In the name of Allah

CV of Seyed Ebrahim Akrami

March 6, 2019

1 Personal Information

- Date of Birth: July 1972, Tehran Iran
- Date of Marriage: September 2000
- Citizenship: Semnan Iran
- Gender: Male

2 Contact Details

- Department of Math Semnan University, Iran
- E-mail: akramisa@ipm.ir

3 Research Interests

1. Classical differential geometry and algebraic-differential topology
2. Modern differential geometry (including NCG and quantum groups) and modern algebraic-differential topology (including miscellaneous versions of Floer homology, TQFT)
3. Dynamical systems: classical and quantum Mechanics and Field Theory. General relativity

4 Education

• B.S. in mathematics, Uni. of Tehran 1990-1994 (rank of entrance exam: 834)
• M.S. in mathematics (differential geometry), Sharif Uni. Tech. 1994-1997 (rank of entrance exam: 3).
-Thesis title: On the K-theory proof of the Atiyah-Singe theorem
-Supervisor: Prof. A. Shafie
-Passed courses: Manifold I, advanced algebra, real analysis, algebraic topology, complex analysis and partial differential equations
• PhD. in mathematics (Noncommu. diff. geo. and quantum groups), Uni. of Tehran and Queen Mary College of London 1999-2004
-Thesis title: Braided cyclic cohomology
-Supervisors: Prof. A. Shafie and Prof. Shahn Majid
-Passed courses: Operator alagebras I, II, cyclic homology, K-theory, Noncommutative geometry, quantum groups, TQFT

5 Positions held

• Research visitor of Pro. Shahn Majid, March 2002-February 2003, Queen Mary University of London, on the area of NCG and quantum groups
• Post-doc in mathematics department IPM Iran 2004-2006, on the area of mathematical foundation of quantum mechanics
• Research visitor of Pro. M. Golshani, Phys. department IPM, September 2010-March 2011 on the area of mathematical foundation of quantum mechanics

6 Teaching

6.1 Undergraduate

-General mathematics I, II, III
-Mathematical analysis I, II, III
-Differential equations
-Differential geometry
-Foundation of Geometry
-Topics in mathematics: mathematical introduction to robotics

6.2 Graduate

-Manifold I, II
-Mathematical introduction to robotics

-Algebraic Topology

7 Publications

7.1 Published

1. Braided cyclic cocycles and nonassociative geometry, S.E. Akrami, S. Majid - Journal of Mathematical Physics, 2004

7.2 Accepted

1. Generalized Matrices, K- Theory and Cyclyc Cohomology, S. E. Akrami and R. Mohammdadi in the journal of Mathematical Reports 2017

2. On the Spectrum of a Special Operator and Application in Hamiltonian Mechanics, in Journal of Applied Analysis (2018)

3. Covariantization of Quantized Calculi over Quantum Groups, Akrami Seyed Ebrahim, Farzi Shervin, in Mathematica Bohemica 2019

7.3 Submitted

1. Partial Dynamical Systems and Partial Geodesic Equations, joint with Farzi Shervin, submitted to Inter. J. Diff. Eq. Dyna. Sys.

2. Partial geodesics equations versus ordinary geodesics equations, joint with R. Mohammadi, submitted to journal of Differential Equations and Dynamical Systems 2018

8 Conferences and Talks

8.1 Conferences and seminars

1. Quantum differential geometry, 7th seminar in geometry and topology, Iran University of Science and Technology 2013

2. The interplay between math and robotics, in 45th Math Con of Iran, 2014

3. Geometric solution of inverse kinematics problem of serial robots, joint with Alavisefat and Hojattipour, in 45th Math Con of Iran, 2014

4. Field Geometry and Mechanics, in 8th seminar on geometry and topology 2015

9 Talks

1. From classical manifolds to quantum manifolds, Math Dep. Semnan U. 2012
2. Quantum geometry and particle-field theory, Math dep. Semnan U. 2015
3. Quantum analysis, Math Dep. Semnan U. 2016
4. Reformulation of Quantum Mechanics via Revision in Atomic Theory, Phy. Dep. IPM, Oct. 2017
5. Derivation of Schrdinger equation, Phys. Dep. Semnan Uni. 2017
6. On the Concept of Space, Math Dep. Analysis Seminars, IPM, 2018

10 Research Projects

1. Geometry and Mechanics of Fields, Sponsor: Semnan uni. 2015-2016

11 Students

11.1 Graduate Thesis

1. Singular analysis of parallel robots, 2014
2. Generalized exponential function formula for kinematics of serial robots, 2014
3. Analysis of tendon robots based on POE, 2014
4. Local isometric embedding of analytical and smooth manifolds in Euclidean spaces, 2015
5. Global isometric embedding of smooth manifolds in Euclidean spaces, 2015
6. Hilbert theorem, 2015
7. On the Arnold's conjecture (3 projects) 2016
8. Semi-Riemnnian manifolds and applications 2017

11.2 PhD Thesis

1. Topics in quantum geometry, 2014-2018
2. Modern models of geometry, 2014-2018