



# Rohollah Bakhshandeh Chamazkoti

## Curriculum Vitae

### Experience

2012–Now Assistant Professor: Faculty of Basic Sciences, Babol Noshirvani University of Technology, Babol, Mazandaran

### Research Visit

Jun– Sep 2017 Technische Universitat Darmstadt, Petersenstrae 30, Darmstadt 64287, Germany.  
By invitation from Professor Martin Oberlack

May – Oct 2011 Linköping University, Sweden. By invitation from Professor Peter Basarab-Horwath

### Education

2008–2012 **PhD in Differential Geometry**, *Iran University of Technology*, Tehran, Iran.  
Thesis topic: The method of Cartan equivalence problem and its applications

2006–2008 **Masters in Differential Geometry**, *Iran University of Technology*, Tehran, Iran.  
Thesis topic: Generating differential invariants

2002–2006 **Bachelor in Pure Mathematics**, *University of Mazandaran*, Babolsar, Iran.

### Teaching Experience

#### Babol Noshirvani University of Technology

2012–Now **BSc Courses**.  
Calculus 1, Calculus 2, Ordinary Differential Equations, Foundation of Mathematics, Linear Algebra, General Topology, Foundation of Geometry, Elementary Differential Geometry,

**MSc Courses**.  
Differentiable Manifolds, Lie Groups and Lie Algebras, Algebraic Geometry

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2011–2016 **BSc Courses.**

Calculus 2, Real Analysis III

**MSc Courses.**

Differentiable Manifolds, Riemannian Geometry

## Papers

1. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Fuzzy Lie Groups, Mathematical Science , Vol. 2, No. 2, 193-206, (2008).
2. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, A. Mehdipour-Shirayeh, A symmetry classification for a class of  $(2+1)$ -nonlinear wave equation, Nonlinear Analysis, Vol. 71 5164-5169, (2009).
3. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Fuzzy differential invariant (FDI), Chaos, Solitons and Fractals, Vol.42, 1677-1683, (2009).
4. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, The Special Linear Representation of Compact Lie Group, Mathematical Sciences, Vol. 4, No. 3 349-358, (2010).
5. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Symmetry group classification for general Burgers' equation, Commun Nonlinear Sci Numer Simulat, Vol. 15, 2303-2310, (2010).
6. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Preliminarily group classification of a class of 2D nonlinear heat equations, IL NUOVO CIMENTO, Vol. 125 B, No. 12, (2010).
7. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, F. Ahangari, Potential symmetries and conservation laws for generalized quasilinear hyperbolic equations, Appl. Math. Mech. -Engl. Ed., Vol. 32, No. 12, 1607–1614, (2011).
8. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Cartan equivalence method for third order differential operators, Turk. J. Math., Vol. 37, 949–958, (2013).
9. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, The equivariant moving frame method of third order differential equations, Bull. Malays. Math. Sci. Soc., Vol. 37 (2), 487–498, (2014).
10. M. Nadjafikhah, R. Bakhshandeh Chamazkoti, Web geometry of a system of first order autonomous ordinary differential equations, J Dyn Control Syst, Vol. 21, 655-663, (2015)
11. R. Bakhshandeh Chamazkoti, The Geometry of Fourth Order Differential Operator, International Journal of Geometric Methods in Modern Physics, Vol. 12, 1550055, (2015).
12. R. Bakhshandeh Chamazkoti, M. Nadjafikhah, The stability of a connection on Hermitian vector bundles over a Riemannian manifold, Asian-European Journal of Mathematics, Vol. 09, No. 01, 1650001 (2016).
13. R. Bakhshandeh-Chamazkoti, Symmetry analysis of the charged squashed Kaluza-Klein black hole metric, Mathematical Methods in the Applied Sciences, Vol. 39, 3163–3172, (2016).
14. R. Bakhshandeh Chamazkoti, Geometry of the curved traversable wormholes of  $(3+1)$ -dimensional spacetime metric, International Journal of Geometric Methods in Modern Physics, Vol. 14, 1750048, (2017).
15. R. Bakhshandeh Chamazkoti, Martin Oberlack, Geometry of two-point velocity correlation tensor of incompressible and isotropic turbulence in helical coordinates, Journal of Mathematical Physics, Vol. 59, 103507 (2018).
16. R. Bakhshandeh Chamazkoti, M. Alipour, On Lie Symmetry Classification and Numerical Analysis of KdV Equation with Power-law Nonlinearity, MATH. REPORTS 22(72), 2 (2020), 163–176.
17. D. Farrokhi, R. Bakhshandeh Chamazkoti, M. Nadjafikhah, On the invariance properties of Vaidya-Bonner geodesics via symmetry operators, Accepted for publication "International Journal of

Nonlinear Analysis and Applications", (2020).

## Conference Talks

1. Classification of Lie symmetries for general Burger's equation
  - 40<sup>th</sup> Annual Iranian Mathematics Conference (Talk)– Sharif University of Technology, Tehran, Iran. (August 2009).
2. Lie symmetry analysis and Linearization of Difference equations
  - Doctoral seminar – School of Mathematics, Iran University of Science and Technology, (October 2009).
3. Abelian algebra as symmetries of third order nonlinear evolution equations
  - Differential Geometry and Differential Equations' Seminars – Iran University of Science and Technology, (December 2011).
4. The gauge equivalence problem of fourth order differential operators
  - 7<sup>th</sup> seminar on Geometry and Topology – Iran University of Science and Technology, (January 2014).
5. The gauge equivalence problem of fourth order differential operators
  - 46<sup>th</sup> Annual Iranian Mathematics Conference (Talk) – Yazd University, (August 2015).
6. Exterior Differential System and Partial Differential Equations
  - 49<sup>th</sup> Annual Iranian Mathematics Conference (Talk) – Iran University of Science and Technology, (August 2018).

## Academic Service and Contributions

- Results in Physics
- Nonlinear Analysis: Real World Applications
- Computational and Applied Mathematics
- Physica D: Nonlinear Phenomena
- International Journal of Nonlinear Analysis and Applications
- Iranian Journal of Fuzzy Systems
- International Journal of Industrial Mathematics
- Mathematical Sciences Quarterly Journal (MSQJ)
- Caspian Journal of Mathematical Sciences
- Indian Journal Science and Technology
- Advances in Applied Mathematics and Mechanics
- Physica A: Statistical Mechanics and its Applications
- Journal of Physics A: Mathematical and Theoretical
- Mathematical Researches
- Algebraic Structures and Their Applications

## Computer skills

Intermediate HTML, Office, Linux, Microsoft Windows

Advanced L<sup>A</sup>T<sub>E</sub>X, Maple

## Languages

Persian **Mothertongue**

English **Fluent**

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