

EDUCATION	
B.S. IN PURE MATHEMATICS	2004-2008
University of Mohaghegh Ardabili (Iran), Total GPA: 17.82/20	
B.S. IN CIVIL ENGINEERING	2006-2010
University of Mohaghegh Ardabili (Iran), Total GPA: 17.15/20	
M.Sc. in Pure Mathematics	2008-2010
M.Sc. thesis: Geometrical theory of fluid flows and dynamical system	
University of Mohaghegh Ardabili (Iran), Total GPA: 17.16/20	
Ph.D. IN PURE MATHEMATICS	2013-2017
Ph.D thesis: On the classification of semi-symmetric contact metric manifolds	
Azarbaijan Shahid Madani University (Iran), Total GPA: 19.50/20	

### SKILLS \_\_

 ENGINEERING SOFTWARE
 Experienced:
 AutoCAD

 MATHEMATICAL SOFTWARE
 Experienced:
 Matlab

 PROGRAMMING LANGUAGES
 Familiar:
 Python
 Libraries:
 Matplotplib
 Numpy
 Pandas
 Scikit-learn
 PyTorch

 Word Processors
 Experienced:
 TEX
 Microsoft Word

 LANGUAGES:
 Native:
 Persian
 Turkish
 Fluent:
 English

# **RESEARCH INTEREST**

- Differential Geometry and its Application in Deep Learning
- Riemannian Geometry and its Application in Deep Learning
- Manifold Learning (Machine Learning)
- Information Geometry (Machine Learning)
- Shape Analysis (Computer Vision)

RESEACH EXPERIENCE VISITING STUDENT UNDER SUPERVISION OF PROF. THOMAS DELZANT, STRASBOURG UNIVERSITY, STRASBOURG (6 MONTHS)	2016 / France
IRAN'S NATIONAL ELITES FOUNDATION	2010-2013 / Full Time
Research Project Coordinator	
Tehran Mathematics House	2017 - 2022 / Full Time
Scientific Unit Manager $\mid$ Team Leader and Supervisor in WMC & IMC & ASMO	
TEACHING EXPERIENCE	
CALCULUS I AND II	Part time
Mohaghegh Ardebili University (2010-2012)   Azarbaijan Shahid Madani University (2013-2015)	
Farhangian University (2018-Present)	
DIFFERENTIAL EQUATIONS	Part time
Mohaghegh Ardebili University (2010-2012)   Azarbaijan Shahid Madani University (2014-2015)	
Farhangian University (2018-Present)	
DISCRETE MATHEMATICS	Part time

MOHAGHEGH ARDEBILI UNIVERSITY (2010-2012) | AZARBAIJAN SHAHID MADANI UNIVERSITY (2014-2015)

#### GEOMETRY

MOHAGHEGH ARDEBILI UNIVERSITY (2010-2013) | AZARBAIJAN SHAHID MADANI UNIVERSITY (2013-2015)

## PUBLICATION .

- N. Malekzadeh, E. Abedi, Semi-symmetric contact metric manifolds of dimension ≥ 5, Turkish J. Math., 2017, DOI: 10.3906/mat-1612-107.
- M. Yousefikhoshbakht, N. Malekzadeh, M. Sedighpour, Solving the Traveling Salesman Problem Based on The Genetic Reactive Bone Route Algorithm whit Ant Colony System, International Journal of Production Management and Engineering, 2016, DOI:10.4995/ijpme.2016.4618.
- N. Malekzadeh, E. Abedi, U.C. De , Pseudosymmetric and Weyl-pseudosymmetric ( $\kappa$ ,  $\mu$ )-contact metric manifolds, Archivum Mathematicum, 52, 2016, 1-12.
- H. Larki, N. Malekzadeh, F. Nakhaei, M. Yousefikhoshbakht, An Optimization Meta-heuristic Algorithm for the Capacitated Vehicle Routing Problem, Journal of Transportation, January 2013 (in Persion).
- N. Malekzadeh, E. Abedi, Special solitons on 3-manifolds, Submited . https://arxiv.org/abs/1606.05493.
- N. Malekzadeh, E. Abedi, Ricci-generalized pseudosymmetric (*κ*, *μ*)-manifolds, Submited, http://arxiv.org/abs/1708.05783.
- N. Malekzadeh , E. Abedi,  $\phi$  -pseudo symmetric ( $\kappa, \mu$ )-contact metric manifolds, Submited.

### **CONFERENCES AND SEMINARS**

- Seminar on Geometry and Topology, Amirkabir University of Technology, Tehran-Iran, December 15-17, 2015, Pseudosymmetric almost Kenmotsu manifolds (Speaker).
- The 46th Annual Iranian Mathematics Conference, 25-28 August 2015, Yazd University, Yazd, Iran, Classification pseudosymmetric (κ, μ)-contact metric manifolds(Speaker).
- The 46th Annual Iranian Mathematics Conference, 25-28 August 2015, Yazd University, Yazd, Iran, Total domination number of a family of graph product (Speaker).
- Annual Iranian Mathematics Conference, Tabriz-Iran, 27-30 August 2012, Total domination in Cartesian product  $P_m \times C_n$  (Speaker).
- Proposal of Ph.D thesis: On the classification of semi symmetric contact metric manifolds, Azarbaijan Shahid Madani University ,Tabriz-Iran, Full 2014 (Speaker).
- M.Sc. seminar: Geometrical theory of chaos of a Hamiltonian system, University of Mohaghegh Ardabili ,Ardabil-Iran, Spring 2010 (Speaker).
- B.S. seminar: The Harmonic series diverges again and again, University of Mohaghegh Ardabili , Ardabil-Iran, Winter 2009 (Speaker).

WORLD CHAMPIONS ACTIVITES	
WORLD MATHEMATICS CHAMPIONSHIPS(WMC)	2018 / United Kingdom / London
TEAM LEADER AND SUPERVISOR, RESULT: GOLD MEDAL	
ASIAN SCIENCE & MATH OLYMPIAD (ASMO)	2018 / Malaysia / Kota Kinabalu
Team Leader and Supervisor, Result: Bronze Medal	
INTERNATIONA MATH COMPETITION (IMC)	2020 / Indonesia
Team Leader and Supervisor, Result in key stage II: Silver Medal	
INTERNATIONA MATH COMPETITION (IMC)	2020 / Indonesia
Team Leader and Supervisor, Result in key stage III: Bronze Medal	
Honors	
DISTINGUISHED STUDENT DURING B.S.	2005

NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS GRADUATED WITH FIRST RANK IN PURE MATHEMATICS, B.S.

2008

Mohaghegh Ardebili University	
PARALLEL STUDY AT TWO COURSES (PURE MATHEMATICS AND CIVIL ENGINEERING) DURING B. S.	2006-2010
Mohaghegh Ardebili University	
DISTINGUISHED STUDENT DURING M.SC.	2009
NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS	
GRADUATED WITH SECOND RANK IN PURE MATHEMATICS, M.S.	2010
Mohaghegh Ardebili University	
Awards	
PERMISSION TO STUDY AT TWO DEGREE(PURE MATHEMATICS AND CIVIL ENGINEERING)	2006
Mohaghegh Ardebili University	
Admitted in M.S. distinguished student quota	2008
Mohaghegh Ardebili University	
THE SABBATICAL GRANTS AWARD FOR 6 MONTH,	2016
Azarbaijan Shahid Madani University	
Workshops	
ALGEBRA AND ITS APPLICATIONS	2012
Second Seminar on Algebra and its Applications workshop	
CONFIGURATION SPACES: GEOMETRY, TOPOLOGY DYNAMICS PHYSICS AND TECNOLOGY	2015
8th Int'l seminar on Geometry and Topology workshops, D. Alekseevsky	
INTRODUCTION TO NEUROGEOMETRY IN VISION AND COFORMAL GEOMETRY OF SPHERES	2015
8th Int'l seminar on Geometry and Topology workshops, A. Zeghib	

# MEMBERSHIP \_

- Researcher Club
- Organization for Engineering order of Building
- Presidency of Islamic Republic of Iran, Nation Elites Foundation