

Curriculum vitae

Bijan Taeri



Address:

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Personal:

- Birth date: March, 7, 1962
- Place of Birth: Kermanshah, Iran
- Nationality: Iranian
- Sex: Male
- Marital Status: Married

Education:

- Ph. D. 1994-1999, Mathematics, Isfahan University
Thesis Topic: Permutational properties in groups
- M. Sc. 1988-1990, Mathematics, Isfahan University
Project Topic: Groups with virtually trivial automorphisms
- B. Sc. 1984-1988, Mathematics and computer science, Isfahan University of Technology

Academic Employment:

- Professor, 2008-..., Isfahan University of Technology
- Associate Professor, 2003- 2008, Isfahan University of Technology
- Assistant Professor, 1999- 2003, Isfahan University of Technology
- Lecturer, 1990-1999, Isfahan University of Technology

Teaching Experience:

- **Undergraduate Level:** Calculus I, II, III, Differential Equations, Engineering Mathematics, Partial Differential Equations, Set Theory, Linear Algebra, Applied Linear Algebra, Algebra I, II, III, Discrete Mathematics, Graph Theory, Mathematical Laboratories, Numerical Methods, Mathematical Softwares, Applied Algebra
- **Graduate Level:** Advanced Algebra, Finite Group Theory, Infinite Group Theory, Finite Fields, Representation and Characters of Finite Groups, Permutation Groups, Topics in Group Theory, Topics in Algebra, Advanced Mathematics for non-math students.

Research Experience:

- On a problems arising from a question of Paul Erdos, Isfahan University of Technology, 1999-2000.
- Some combinatorial conditions on groups, Isfahan University of Technology, 2000-2001.
- On a question of Paul Erdos, Institute for Studies in Theoretical Physics and Mathematics (IPM), 2000-2001.
- A combinatorial problem in variety of groups Institute for Studies in Theoretical Physics and Mathematics (IPM), 2001-2002.
- Groups in which some equations have many solutions, Isfahan University of Technology, 2001-2002.
- Groups with many permutable products, Isfahan University of Technology, 2002-2003.
- Counting centralizers in finite groups, Isfahan University of Technology, 2002-2003.
- Groups with combinatorial conditions on subsets, Isfahan University of Technology, 2004-2005.
- Topological indices of nanotubes and rooted product of graphs, Center of Excellence of Algebraic Methods and Applications (CEAMA), 2006-2008.
- Topological indices of some nanotubes and composite graphs, Center of Excellence of Algebraic Methods and Applications (CEAMA), 2006-2008.

Research Interest:

- Algebra, Group Theory, Finite Fields, Discrete structures, Algebraic graph theory, Applications of Algebra.

Honorary Activities:

- Reviewer of the American Mathematical Reviews.
- Editorial member of International Journal of Group Theory
- Editorial member of Transactions on Combinatorics
- Editorial member of International Nano Letters
- Editorial member of Iranian Journal of Mathematical Chemistry
- Editorial member of ISRN Combinatorics
- Referee for
 - Journal of Applied Mathematics & Computing. (Korean Society for Computational & Applied Mathematics and the Korean SIGCAM)
 - Applied Mathematics Letters (Elsevier Inc.)
 - Utilitas Mathematica (Univ. Natal Dept. Math. Appl. Math. Durban, South Africa)
 - Ars Combinatoria (Charles Babbage Res. Centre, Canada)
 - Bulletin of the Iranian Mathematical Society
 - Current Nano Science (Bentham Science Publishing)
 - Discrete Applied Mathematics (Elsevier Inc.)
 - Discrete Mathematics (Elsevier Inc.)
 - Discussiones Mathematicae Graph Theory (Technical University Press)
 - European Journal of Combinatorics (Elsevier Inc.)
 - Graphs and Combinatorics (Springer)
 - Iranian Journal of Mathematical Chemistry (University of Kashan)
 - International Journal of Nanoscience and Nanotechnology (International Research Publishing House)
 - International Journal of Combinatorics (Hindawi Publishing Corporation)
 - Journal Advanced Research in Pure Mathematics (Institute of Advanced Scientific Research, Inc.)
 - Journal of Nano Material (Hindawi Publishing Corporation)
 - MATCH Communications in Mathematical and in Computer Chemistry (University of Kragujevac)
 - Mathematics Scientific Journal (Islamic Azad University of Arak)

- Journal of Sciences, Islamic Republic of Iran (University of Tehran)
- Iranian Journal of Science and Technology (University of Shiraz)
- Journal of Optoelectronics and Advanced Materials (INOE Publishing House)
- Collaboration in Conference Organizing:
 - Member of the Scientific and Administrative Committees of the 11th Algebra seminar IRAN. (Isfahan 1999-2000)
 - Member of the Scientific Committee of the 3th International ISC Conference on Information Security and Cryptology (Isfahan 2004-2005)
 - Member of the Scientific and Administrative Committees of the 5th Seminar on Commutative Algebra and Related Topics IRAN. (Isfahan 2008)
 - Member of the Scientific and Administrative Committees of the Workshop on the Recent Progress on the Ring and Module Theory IRAN. (Isfahan 2006)
 - Member of the Scientific and Administrative Committees of the International Workshop on the Metric Graph Theory and Application IRAN. (Isfahan 2008)
 - Member of the Scientific Committee of The 1th International Conference on Mathematical Chemistry (Tehran 2008)
 - Member of the Scientific Committee of The 2th International Conference on Mathematical Chemistry (Kashan 2009)
 - Member of the Scientific Committee of The 3th International Conference on Mathematical Chemistry (Tehran 2010)
 - Member of the Scientific Committee of The Fourth International Conference on Group Theory of Iran (Isfahan, 2012)
 - Member of the Scientific Committee of The First Iranian Conference on Chemical Graph Theory (Tehran, 2010)

Professional Experience:

- Deputy of Graduate Studies, IUT Department of Mathematics (2002-2006)
- Member of Graduate Studies Committee, IUT Department of Mathematics (2002-2003)
- Member of research Committee, IUT Department of Mathematics (2002-2006)
- Member of Undergraduate Studies Committee, IUT Department of Mathematics (2003-2005)
- Member of Department Committee, IUT Department of Mathematics (2002-2005)
- Member of Graduate Studies Planning Committee, IUT (2004-2006)
- Head of the Center of Excellence for Mathematics, University of Isfahan (2005-2011)
- IUT distinguished research award (2007)

- Visiting Professor, University of Western Australia (October 2008- August 2009).
- Deputy of Research, IUT Department of Mathematics (2009-2011)
- Isfahan State distinguished research award (2011)
- Computer Skills: Mathematics Softwares such as GAP, MATHEMATICA, MAPLE, ... and various computer softwares

Supervised M.Sc. and Ph. D. Students:

1. A. Ghorbani, (1999, Ph. D.) Generalized Hopfian modules, Charactrizations of Arinian rings, (Advisor)
2. M. Yousefzade, (1999) Injective minimal rings, (Advisor)
3. M. Ghorbani, (2001) Unique facorization in Artinan modules, (Advisor)
4. K. Zaringhalami, (2000) Topics on locally graded groups, (Supervisor)
5. Sh. Askari, (2002) Qoutient of Noterian rings ??? , (Advisor)
6. F. Shamsini, (2003) Algebraic characterization of locally compact groups , (Advisor)
7. R. Keykhaee, (2003) Isomorphis of Cayley graphs of bounded valency , (Supervisor)
8. M. Jaberi, (2005) Cyclic and quaderatic residue codes over ring \mathbb{Z}_p^m , (Supervisor)
9. M. Moghadassi, (2006) Primitive Polynomials With Coefficients Prescribed, (Supervisor)
10. H. Mohammadi, (2004) Prime graph of simple groups, (Supervisor)
11. H. Mohamudi, (2004) Seperation property of positive definite functions over locally compact groups, (Supervisor)
12. S. Gashti, (2004) Facorization in commutative rings, (Advisor)
13. M. Eliasi, (2008, Ph. D.) Topological indices of some nanotubes and nanotorus and composite graphs, (Supervisor)
14. A. Heydari, (2008, Ph. D.) On the Topological Indices of Nanotubes and Rooted Product of Graphs, (Supervisor)
15. A. Arfaanejad, (2007) Factoring polynomials over Galois rings and Cyclic codes and Negacyclic codes, (Supervisor)
16. S. H. Shojaee, (2007) Primitive Elements With Zero Traces, (Supervisor)
17. H. Ahmadi, (2008) The Graph of Conjugacy Classes of Finite Groups, (Supervisor)
18. M. Arezoomandi, (2008) On the Linear Representations of Symmetry Groups of Single-wall carbon nanotubes, (Supervisor)

19. A. Behtoei, (2008) Irreducible character graph of groups, (Supervisor)
20. Z. Amini, (2009) Frobenius Groups with Many Involutions, (Advisor)
21. A. Safiyanboldajii, (2011) On the Number of Centralizer in Finite Groups, (Supervisor)
22. M. A. Morshedlo, (2011) The Structure of Finite Groups of Conjugate Rank 2, (Supervisor)
23. M. Ahmadpour, (2012) The spectrum of semi-cayley graphs over abelian groups, (Supervisor)
24. Kazem Shokri, (2012) Integral Cayley graphs over abelian groups, (Supervisor)
25. M. Aslanifar, (2012) Finite Nonsolvable Groups whose Character Graphs Have no Triangles, (Supervisor)
26. H. Zaherifar, Wiener index and its application on nonostructures, (Supervisor)
27. S. Akbari, On the distance spectra of graphs, (Supervisor)
28. M. Jahanbakhsh, (2012) Distance spectral radius of trees with fixed maximum degree, (Supervisor)
29. N. Poutbafrani, (2012) Distance spectral radius of trees with given matching number, (Supervisor)
30. F. Karimi, (2012) Characterization of the finite simple group $L_{16}(2)$ by its prime graph, (Advisor)

List of publications:

1. *A property equivalent to n -permutability*, J. Algebra **221** (1999) 570-578. (with A. Abdollahi, A. Mohammadi Hassanabadi)
2. *A condition on finitely generated soluble groups*, Comm. Algebra **27** No. 11 (1999) 5633-5638. (with A. Abdollahi)
3. *Some conditions on infinite subsets of infinite groups*, Bull. Malaysian Math. Soc. (Second Series) **22** (1999) 87-93. (with A. Abdollahi)
4. *A condition on certain variety of groups*, Rend. Sem. Mat. Univ. Padova Vol. **104** (2000) 129-134. (with A. Abdollahi)
5. *On a class of infinite rings*, Algebra Colloq. **8:2** (2001) 153-157. (with A. Abdollahi)
6. *An n -Rewritability criterion for infinite groups*, Comm. Algebra. **29**(4), (2001) 1571-1581. (with A. Abdollahi, A. Mohammadi Hassanabadi)
7. *A combinatorial condition on certain variety of groups*, Arch. Math. **77** (2001) 456-460.

8. *A question of Paul Erdős and nilpotent-by-finite groups*, Bull. Aus. Math. Soc. **64** (2001) 245-254.
9. *On a combinatorial problem in group theory*, Southeast Asian Bull. Math. **26** (2003) 1029-1039.
10. *On a class of residually finite group*, Bull. Malaysian Math. Soc. (Second Series) **26** (2003) 209-219.
11. *On finite groups with a certain number of centralizers*, J. Appl. Math. & Computing. **17** (2005) No. 1-2, 217-227 (with A. Ashrafi)
12. *On a permutability problem for groups*, J. Appl. Math. & Computing. **20** (2006) No. 1-2, 75-96.
13. *On Finite Groups with exactly seven element centralizers*, J. Appl. Math. & Computing. **22** (2006) No. 1-2, 403-410. (with A. Ashrafi)
14. *Szeged and Balaban indices of zigzag polyhex nanotubes*, MATCH Commun. Math. Comput. Chem. **56**(2) (2006) 383-402. (with M. Eliasi)
15. *Wiener and Schultz indices of $TUC_4C_8(R)$ nanotubes*, J. Comp. Thoer. NanoSci. **4**(1) (2007) 158-167. (with A. Heydari)
16. *Szeged index of $TUC_4C_8(R)$ nanotubes*, MATCH Commun. Math. Comput. Chem. **57**(1) (2007) 463-477. (with A. Heydari)
17. *Wiener and Schultz indices of $TUC_4C_8(S)$ nanotubes*, MATCH Commun. Math. Comput. Chem. **57**(2) (2007) 665-676. (with A. Heydari)
18. *Balaban index of zigzag polyhex nanotorus*, J. Comp. Thoer. NanoSci. **4**(6) (2007) 1174-1178 (with M. Eliasi)
19. *Hyper Wiener index of zigzag polyhex nanotorus*, Ars Combinatoria **85** (2007) 307-318. (with M. Eliasi)
20. *Schultz index of zigzag polyhex nanotubes*, Utilitas Mathematica **74**(2007) 55-64. (with M. Eliasi)
21. *Cyclic codes of length p^e over $\mathbb{Z}_{p^2}, \mathbb{Z}_{p^3}$* , International J. Pure and Appl. Math. Sci. **4** (2) (2007).
22. *Extension of Wiener index and Wiener polynomial*, Appl. Math. Lett. **21** (2008) 916-921. (with M. Eliasi)
23. *Szeged index of armchair polyhex nanotubes*, MATCH Commun. Math. Comput. Chem. 437-450 **59**(2) (2008). (with M. Eliasi)
24. *Hyper Wiener index of $TUC_4C_8(R)$ nanotubes*, J. Comp. Thoer. NanoSci. **5**(11) (2008) 2275-2279. (with A. Heydari)
25. *The Full non-rigid Group Theory for TBA (Tert-Butyl Alcohol)*, J. Iranian Chem. Soc. **5** (3) (2008) 514-518. (with M. Arezoomand)

26. *Hosoya Polynomial of zigzag polyhex nanotorus*, J. Serbian Chem. Soc. **73**(3) (2008) 311-319 (JSCS-3713). (with M. Eliasi)
27. *An operation based on complete graphs with an application to the line graphs of trees*, (with A. Heydari) To appear in Ars Combinatoria
28. *Charactrization of 3-rewritable finite nilpotent groups*, Comm. Algebra **37** (2009) 894-922.
29. *On finite groups with two irreducible character degrees*, Bull. Iranian Math. Soc. **34** (2) (2008) 39-47. (with A. Heydari)
30. *Distance in zigzag polyhex nanotorus*, J. Theor. Comput. Chem. **7** (5) (2008) 1029-1039. (with M. Eliasi)
31. *Hyper Wiener index of zigzag polyhex nanotubes*, ANZIAM J. **50** (2008) 75-86. (with M. Eliasi)
32. *The Schultz polynomial of zigzag polyhex nanotubes*, Asian J. Chem. **21** (2) (2009) 931-941. (with M. Eliasi)
33. *On characteristic polynomial of special class of graphs and spectra of balanced trees*, Linear Algebra Appl. **429** (2008) 1744-1757.(with A. Heydari)
34. *The Full Non-rigid Group Theory of cis-tetraamminedichlorocobalt (III)*, Asian J. Chem. **21** (2) (2009), 869-878.(with M. Arezoomand)
35. *On finite groups with some conditions on subsets*, Bull. Malays. Math. Sci. Soc. **32** (1) (2009) 63-73.
36. *Szeged index of $TUC_4C_8(S)$ Nanotubes*, European J. Combin. **30** (2009) 1134-1141. (with A. Heydari)
37. *Four new sums of graphs and their Wiener indices*, Disc. Appl. Math. **157** (2009) 794-803. (with M. Eliasi)
38. *Schultz polynomials of composite graphs*, Appl. Anal. Discrete Math. **2** (2008) 258-296. (with M. Eliasi)
39. *On the Wiener index of rooted product of graphs*, Ars. Combin. In press
40. *Quadratic residue codes over \mathbb{Z}_9* , J. Korean Math. Soc. **46** (1) (2009) 13-30.
41. *The full symmetry and irreducible representations of nanotori*, Acta Cryst. **A65** (2009) 249-252. (with M. Arezoomand)
42. *Distance in Armchair Polyhex Nanotubes*, MATCH Commun. Math. Comput. Chem. **62** (2009) 295-310. (with M. Eliasi)
43. *Full Non-Rigid Group of Di-mu-oxo-bis (tetraamine manganese(II)) as a Wreath Product*, MATCH Commun. Math. Comput. Chem. **62** (2009) 275-284. (with M. Arezoomand)

44. *Maximum Zagreb index, minimum hyper-Wiener index and graph connectivity*, Applied Mathematics Letters **22** (2009) 1571-1576. (with A. Behtoei and M. Jannesari)
45. *A mathematical model for TUC₄C₈(S) nanotubes and their symmetry groups*, J. Geom. Phys. 59 (2009) 1168-1174. (with M. Arezoomand)
46. *Full non-rigid group of 2,3,5,6-Tetramethylepyrazine as wreath product*, J. Appl. Math. & Informatics 27 (2009), 3-4, 915 - 931. (with M. Arezoomand)
47. *Distance in Zigzag Polyhex Nanotubes*, Current NanoScience, **5**(4) (2009) 514-518 (with M. Eliasi)
48. *On the characteristic and Laplacian polynomials of trees*, Linear Algebra and its Applications, **432** (2010) 661-669 (with A. Heydari)
49. *A characterization of block graphs*, Discrete Appl. Math. **158** (2010) 219-221 (with A. Behtoei and M. Jannesari)
50. *Some new relations between Wiener, hyper-Wiener, first and second Zagreb indices*, MATCH Commun. Math. Comput. Chem. 65(1) (2011) 27-32 (with A. Behtoei and M. Jannesari)
51. *Generalization of topological Indices*, MATCH Commun. Math. Comput. Chem. 65(1) (2011) 71-78. (with A. Behtoei and M. Jannesari)
52. *On the Distance-based topological indices of polyhex nanotori*, MATCH Commun. Math. Comput. Chem. . 65(1) (2011) 241-248. (with M. Arezoomand)
53. *Cycles and bipartite graph on conjugacy class of groups*, Rend. Sem. Mat. Univ. Padova. 123 (2010) 233-247.
54. *A new method for computing the Wiener index of polyhex nanotorus*, J. Comp. Thoe. NanoSci. 8(1) (2011) 2350-2355. (with M. Arezoomand)
55. *On Szeged polynomial of graphs with even number of vertices*, Ars Combin. In press (with M. Eliasi)
56. *Applications of generalized hierarchical product of graphs in computing the Szeged index of chemical graphs*, MATCH Commun. Math. Comput. Chem. 64(3) (2010) 951-602. (with M. Arezoomand)
57. *On a Graph Associated to Groups*, Bull. Malaysian Math. Soc. (Second Series) 34(3) (2011) 553-560. (with M. Mashkouri)
58. *Wiener index of some graph operations*, Discrete Appl. Math. 160 (2012) 1333-1344. (with M. Eliasi, G. Raeisi)

Papers in Seminars and Conferences :

1. FC-groups with a condition on infinite subsets, 27-29 October, 1999, 11th Seminar on Algebra, Isfahan, Iran, pp 272-278.
2. A combinatorial condition on infinite subsets of infinite groups, 27-29 October, 1999, 11th Seminar on Algebra, Isfahan, Iran, pp 1-10. (with A. Abdollahi)
3. A combinatorial condition on infinite rings, 27-30 August 2000, 31th Iranian Mathematics Conference, Tehran, pp 23-27. (with A. Abdollahi)
4. On a class of finitely generated soluble groups, 19-20 July 2003, 11th Algebra Seminar Gulian University, pp 107-123.
5. Classification of finite groups by the number of element centralizers, 30-6 July 2005, August Groups St Andrews pp 148-157. (with A. Ashrafi)
6. Szeged and Balaban indices of zigzag polyhex nanotubes, 21-22 February 2007, 1st Conference of Nanotechnology in Environment, Isfahan, pp 129-145. (with M. Eliasi)
7. Wiener and Schultz indices of C_4C_8 nanotubes, 21-22 February 2007, 1st Conference of Nanotechnology in Environment, Isfahan, pp 146-162. (with A. Heydari)
8. Recent results on topological indices of nanotubes, 10-12 April 2007, First Sharjah International Conference on Nanotechnology and its applications, Sharjah, pp 243-249. (with M. Eliasi)

Books :

1. Differential Equations (Including Mathematical Laboratory, MATHEMATICA and MAPLE) [in Persian], 1999, Jihad. (Distinguished Book Award, Isfahan State, 2002)
2. Engineering Mathematics [in Persian], 2001, Jihad.
3. The Foundations of Algebra (Including Mathematical Laboratory, GAP) [in Persian], 2003, Isfahan University of Technology. (Distinguished Book Award, Tehran University, 2003)
4. Calculus Laboratories with Mathematica [in Persian], 2007, Jihad.
5. A Textbook of Graph Theory [translation from English], 2008, Jihad.
6. Mathematics for Engineers and Scientists [in Persian], 2012, Jihad. (Distinguished Book Award, Isfahan State, 2012)
7. Basic Concepts of Matrices and Linear Algebra [in Persian], 2013, Isfahan University of Technology.
8. Group Theory [in Persian], 2013, Jihad.