



Ali Reza Ashrafi

Professor

College: Faculty of Mathematics

Department: Pure Mathematics

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### Education

Degree	Graduated in	Major	University
BSc	1988	Mathematics Education	Teacher Training University of Tehran
MSc	1990	Algebra	Shahid Beheshti University
Doctoral	1994	Computational Group Theory	University of Tehran

### Competitions

### Workshops

- **Chair of the Academic Committee:** The 51st Annual Iranian Mathematics Conference (AIMC 51), February 15-20, 2021, University of Kashan, I R Iran.
- **Chair of the Academic Committee:** The Third Conference on Computational Group Theory, Computational Number Theory and Applications (CACNA 2018), December 2018 12-14,, University of Kashan, I R Iran.
- **Chair of the Academic Committee:** 9th Iranian Group Theory Conference (IGTC 2017), February 1-3, 2017, University of Kashan, I R Iran.
- **Chair of the Academic Committee:** The second conference on Computational Group Theory, Computational Number Theory and Applications (CACNA 2015), October 13-15 2015 ,, University of Kashan, I R Iran.
- **Chair of the Academic Committee:** The first conference on Computational Group Theory, Computational Number Theory and Applications (CACNA 2014), December 17-19 2014 ,, University of Kashan, I R Iran.
- **Chair of the Conference:** Iran-Belarus International Conference on Modern Applications of Nanotechnology, June 27-29, 2012, National Academy of Sciences of Belarus, Minsk, Belarus.
- **Chair of the Academic Committee:** 5<sup>th</sup> Conference on Algebraic Combinatorics and Graph Theory, July 3-4, 2012, University of Kashan, I R Iran.

- **Chair of the Academic Committee:** The Second Conference And Workshop on Mathematical Chemistry, University of Kashan, April 24-16, 2009..
- **Chair of the Academic Committee:** International Congress on Ghiyath Al-Din Jamshid Kashani, University of Kashan, November 9-11, 2000..

## Conferences

- Member of Scientific Committees: The 26<sup>th</sup> International Course & Conference on the Interfaces among Mathematics, Chemistry & Computer Sciences, June 07-12, 2011, Dubrovnik, Croatia.
- Member of Scientific Committees: The 25<sup>th</sup> International Course & Conference on the Interfaces among Mathematics, Chemistry & Computer Sciences, June 07-12, 2010, Dubrovnik, Croatia.
- **Member of Scientific Committees:** 3<sup>rd</sup> International Congress on Nanoscience and Nanotechnology, ICNN 2010, November 9-11, 2010, Shiraz, Iran.
- **Member of Academic & Organizing Committees:** The Third Conference and Workshop on Mathematical Chemistry, Tarbiat Modares University, Tehran, February, 2010.
- **Member of Academic & Organizing Committees:** The First Conference and Workshop on Mathematical Chemistry, Tarbiat Modares University, Tehran, January 29-31, 2008.
- **Member of Scientific Committees:** 16th Algebra Seminar, IASBS, Zanjan, 2004

## Journal Membership

1. Editor-in-Chief (2016-present) [Mathematics Interdisciplinary Research](#) (University of Kashan, Islamic Republic of Iran)
2. Editorial Board Member (2016 - present) [Fullerenes, Nanotubes and Carbon Nanostructures](#) (Taylor & Francis, UK)
3. Editorial Board Member (2016 - present) [Italian Journal of Pure and Applied Mathematics](#) (Aviani Editore, Italy)
4. Editorial Board Member (2014 - 2016) [Bulletin of the Iranian Mathematical Society](#) (Iranian Mathematical Society, Islamic Republic of Iran)
5. Editor-in-Chief (2012-2013) [Bulletin of the Iranian Mathematical Society](#) (Iranian Mathematical Society, Islamic Republic of Iran)
6. Editorial Board Member (2012 - present) [International Journal of Group Theory](#) (University of Isfahan, Islamic Republic of Iran)
7. Editorial Board Member (2012 - present) [Transaction on Combinatorics](#) (University of Isfahan, Islamic Republic of Iran)
8. Managing Editor (2011) [Bulletin of the Iranian Mathematical Society](#) (Iranian Mathematical Society, Islamic Republic of Iran)
9. Editor-in-Chief (2010-present) [Iranian Journal of Mathematical Chemistry](#) (University

of Kashan, Islamic Republic of Iran)

10. Editorial Board Member (2005 - present) [MATCH Communications in Mathematical and in Computer Chemistry](#) (University of Kragujevac, Serbia)
11. Editorial Board Member (2007 - present) [Iranian Journal of Mathematical Sciences and Informatics](#) (Tarbiat Modares University, Islamic Republic of Iran)

## Membership in Scientific Societies

- Member of the Iranian Mathematical Society
- Member of the American Mathematical Society
- Member of the International Academy of Mathematical Chemistry

## Papers in Conferences

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1. سید علی رضا اشرفی و سهیلا مهدوی، طوقه ها، گروه های چرخشی و ارتباط آن ها با نظریه نسبیت خاص، نخستین همایش ملی پژوهش های کاربردی در علوم پایه، بروجرد، پنجم و ششم خرداد ۱۴۰۱.

## Papers in Journals

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1. K. Balasubramanian, O. Ori, F. Cataldo, A. R. Ashrafi and M. V. Putz, Face colorings and chiral face colorings of icosahedral giant fullerenes: C80 to C240, *Fullerenes, Nanotubes and Carbon Nanostructures*, Vol. 29, pp. 1-12, 2021.
  2. A. Ghalavand and A. R. Ashrafi, Laplacian coefficients of trees, *Rad HAZU, Matematičke znanosti*, Vol. 24, pp. 1-14, 2020.
  3. B. Akhavan Mahdavi, M. Tavakoli, F. Rahbarnia and A. R. Ashrafi, Star coloring under some graph operations, *Asian-European Journal of Mathematics*, Vol. 15, No. 4, pp. 2250079, April 2022.
  4. K. C. Das, A. R. Ashrafi and A. Ghalavand, Comparison between Szeged indices of graphs, *Quaestiones Mathematicae*, مجلد ۴۳، شماره صفحات ۱۰۴۶، ۲۰۲۰-۱۰۳۱.
  5. F. Fayazi, A. Gholami and A. R. Ashrafi, <https://match.pmf.kg.ac.rs/content85n3.htm>, *MATCH Communications in Mathematical and in Computer Chemistry*, Vol. 85, No. 3, pp. 545-553, 2021, Scopus, JCR.
  6. S. Mahdavi, A. R. Ashrafi, M. A. Salahshour and A. A. Ungar, Construction of 2-Gyrogroups in Which Every Proper Subgyrogroup Is Either a Cyclic or a Dihedral Group, *Symmetry*, Vol. 13, No. 2, pp. 316, 2021, Scopus, JCR.
  7. A. Ghalavand, A. R. Ashrafi and M. Hakimi, & Nezhaad, On Mostar and Edge Mostar Indices of Graphs, *Journal of Mathematics*, Vol. 2021, pp. 6651220, 2021.
  8. G. K. Gök and A. R. Ashrafi, Some bounds for the resolvent energy, *Applied Mathematics and Computation*, Vol. 397, pp. 125958, 2021, Scopus, JCR.
  9. B. Akhavan Mahdavi, M. Tavakoli, F. Rahbarnia and A. Ashrafi, Star coloring under some graph operations, *Asian-European Journal of Mathematics*, 2021, Scopus, ISI.
  10. M. R. Oboudi, A. Z. Abdian, A. R. Ashrafi and L. W. Beineke, Laplacian spectral determination of path-friendship graphs, *AKCE International Journal of Graphs and Combinatorics*, Vol. 18, No. 1, 2021, Scopus, JCR.
  11. A. Ghalavand, A. R. Ashrafi and M. Pourbabaee, Extremal Values of Randic Index among Some Classes of Graphs, *Mathematical Problems in Engineering*, Vol. 2021, pp. 7758172, 2021.
  12. M. A. Salahshour and A. R. Ashrafi, Commuting conjugacy class graphs of finite groups, *Algebraic Structures and their Applications*, Vol. 7, No. 2, pp. 135-145, 2020, Scopus.
  13. M. V. Diudea, A. R. Ashrafi and M. Hakimi-Nezhaad, Symmetry of hyper-adamantanes, *Fullerenes*,

Nanotubes and Carbon Nanostructures, Vol. 28, pp. 650-655, 2020.

14. A. R. Ashrafi, L. Ghanbari-Maman, K. Kavousi and F. Koorepazan-Moftakhar, An algorithm for constructing all supercharacter theories of a finite group, *Ars Mathematica Contemporanea*, Vol. 18, No. 1, pp. 149-162, 2020.
15. S. Madani and A. R. Ashrafi, Symmetry and two symmetry measures for the web and spider web graphs, *Journal of Applied Mathematics and Computing*, Vol. 64, pp. 737-748, 2020, Scopus, JCR.
16. A. Ghalavand, A. Ashrafi and I. Gutman, New upper and lower bounds for some degree-based graph invariants, *Kragujevac Journal of Mathematics*, Vol. 44, No. 2, pp. 181-188, 2020.
17. M. A. Salahshour and A. R. Ashrafi, Commuting Co-njugacy Class Graph of Finite CA-Groups, *Khayyam Journal of Mathematics*, Vol. 6, No. 1, pp. 108-118, 2020.
18. A. R. Ashrafi and A. Ghalavand, Note on non-regular graphs with minimal total irregularity, *Applied Mathematics and Computation*, Vol. 369, pp. 124891, 2020.
19. A. Ghalavand and A. R. Ashrafi, Ordering of c-cyclic graphs with respect to total irregularity, *Journal of Applied Mathematics and Computing*, Vol. 63, pp. 707-715, 2020.
20. H. B. Shelash and A. R. Ashrafi, Table of marks and mark character table of certain finite groups, *Quasigroups and Related Systems*, Vol. 28, No. 1, pp. 159-170, 2020, Scopus.
21. A. R. Ashrafi, F. Koorepazan, & Moftakhar and M. A. Salahshour, Counting the number of centralizers of 2-element subsets in a finite group, *Communications in Algebra*, Vol. 48, No. 11, pp. 4647-4662, 2020, Scopus, JCR.
22. M. Torktaz and A. R. Ashrafi, Spectral properties of the commuting graphs of certain groups, *AKCE International Journal of Graphs and Combinatorics*, Vol. 16, No. 3, pp. 300-309, 2019.
23. A. Ghalavand and A. R. Ashrafi, Extremal trees with respect to the first and second reformulated Zagreb index, *Malaya Journal of Matematik*, Vol. 5, No. 3, pp. 530-524, 2017.
24. S. Hossein-Zadeh, A. Iranmanesh, M. A. Hosseinzadeh, A. Hamzeh, M. Tavakoli and A. R. Ashrafi, Topological efficiency under graph operations, *Journal Applied Mathematics and Computing*, Vol. 54, No. 1, pp. 69-80, 2017.
25. F. Taghvaei and A. R. Ashrafi, On spectrum of l-graph and its ordering with respect to spectral moments, *Le Matematiche*, Vol. 72, pp. 61-75, 2017, ISI, SCOPUS.
26. F. Koorepazan-Moftakhar and A. R. Ashrafi, Note on Symmetry of Molecules, *MATCH Communications in Mathematical and in Computer Chemistry*, Vol. 78, No. 2, pp. 273-279, 2017, ISI, SCOPUS.
27. A. Ghalavand and A. R. Ashrafi, Extremal graphs with respect to variable sum exdeg index via majorization, *Applied Mathematics and Computation*, Vol. 303, pp. 19-23, 2017.
28. A. R. Ashrafi, A. Gholami and Z. Mehranian, Automorphism group of certain power graphs of finite groups, *Electronic Journal of Graph Theory and Applications (EJGTA)*, Vol. 5, No. 1, pp. 70-82, 2017.
29. Z. Mehranian, A. Gholami and A. R. Ashrafi, The Spectra of power graphs of certain finite groups, *Linear and Multilinear Algebra*, Vol. 65, No. 5, pp. 1003-1010, 2017.
30. A. Hamzeh and A. R. Ashrafi, Automorphism groups of supergraphs of the power graph of a finite group, *European Journal of Combinatorics*, Vol. 60, pp. 82-88, 2017, Scopus, JCR.
31. H. Khass, A. R. Ashrafi and B. Bazigaran, On the lattice of f-subgroups, *Siberian Electronic Mathematical Reports*, Vol. 14, pp. 600-613, 2017.
32. S. Jafari, A. R. Ashrafi, G. H. Fath Tabar and M. Tavakoli, Remarks on the Inner Power of Graphs, *Journal of Applied Mathematics and Informatics*, Vol. 35, No. 1, pp. 25-32, 2017.
33. H. Shabani, A. R. Ashrafi and M. Ghorbani, Note on mark character table of finite groups, *SUT Journal of Mathematics*, Vol. 52, No. 2, pp. 133-140, 2016.
34. A. R. Ashrafi, T. Dehghan, & Zadeh, N. Habibi and P. E. John, Maximum values of atom-bond connectivity index in the class of tricyclic graphs, *Journal of Applied Mathematics and Computing*, Vol. 50, No. 1, pp. 511-527, 2016.
35. Z. Mehranian, A. Gholami and A. R. Ashrafi, A note on the power graph of a finite group, *International Journal of Group Theory*, Vol. 5, No. 1, pp. 1-10, 2016, ISI, SCOPUS, ISC.

36. M. Tavakoli , F. Rahbarnia and A. R Ashrafi, Tricyclic and Tetracyclic Graphs with Maximum and Minimum Eccentric Connectivity, Iranian Journal of Mathematical Sciences and Informatics, Vol. 11, No. 1, pp. 137-143, 2016.
37. R. Nasiri, H. R. Ellahi, A. Gholami, G. H. Fath-Tabar and A. R. Ashrafi, Resolvent Estrada and Signless Laplacian Estrada Indices of Graphs, MATCH Communications in Mathematical and in Computer Chemistry, Vol. 77, No. 1, pp. 157-176, 2016, ISI.
38. A. R. Ashrafi, J. Azarija, Kh. Fathalikhani, S. Klavžar and M. Petkovšek, Vertex and edge orbits of Fibonacci and Lucas cubes, Annals of Combinatorics, Vol. 20, No. 2, pp. 209-229, 2016.
39. A. R. Ashrafi, J. Azarija, A. Babai, Kh. Fathalikhani and S. Klavžar, The (non-)existence of perfect codes in Fibonacci cubes, Information Processing Letters, Vol. 116, No. 5, pp. 387-390, 2016.
40. A. R. Ashrafi and A. Tadayyonfar, The Zero Divisor Graph of  $2 \times 2$  Matrices Over a Field, Quaestiones Mathematicae, Vol. 39, No. 7, pp. 977-990, 2016.
41. M. Hamidi and A. R. Ashrafi, Fundamental relation and automorphism group of very thin Hv-groups, Communications in Algebra, Vol. 45, No. 1, pp. 130-140, 2016.
42. A. R. Rahimipour, A. R. Ashrafi and A. Gholami, The existence of minimal logarithmic signatures for the sporadic Suzuki and simple Suzuki groups, Cryptography and Communications, Vol. 7, No. 4, pp. 535-542, 2015.
43. Z. Shiri and A. R. Ashrafi, Dependence Polynomials of some Graph Operations, Vietnam Journal of Mathematics, Vol. 43, No. 4, pp. 755-769, 2015, Scopus, ISI.
44. M. Tavakoli, F. Rahbarnia and A. R. Ashrafi, Eccentric Connectivity and Zagreb Coindices of the Generalized Hierarchical Product of Graphs, Journal of Discrete Mathematics, Vol. 2014, pp. 292679, 2014, SID.
45. M. Tavakoli, F. Rahbarnia, M. Mirzavaziri and A. R. Ashrafi, Complete solution to a conjecture of Zhang-Liu-Zhou, Transactions on Combinatorics, Vol. 3, No. 4, pp. 55-58, 2014, ISC, ISI, Scopus.
46. M. Tavakoli, F. Rahbarnia and A. R. Ashrafi, Studying the corona product of graphs under some graph invariants, Transactions on Combinatorics, Vol. 3, No. 3, pp. 43-49, 2014, ISC, ISI, Scopus.
47. M. Tavakoli, F. Rahbarnia and A. R. Ashrafi, Applications of the generalized hierarchical product of graphs in computing the vertex and edge PI indices of chemical graphs, Ricerche di Matematica, Vol. 63, pp. 59-65, 2014, Scopus, JCR.