Curriculum Vitae

Adel P. Kazemi
Professor at Graph Theory and Combinatorics

- **PERSONAL INFORMATION:**

  Name: Adel
  Family name: Kazemi Piledaraq
  Scientific Name: Adel P. Kazemi or A. P. Kazemi
  Cell phone: +98-911-125-5693
  Date of Birth: June 23, 1975
  Language: Azerbayjani Turkish, Türkiye Turkish, English, Persian
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- **WORK ADDRESS:**

  Department of Mathematical Sciences
  University of Mohaghegh Ardabili
  Ardabil, Iran.

- **EDUCATIONS:**

  - 1993-1997, B. Sc. In Mathematics, University of Tabriz, Tabriz, Iran.
  - 1998-2000, M. Sc. In Mathematics, University of Mazandaran, Babolsar, Iran. Title of thesis: *Additive and multiplicative commutators and their applications*, Supervisor: Prof. D. Mojdeh.
  - 2003-2007, Ph.D. In Mathematics, University of Mazandaran, Babolsar, Iran. Title of thesis: *The coloring defining numbers and the forcing domination numbers*, Supervisors: Prof. D. Mojdeh, Prof. A. Khodkar.

- **HONORS, AWARDS AND DISTINCTIONS:**
  - ▶ SIGNIFICANT CONTRIBUTIONS: Throughout his career, I have had the honor for collaboration with Trkiye research offices for a project. I was the main part of the project **3501-Career Development Program** with number 121F228 from 01.11.2021 till 01.05.2023 that were supported by The Scientific and Technological Research Council OF Türkiye (**TÜBİTAK**) in Ege University and Ordu University.
  - ▶ I was author and co-author of more than **58** (and **4** submitted) peer review publications, at top ranked, prestigious international journal and conference with high impact factors.
  - ▶ Peer review works cited **281** times reported by google scholar.
  - ▶ I have reviewed at least **9** papers for Mathematical Reviews.
  - ▶ Reviewer for the following distinguished Journals and Conferences and Mathematical Reviewer.
    - Ars Combinatoria,
    - Discrete Mathematics,
    - Utilatas Mathematica,
    - Journal of Graph Theory,
    - Acta Mathematica Sinica,
    - Aequationes Mathematicae,
    - RAIRO Operation Research,
    - Graphs and Combinatorics,
    - Applied Mathematics Letters,
    - Discrete Applied Mathematics,
    - Transactions on Combinatorics,
    - Turkish Journal of Mathematics,
    - Australian Journal of Combinatorics,
    - Asian-European Journal of Mathematics,
    - Bulletin of Iranian Mathematical Society,
    - Annual Iranian Mathematical Conference,
    - Discussiones Mathematicae Graph Theory,
    - Bulletin of Malaysian Mathematical Sciences Society,

- **PROFESSIONAL EXPERIENCES:**
  - **Assistant Professor of Mathematics**,
    University of Mohaghegh Ardabili, 2007–2013.
  - **Associate Professor of Mathematics**,
    University of Mohaghegh Ardabili, 2014–2020.
  - **Professor of Mathematics** (Graph Theory and Combinatorics),
    University of Mohaghegh Ardabili, from 10 Decemnber 2020.

- **ACADEMIC DISCIPLINES SKILLS:**

  I have taken several courses throughout his academic education and always has been interested to learn the details of science. By taking various courses, he has a high knowledge of:

  Undergraduate courses:

  - Foundations of Combinatorics
  - Combinatorics and its Applications
  - Discrete Mathematics
  - Graph Theory and its Applications
  - Algebra I, II, III
  - Calculus I, II, III
  - Number Theory
  - Foundations of Mathematics

Graduate courses:

- Combinatorial Analysis
- Graph Theory
- Algebraic Graph Theory
- Product of Graphs
- Block Designs
- Graphs and Homomorphisms
- Finite Groups
- Commutative Algebra

- **RESEARCH EXPERIENCES:**

Some of my research areas in graph theory and combinatorics are listed here.

- Latin squares and their transversals
- Vertex colorings of graphs
- Edge colorings of graphs
- Total colorings of graphs
- Total dominator coloring of graphs
- Total dominator mixed coloring of graphs
- Domination in graphs
- Total domination in graphs
- k-tuple total domination in graphs
- Upper k-tuple total domination in graphs
- Roman domination in graphs
- Total mixed domination in graphs
- Power domination in graphs
- Restrained domination in graphs

- **SUPERVISOR OF STUDENTS:**

I was the supervisor of 4 former Ph.D. students and 17 master students, and right now I am the supervisor of 3 Ph.D. students, and 2 master students.

- **Ph.D. students:**

(1) ***Behnaz Pahlavsay*** (MR ID: 1306261): Title: k-tuple total domination number of Rook's graphs and latin squares, defended Dec. 20, 2017.

(2) ***Parvin Jalilolghadr*** (MR ID: 1167377): Title: Coloring of circulant graphs, defended June 2019.

(3) ***Farshad Kazemnejad*** (MR ID: 1336041): Title: Total dominator coloring of graphs, defended Feb. 2020.

(4) ***Najibeh Shahbaznejad*** (MR ID: 1479231): Title: Power domination in graphs, defended Nov. 08, 2021.

(5) ***Malihe Alayi***, Started date: Oct. 2019.

(6) ***Leyla Vusuqi***, Started date: Oct. 2020.

(7) ***Tahmine Kalantari***, Started date: Oct. 2022.

- **Master students:**

(1) ***Behnaz Pahlavsay***, Title: k-tuple domination and k-tuple total domination in graphs, (**2011**).

(2) ***Leyla Habibzadeh***, Title: Extremal problems for Roman domination number and some extensions of this number, (**2011**).

(3) ***Rahele Ashrafi***, Title: Nordhous-Gaddum relation in total domination in graphs, (**2014**).

(4) ***Sahar Qaderi***, Title: On some properties of token graphs, (**2014**).
(5) ***Hamide Sabri***, Title: On isomorphisms of finite Cayley graphs, (**2014**).
(6) ***Malihe Musavian***, Title: On the Ramsey number of hypergraphs, (**2015**).
(7) ***Sepide Heydari***, Title: Hadamard matrices and its applications, (**2015**).
(8) ***Rubab Qahraman***, Title: Cayley graphs and G-graphs, (**2016**).
(9) ***Leyla Shahbazi***, Title: Hamiltonian colorings of graphs, (**2016**).
(10) ***Saide Qeysar Anzabi***, Title: Study of partial latin square uniquely completable, (**2018**).
(11) ***Saman Mostafayi***, Title: Study of total dominating in complementary prisms, (**2018**).
(12) ***Masume Seddighi Juryabi***, Title: Coloring of block designs, (**2018**).
(13) ***Fina Eslami***, Title: On the silver Cubes, (**2018**).
(14) ***Jannat Taheri Hashjin***, Title: On endomorphism of multiplication and comultiplication modules, (**2019**).
(15) ***Zeynab Najafi***, Title: The study of Grundy domination in product of graphs, (**2020**).
(16) ***Sanaz Moharrami***, Title: Double graphs, (**2021**).
(17) ***Afsane Jafari***, Title: On Fuzzy ideals and filters of pseducomplete semilattices, (**2022**).
(18) ***Leyla Ojarudi***.
(19) ***Afsane Jafari***.

- **MY PAPERS:**

I have published at least 40 papers which16 papers of them are joint works with other persons, and the other 24 papers have written alone. My papers has cited at least 281 times at the other works by **Google Scholar**. I am the corresponding author of **32** papers, and **21** papers is **JCR**-Journal Citation Reports. At least 30 papers of them has published in Mathematical Reviewer with author ID: 803682. The results of at least 13 papers are appeared in the following three books which are published recently by Springer.

(1) Teresa W. Haynes, Stephen T. Hedetniemi, Michael A. Henning, ***Structures of Domination in Graphs***, Springer **2021**.
(2) Teresa W. Haynes, Stephen T. Hedetniemi, Michael A. Henning, ***Topics in Domination in Graphs***, Springer **2020**.
(3) M. A. Henning, A. Yeo ***Total domination in graphs***, Springer **2013**, ISBN: 978-1-4614-6524-9 (Print) 978-1-4614-6525-6 (Online).

- **Published papers:**

(1) Domination in Harary graphs, *The Bulletin of ICA*, 49 (**2007**) 61-78 (with D. A. Mojdeh and A. Khodkar), http://www.combinatorialmath.ca/ICA/ICA49.html.
(2) Geodomination in graphs, *International Mathematical Forum* , 35 (2) (**2007**) 1729-1736, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.94.2849(and)rep=rep1(and)type=pdf.
(3) Chromatic numbers in some graphs, *International Mathematical Forum* , 35 (2) (**2007**) 1723-1727, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.503.1050(and)rep=rep1(and)type=pdf.
(4) Defining numbers in some of the Harary graphs, *Applied Mathematics Letters*, 22 (**2009**) 922-926 (With D. A. Mojdeh), https://www.sciencedirect.com/science/article/pii/S0893965909000020.
(5) On the domination number of some graphs, *Journal of Discrete Mathematical Sciences and Cryptography*, 12 (4) (**2009**) 489-493, https://www.tandfonline.com/doi/abs/10.1080/09720529.2009.10698250.

(6) Geodomination in graphs II, *Journal of Discrete Mathematical Sciences and Cryptography*, 12 (1) (**2009**) 43-50, http://doi.org/10.1080/09720529.2009.10698215.

(7) k-tuple total domination in graphs, *Discrete Applied Mathematics*, 158 (**2010**) 1006-1011, (with M. A. Henning) (selected as a **Hot paper**), https://www.sciencedirect.com/science/article/pii/S0166218X10000211.

(8) Every $K_{1,7}$, $K_{1,3}$-free, 3-vertex critical graph of even order has a perfect matching, *J. of Disc. Math. Scie. and Crypto.*, 13 (6) (**2010**) 583-591, https://www.tandfonline.com/doi/abs/10.1080/09720529.2010.10698316.

(9) On the independent domination number of the generalized Petersen graphs, *African Diaspora Journal of Mathematics*, 10 (1) (2010), 18-22.

(10) The Roman (k, k)-domatic number of a graph, *Annales Mathematicae et Informaticae*, 38 (**2011**) 45-57 (with S. M. Sheikholeslami, L.Volkmann), http://publikacio.uni-eszterhazy.hu/3238/1/AMI(underline)38(underline)from45to57.pdf.

(11) k-tuple total domination in supergeneralized Petersen graphs, *Communications in Mathematics and Applications*, 2 (1) (**2011**) 21-30 (with B. Pahlavsay), http://www.rgnpublications.com/journals/index.php/cma/article/view/130.

(12) k-tuple total domination in complementary prisms, *ISRN Combinatorics*, (**2011**) doi: 10.5402/2011/681274, https://downloads.hindawi.com/archive/2011/681274.pdf.

(13) k-tuple total domination in cross product of graphs, *Journal of Combinatorial Optimization*, 24 (3) (**2012**) 339-346 (with M. A. Henning), https://link.springer.com/article/10.1007/s10878-011-9389-z.

(14) Total domination in inflated graphs, *Discrete Applied Mathematics*, 160 (**2012**) 164-169 (with M. A. Henning), https://www.sciencedirect.com/science/article/pii/S0166218X11003106.

(15) Roman domination and Mycieleski's stucture in graphs, *Ars Combinatoria*, Vol. CVI (**2012**) 277-287, http://www.combinatorialmath.ca/ArsCombinatoria/Vol106.html, https://arxiv.org/pdf/1105.3290.pdf.

(16) k-tuple total domination and Mycieleskian graphs, *Transaction on Combinatorics*, 1 (1) (**2012**) 7–13, http://toc.ui.ac.ir/article(underline)333.html.

(17) On the total k-domination number of graphs, *Discussions Mathematicae and Graph Theory*, 32 (3) (**2012**) 419-426, https://www.dmgt.uz.zgora.pl/publish/bbl (underline) view (underline) pdf.php?ID=-1540.

(18) k-tuple total domination in complementary prisms, *ISRN Discrete Mathematics*, (**2012**) doi: 10.5402/2011/681274.

(19) k-tuple total domination in inflated graphs, *FILOMAT*, 272 (**2013**) 341-351. https://www.pmf.ni.ac.rs/filomat-content/2013/27-2/F27-2-14.pdf.

(20) Total domination in K_r-covered graphs, *Bull. Iranian Math. Soc.*, 39 (4) (**2013**) 675-680, http://bims.iranjournals.ir.

(21) k-tuple total restrained domination in complementary prisms, *ISRN Combinatorics*, (**2013**) Article ID 984549, https://downloads.hindawi.com/archive/2013/984549.pdf.

(22) k-tuple domatic in graphs, *Caspian Journal of Mathematical Sciences*, 2 (2) (**2013**) 105-112, http://cjms.journals.umz.ac.ir.

(23) k-tuple total restrained domination/domatic in graphs, *Bull. Iranian Math. Soc.*, 40 (3) (**2014**) 751-763, http://bims.iranjournals.ir/article (underline) 529 (underline) f5f373afe7aa443a872393ba1dd1ad50.pdf.

(24) Total dominator coloring in product graphs, *Utilitas Mathematica*, 94 (**2014**) 329-345.

(25) A note on the k-tuple total domination number of a graph, *Tbilisi Mathematical Journal*, 8 (2) (**2015**) 281-286, https://projecteuclid.org/journals/tbilisi-mathematical-journal/volume-8/issue-2/A-note-on-the-k-tuple-total-domination-number-of/10.1515/tmj-2015-0027.full.

(26) Total dominator chromatic number of a graph, *Transactions On Combinatorics*, Vol.4 No.2 (**2015**) 45-55, https://toc.ui.ac.ir/article(underline) 6171(underline)9ef54a03e9ce8be1ddbac6d68cda24c0.pdf.

(27) Chromatic number of Harary graphs, *Tbilisi J. of Math.*, 9 (1) (**2016**), 271-278 (with P. Jalilolghadr), https://projecteuclid.org/journals/tbilisi-mathematical-journal/volume-9/issue-1/Chromatic-number-of-Harary-graphs/10.1515/tmj-2016-0013. full.

(28) Double total domination in Harary graphs, *Communications in Mathematics and Applications*, 8 (1) (**2017**), 1-5 (with B. Pahlavsay), https://www.rgnpublications.com/journals/index.php/cma/article/view/701/465.

(29) Total dominator chromatic number of Mycieleskan graphs, *Utilitas Mathematica*, 103 (**2017**) 129–137, http://www.combinatorialmath.ca/Utilitas/UM103.html, https://arxiv.org/abs/1307.7706.

(30) Upper k-tuple total domination in graphs, *Pure and Applied Mathematics Quarterly*, 13 (4) (**2017**) 563-579, https://dx.doi.org/10.4310/PAMQ.2017.v13.n4.a1.

(31) Cartesian product graphs and k-tuple total domination, *FILOMAT*, 32 (19) (**2018**) 6713–6731 (with Rebecca J. Stones and B. Pahlavsay), https://doi.org/10.2298/FIL1819713K.

(32) Roman k-tuple domination in graphs, *Iranian Journal of Mathematical Sciences and Informatics*, Vol. 15, No. 2 (2020) 101-115, DOI: 10.29252/ijmsi.15.2.101.

(33) Total dominator coloring of the circulant graphs $C_n(a, b)$, *Utilitas Mathematica*,115 (**2020**) 105–117, (with P. Jalilolghadr and A. Khodkar), https://arxiv.org/abs/1905.00211.

(34) k-tuple restrained domination in graphs, *Quaestiones Mathematicae*, 44(8) (**2021**) 1023-1036. (with M. A. Henning), https://doi.org/10.2989/16073606.2020.1762137.

(35) Some product graphs with power domination number at most 2, *AKCE Int. J. of Graph Theory and Combin.*, 18 (3) (**2021**) 127-131, https://doi.org/10.1080/09728600.2021.1972773, (with N. Shahbaznejad and I. M. Pelayo).

(36) Total Dominator coloring of central graphs, *Ars Combinatoria*, 155 (**2021**) 4567, (with F. Kazemnejad), https://arxiv.org/abs/1801.05137.

(37) Total mixed domination in graphs, *AKCE International Journal of Graphs and Combinatorics*, 19 (3) (**2022**) 229–237, (with F. Kazemnejad and S. Moradi) https://doi.org/10.1080/09728600.2022.2111240.

(38) Quasi-Transversal in Latin Squares (with B. Pahlavsay), accepted (2020), https://arxiv.org/abs/1808.05213.

(39) Total dominator total coloring of graphs, *Contributions to Discrete Mathematics*, 18(2) (2023) 1-19 (with F. Kazemnejad and S. Moradi). https://cdm.ucalgary.ca/article/view/70912/57191.

(40) Total dominator total chromatic numbers of cycles and paths, *RAIRO - Operations Research* 57 (2023) 383–399, https://www.rairo-ro.org/articles/ro/pdf/forth/ro220278.pdf (with F. Kazemnejad).

- **Some submited papers:**

(1) Total dominator total chromatic numbers of wheels, complete bipartite graphs and complete graphs (with F. Kazemnejad), https://arxiv.org/abs/2002.11334.

(2) Graphs with small power domination number, (with N. Shahbaznejad and I. M. Pelayo) https://arxiv.org/abs/2106.13496.

(3) Total dominator coloring of the Lexicographic product of graphs (with Canan Ciftci).

(4) Total dominator chromatic number of the Lexicographic product of a cycle to a graph (with Canan Ciftci).

(5) The Moore graphs; Total domination and total dominator chromatic numbers (with Maliheh Alaei).

(6) The cages; Total domination and total dominator chromatic numbers (with Maliheh Alaei).

- **MATHEMATICAL REVIEWER:**

I have invited to review many articles for Mathematical Reviews. Nine of them are listed here. Throughout his career, he has had the honor and responsibility of serving in the capacity of judging the work of others that are enlisted as follows. These exceptional opportunities have been offered to him on the basis of his outstanding research and academic accomplishments.

(1) Henning, Michael A.; Krzywkowski, Marcin, **Total domination stability in graphs**, Discrete Appl. Math., 236 (**2018**) 246–255, MR number: 3739789 (2019).

(2) Jafari Rad, Nader; Volkmann, Lutz, **Generalization of the total outer-connected domination in graphs**, RAIRO Oper. Res. 50 (**2016**), no. 2, 233–239, MR number: 3479866 (2016).

(3) Henning, Michael A.; Naicker, Viroshan, **Bounds on the disjunctive total domination number of a tree**, Discuss. Math. Graph Theory 36 (**2016**), no. 1, 153–171, MR number: 3449142 (2016).

(4) Balbuena, Camino; Hansberg, Adriana; Haynes, Teresa W.; Henning, Michael A. **Total domination edge critical graphs with total domination number three and many dominating pairs**, Graphs and Combin. 31 (**2015**), no. 5, 1163–1176, MR number: 3386001 (2016).

(5) Lunney, S.; Mynhardt, C. M., **More trees with equal broadcast and domination numbers**, Australas. J. Combin. 61 (**2015**), 251–272, MR number: 3311125 (2015).

(6) Kostochka, Alexandr V.; Milans, Kevin G., **Coloring clean and K_4-free circle graphs**, Book Part: Thirty essays on geometric graph theory, 399–414, Springer, New York, **2013**, MR n Number: 3205165 (2015).

(7) Favaron, O.; Karami, H.; Khoeilar, R.; Sheikholeslami, S. M., **On the total domination subdivision number in graphs**, Bull. Malays. Math. Sci. Soc. (2) 37 (**2014**) no. 1, 173–180, MR number: 3151703 (2014).

(8) Gonzlez Yero, Ismael; Kuziak, Dorota; Rondn Aguilar, Amauris, **Coloring, location and domination of corona graphs**, Aequationes Math. 86 (**2013**) no. 1-2, 1–21, MR number: 3094629 (2014).

(9) Basavaraju, Manu; Chandran, L. Sunil, **Acyclic edge coloring of triangle-free planar graphs**, J. Graph Theory 71 (**2012**), no. 4, 365–385, MR number: 2988880 (2013)

- **CONFERENCE TALKS:**

I have presented at least **14** talks at international conference in mathematics which was invited speaker at three of them.

(1) k-tuple total domination in graphs, International Conference of Mathematical Sciences, 04-10 Aug. **2009**, Istanbul, Türkiye.

(2) Roman domination and Mycieleskian structure in graphs, AIMC 40, Sharif University of Technology, Aug. 18-21, **2009**, Tehran, Iran.

(3) k-Tuple total domination in inflated graphs, ICMS2 2010, Nov. 30-Dec. 3, **2010**, UKM, Kuala Lumpur, Malaysia.

(4) The proof of the r-complete covered conjecture, ICMS2 2010, Nov. 30-Dec. 3, **2010**, UKM, Kuala Lumpur, Malaysia.

(5) Total domination and total dominator chromatic numbers of a Hypergraph, Aug. 26-31, **2013**, Isfahan, Isfahan Univ. of Tech., Iran, (**invited Speaker**).

(6) Domination in graphs, IASBS Combinatorics and Graph Theory workshop, Sep. 3-5, **2014**, Zanjan, IASBS, Iran (**invited Speaker**).

(7) Total domination number of a family of graph product, AIMC 46, Aug. 25-28, **2015**, Yazd, Yazd University, Iran.

(8) Total dominator colorings in graphs, The Third Gdask Workshop on Graph Theory, Sep. 16-18, **2015**, Gdansk, Poland.

(9) A new type of domination in graphs, 3rd Istanbul Design Theory, Graph Theory and Combinatorics Workshop, June 13-17, **2016**, Istanbul, Türkiye.

(10) Upper k-tuple total dominating sets in graphs, IPM Combinatorics and Computing Conference, **2017** May 16-18, Tehran, Iran.

(11) k-tuple total domination in cartesian product of graphs, 26th 3 in 1 Workshop on Graph Theory, **2017** Oct. 26-28, AGH University of Science and Technology, Cracow, Poland.

(12) Total dominator coloring of a graph, ICPAM-Van **2018**, Sep.11-13, Van Yuzuncu Yil University, Van, Türkiye.

(13) Total dominator total coloring of graphs, 8th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2019), **2019**, Aug. 27-30, Baku State University, Baku, Azerbayjan.

(14) Total dominator total coloring of graphs, Ordu University, May 26, **2022**, Ordu, Türkiye, (**invited Speaker**).