----
10	Cohomogeneity one revolution hypersurfaces of the Euclidean space	*Southeast Asian Bull of Math.(1999)23:633-642*	----
11	Hypersurfaces of the hyperbolic space (in Persian)	*Nashr-I-Ryazy.1999,vol.10,no.1.12-20*	----
12	Topological properties of some cohomogeneity one Riemannian manifolds of non positive curvature	Bulletin of Korean Math. Soc.37(2000),no.3,pp.587-599	Mirzaie.R
13	Cohomogeneity one revolution hypersurfaces of the sphere	Italian Journal of pure & applied Math.no.10-2001(181-190)	Etemadi.A
14	Compact homogeneous hypersurfaces of the hyperbolic space	Southeast Asian Bull of Math.(2002)26:223-225	Etemadi.A
15	On cohomogeneity one flat Riemannian Manifolds	Glasgow Math.J.44(2002)185-190	Mirzaie.R
16	On the topological properties of some cohomogeneity one manifolds of non positive carvature	Italian Journal of pure and applied math.no.15-2004(49-56)	----
17	On some compact space like submanifolds of pseudo-sphere	Geom. Ded.108:125-130,2004	----

18	Cohomogeneity one Riemannian manifolds of non-positive curvature	Diff. geom. Appl,25(2007)p561-581	Alekseevesky.D. V, Abedi.H
19	Cohomogeneity one Riemannian manifolds of constant positive curvature,	Journal of Korean Math. Soc.44(2007),no.4,pp799-807	Abedi-H
20	totally geodesic singular orbits and symmetric singular orbits in cohomogeneteity one riemennian manifolds	Lobachevskii journal of math.2008,vol.22,no.4,p193 - 205	Alekseevesky.D. V,Abedi.H
21	Umbilicity of (space-like) submanifolds of pseudo-Riemannian space forms	*Journal of Scinces,IRI.20(2):153 -157(2009)*	---
22	On some L_1-finite type (hyper)surfaces in R^{n+1}	Bull.korean math.soc.46(2009),no.1,35-43	---
23	Cohomogeneity one anti de Sitter space $(H^3)_1$	Bulletin of iranian mathematical society.vol.35,no.1(2009),223-235	Ahmadi.P
24	cohomogeneity one de Sitter space $(S^n)_1$	Acta Math. Sinica, English version,2010,vol.26,no.10,1915-1926	Ahmadi.P
25	Hypersurfaces in space forms satisfying the condition Lkx=Ax+b	Taiwanese J. Math(,vol.14,No.5,pp.1957-1977oct2010)	Alias-l.J
26	cohomogeneity one Minkowski space $(R^n)_1$	Publications Math. Debrecen78/1,(2011),49-59	Ahmadi.P
27	Timelike Hypersurfaces in the Standard Lorentzian Space Forms Satisfying L k x = Ax + b	Mediterranean Journal of Mathematics, Agust 2014, 11, 755-773	F. Pashaie
28	Some integral formulas for the (r+1)th mean curvature of a closed hypersurface	Int. J. Math. &Math sciences,vol 2012, article ID 784028	A.Mohammadpouri
29	On some Lk -finite – type Euclidean Hypersurfaces	ISRN Geometry, vol 2012-article ID 591296	A.Mohammadpouri
30	Quadric hypersurfaces of Lr -finite type	Countribution to Alg. & Geom., 2013, 54, 625-641	A. Mohammadpouri
31	On some L1 finite type Euclidean surfaces	Acta Mmath Vietnam, 2013 38,303-316	A. Mohammadpouri, F. Pashaie
32	Isotropic Lagrangian submanifolds in complex space forms	Journal of Sciences,IRI, 2012, 23(3), 257-262	Z. Toyserkani
33	L_k Biharmonic Hypersursurfaces in the eucliden space	Taiwanese journal of mathematics, Vol. 19, No. 3, 2015,861-874	M. Aminian
34	L_k Biharmonic Hypersursurfaces in the space Form	*Acta math. Vietnam (2017)42,3,471-490*	M. Aminian
35	On cohomogeneity one non-simply connected 7-manifolds	Bull. Iranian Math . Soc. Vol. 42 (2016), No. 3, 565-584	M.Zarei and H. Abedi
36	cohomogeneity one Anti De Sitter space AdS^{n+1}	Lobachevskii Journal of Math. Vol 37, No. 2, 2016,205-214	M.J. vanaei, E. Straume
37	Cohomogenity one actions on anti de sitter Spacetime	*Results in Math 72(2017),515-536.*	M.J. vanaei, J. c. Diaz-Ramos.
38	Perelman entropy functional at type 1 singularity on complete manifolds	Bull. Iranian Math. Soc.44(2018)519-1542	M. H. Mostafid

39	Riemannian hypersurfaces in Ln+1 with a totally geodesic foliation of codimension One	J. Geom. (2019) 110:22 2019 https://doi.org/10.1007/s00022-019-0477-z	M.J. Vanaei, S.M. Yaghoobi
40	*Real Hypersurfaces in Q^m with Commuting Structure Jacobi Operator*	Bull. Iran. Math. Soc. (2021) 47:351-370 DOI 10.1007/s41980-020-00387-5	N.Heidari, M. J Vanaei
41	*Comparison geometry for an extension of Ricci tensor*	Results in Math., vol 76, article no.:215 (2021)	S. Azami, S.H. Fatemi,
42	*Geodesic completeness of some Lorentzian simple Lie groups*	J. Lie Theory, vol 35 (2025) 239-261.	E. Ebrahimi, M.J. Vanaei
43	*Hypersurfaces in non-flat Lorentzian space forms with a t. g. foliation of codimension one*	Results in Math., (2025) 80:120	N. Heidari, M.J. Vanaei
44	*Mirror Symmetry (in Persian)*	J. Mathematical Culture and Thought, April 2025	

Research Projects

Math. Research Projects with the support of Iranian research Institutes.

Awards and Prizes

National prizes and honors and many financial supports from ICTP, CIMPA, MPIM for research activities

Administrative jobs

- Education/research deputy head of Faculty of Basic sciences and the head of Pure Math. Department for many years.
- Organizing seminars and national/ international math. conferences at TMU, Tehran, Iran

Languages

Persian (native), English (fluent), Italian (moderate), Arabic (full grammar)

Hobbies

Reading social sciences books and hiking.