Mohammad Zarrin
Department of Mathematics, Texas State University, 601 University Drive
San Marcos, TX 78666-4616, USA
Email: m.zarrin@txstate.edu
Office:MCS462

ACADEMIC POSITIONS AND PROFESSIONAL EXPERIENCE:

* **Lecturer**, Department of Mathematics, Texas State University, San Marcos, Texas, USA, August 2022- now

* **Associate Professor** of Mathematics, University of Kurdistan, Iran, 2013- February 2022.

* **Visiting professor** at the University of Napoli Federico II, invited by Professor Francesco de Giovanni, Italy 2020, for one month.

* **Visiting Scholar** at the Kent State University, Ohio, USA, 2016- 2017.

* **Assistant Professor**, Department of Mathematics, University of Kurdistan, Iran, 2009- 2013.

* **Visiting Scholar** at the University of Udine, Udine, Italy, 2007- 2008.

Awards and Honors:

* Darafsheh Prize, selected as the best invited speaker in 8-th Iranian Group Theory Conference University of Tabriz, Tabriz, Iran, Feb 3-5, 2016.

* IPM Research Grant (Institute of Physics and Mathematics), Tehran, Iran, 2010- 2013. link

* Scholarship of MSRT (Ministry of Science and Research and Technology), Tehran, Iran, 2004- 2008.

Education:

* Ph.D. in Mathematics, Group Theory, University of Isfahan, Isfahan, Iran.

* M.S. in Mathematic, Algebra, University of Isfahan, Isfahan, Iran, 2003.

* B.S. in Mathematics, Amir Kabir (Tehran Polytechnic) University, Tehran, Iran, 2000.

Honorary Activities:

* Editor of the Bulletin of the Iranian Mathematical Society, Springer, since 2019. link
* Editor of the Global Analysis and Discrete Mathematics, Damghan University, since 2016-2019
* Member of the American Mathematical Reviewers.
* Reviewer of Zentralblatt.
* Member of Scientific Committee of some National Mathematics Conférences, Iran.
* Member of Executive Committee of some Group Theory Conferences, Iran.
* Referee for some Group Theory Conferences.
* I am great at programming in GAP and computational group theory.
* Referee for:
  - . Journal of Algebra (Elsevier Inc.)
  - . Journal of Algebra and its Application (Word scientific)
  - . Linear Algebra and its Application (Elsevier Inc.)
  - . Journal of Group Theory (Walter de Gruyter)
  - . Publicationes Mathimaticae Debrecen (University of Debrecen, Hungary)
  - . Algebra Colloquium (Word scientific)
  - . Communication of Algebra (Taylor & Francis)
  - . Bulletin of the Iranian Mathematical Society (Springer)
  - . Bulletin of Malaysian Mathematical Society (Springer)
  - . Journal of Pure and Apply Algebra (Elsevier Inc.)
  - . Results in Mathematics (Springer)
  - . Archiv der Mathematik (Basel) (Springer)

Research Interests:

Combinatoria conditions on subsets of groups and rings,

Graph theory,

Coding theory,

Statistics and computer science.

Mathematics Subject Classifications (2000):
20, 16, 20D, 20P, …

Teaching Experience:

* Texas State University: (four courses per semester)

Math2321, P06: Calculus for Life Sciences I. Academic Semester: Fall 2022.

Math1316, P06: A Survey of Contemporary Mathematics. Academic Semester: Fall 2022.

Math1316, P20: A Survey of Contemporary Mathematics. Academic Semester: Fall 2022.

Math1316, P21: A Survey of Contemporary Mathematics. Academic Semester: Fall 2022.

Math2358, P251: Discrete Math I. Academic Semester/Term: Spring 2023.

Math 2358, P258: Discrete Math I. Academic Semester/Term: Spring 2023.

Math1316, P51: A Survey of Contemporary Mathematics. Academic Semester: Spring 2023.

Math1316, P58: A Survey of Contemporary Mathematics. Academic Semester: Spring 2022.

Math2321, P06: Calculus for Life Sciences I. Academic Semester: Fall 2023.

Math2321, P08: A Survey of Contemporary Mathematics. Academic Semester: Fall 2023.

Math1316, P20: A Survey of Contemporary Mathematics. Academic Semester: Fall 2023.

Math1316, P26: A Survey of Contemporary Mathematics. Academic Semester: Fall 2023.

* University of Kurdistan:

Algebraic Topology: has been taught 2 times, 2014- 2016.

Advanced Algebra: has been taught 4 times, 2012- 2019.

A course in finite group theory: has been taught 4 times, 2012- 2021.

A course in infinite group theory: has been taught 3 times, 2012- 2021.

Ring Theory: has been taught 2 times, 2012- 2014.

Algebra I: has been taught 5 times, 2009- 2021.

Algebra II: has been taught 3 times, 2010- 2020.

Real Analysis I: has been taught 3 times, 2011- 2018.

College Algebra: has been taught 2 times, 2009- 2015.

Principles of Mathematics: has been taught 3 times, 2010- 2016.

Number Theory: has been taught 4 times, 2009- 2019.

Linear Algebra: has been taught 7 times, 2011- 2021.

Discrete Mathematics: has been taught 4 times, 2010- 2018.

Fundamental Mathematics: has been taught 3 times, 2009- 2016.

Calculus I: has been taught 8 times, 2009- 2021.

Calculus II: has been taught 5 times, 2009- 2019.

Calculus III: has been taught 3 times, 2010- 2015.

Statistics: has been taught 5 times, 2011- 2018.

Calculus for Science students: has been taught 2 times, 2009- 2000.

Calculus for engineering students: has been taught 3 times, 2009- 2014.

Multivariable Calculus: has been taught 2 times, 2011- 2015.

History of Mathematics: has been taught 3 times, 2012- 2017.

Combinatorics: has been taught 6 times, 2011- 2020.

Complex Functions: has been taught 2 times, 2009- 2014.

Differential Equations: has been taught 3 times, 2013- 2015.

Graph Theory and its Applications: has been taught 7 times, 2011-2021.

Math for Olympiad: has been taught for OM. 4 times. Also an Olympiad organizer.

* University of Isfahan (Teaching assistant):

Differential Equations: has been taught 8 times, as PhD Student, 2002- 2009.

Calculus I: has been taught 8 times, as PhD Student, 2002- 2009.

Calculus for Science students: has been taught 2 times, as Master Student, 2001- 2001.

Math for Olympiad: has been taught for OM. 2 times.

Painter Instructor: for someone who were interested, including students.

Ping pong trainer: for someone who were interested, including students.

* Amir Kabir University (Tutoring):

Calculus I: has been taught 2 times, as B.S. Student, 1997- 1999.

Publications:

38. Y. Yang and **M. Zarrin**, On the generalization of Pyber's question, submitted.

37. S. Rahimirad and **M. Zarrin**, The probability of two elements in a group have the same centralizers, submitted.

36. N. Ahamadkhah and **M. Zarrin**, On the nilpotentizer of groups, submitted.

35. S. Rahimirad and **M. Zarrin**, The probability of two elements in a group have the same orders, submitted.

34. N. Ahmadkhah and **M. Zarrin**, The influence of centralizers on the size of group, J. Algebra. Appl. (2024) 6 pages.

33. E.I. Khukhro, A. Moreto and **M. Zarrin**, The average element order and the number of conjugacy classes of finite groups, J. Algebra 569 (2021) 1-11.

32. L.J. Taghvasani S. Kohl and **M. Zarrin**, A classification of the finite non-solvable minimal non-CA-groups, J. Algebra. Appl. (2021) 8 pages.

31. K. Khoramshahi and **M. Zarrin**, On groups with the set number of centralizers, J. Algebra. Appl. (2021) 6 pages.

30. C.S. Anabanti, A. Moreto and **M. Zarrin**, Influence of the number of Sylow subgroups on solvability of finite groups, Comptes Rendus Mathématique (2020) 4 pages.

29. N. Ahamadkhah and **M. Zarrin**, On the set of same-size conjugate classes, Comm. Algebra 47 (2019) 3932-3938.

28. M. Lewis and **M. Zarrin**, Generalizing Baer's norm, J. Group Theory 22 (2019)157-168.

27. L.J. Taghvasani, S. Marzang and **M. Zarrin**, On the number of isomorphism classes of derived subgroups, Czech.Math. J. 69 (2019) 665-670.

26. L.J. Taghvasani and **M. Zarrin**, Criteria for nilpotency of groups via partitions, Math. Nachr, 291 (2018) 1-5.

25. **M. Zarrin**, A counterexample to Herzog's Conjecture on the number of involutions, Arch. Math (Basel) 111 (2018) 349-351.

24. N. Ahmadkhah, S. Marzang and **M. Zarrin**, A generalization of Neumann's question, Results Math. 73 (2018) no. 2, Art. 80, 11 page.

23. L.J. Taghvasani and **M. Zarrin**, Shen's conjecture on groups with given same order type, I.J. Group Theory, 6 (2017) 17-20.

22. **M. Zarrin**, Non-nilpotent subsets in the Susuki groups, I.J. Group Theory, 6 (2017) 7-15.

21. L.J. Taghvasani and **M. Zarrin**, A characterization of A_5 by its Same-order type, Monatshefte für Mathematik, 182 (2017), 731-736.

20. **M. Zarrin**, On the norm of the centralizers of a group, Colloq. Math. 149 (2017) 87-91.

19. H.E. Bell and **M. Zarrin**, A commutativity condition subsets of rings, J. Algebra. Appl. 16 (2017) 6 pages.

18. **M. Zarrin**, On non-commuting sets and centralizers in infinite groups, Bull. Aust. Math. Soc. 93 (2016) 42-46.

17. **M. Zarrin**, On Solvability of groups with few non-cyclic subgroups, Algebra Colloq. 23:1 (2016) 105-110.

16. H.E. Bell and **M. Zarrin**, A commutativity property for rings, J. Algebra. Appl.14, (2015) 8 pages.

15. **M. Zarrin**, Derived length and centralizers in groups, J. Algebra. Appl. 14, (2015) 4 pages.

14. **M. Zarrin**, Non-nilpotent subgroups of locally graded group, Colloq. Math.138 (2015) 145-148.

13. **M. Zarrin**, On solubility of groups with few normalizers, Bull. Aust. Math. Soc. 90 (2014) 247-249.

12. **M. Zarrin**, On groups with finitely many derived subgroups, J. Algebra. Appl. 13, (2014) 5 pages.

11. **M. Zarrin**, Non-subnormal Subgroups of groups, Journal of Pure and Applied Algebra, 217 (2013), 851-853.

10. **M. Zarrin**, Groups with few solvable subgroups, J. Algebra. Appl. 12, (2013) 1350011 (4 pages).

9. **M. Zarrin**, On solubility of groups with finitely many centralizers, Bull. Iran. Math. Soc. 39, (2013) 517-521.

8. **M. Zarrin**, A generalization of Schmidt's Theorem on groups with all subgroups nilpotent, Arch. Math (Basel) 99 (2012) 201-206.

7. **M. Zarrin**, Ensuring a group is weakly nilpotent, Comm. Algebra 40 (2012) no.12, 4739-4752.

6. **M. Zarrin**, On groups with a finite number of normalizers, Bull. Aust. Math. 86 (2012) 416-423.

5. **M. Zarrin**, Criteria for the solubility of finite groups by their centralizers, Arch. Math (Basel) 96 (2011) 225-226.

4. A. Abdollahi and **M. Zarrin**, Non-nilpotent graph of a group, Comm. Algebra 38 (2010) no. 12, 4390-4403.

3. A. Abdollahi, A, Azad, A.M. Hassanabadi and **M. Zarrin**, On the clique numbers of non-commuting graphs of certain groups, Algebra Colloq. 17 (2010) 611-620.

2. **M. Zarrin**, On element-centralizers in finite groups, Arch. Math (Basel) 93 (2009), 497-503.

1. A. Abdollahi, A, Azad, A.M. Hassanabadi and **M. Zarrin**, B.H. Neumann's question on ensuring commutativity of finite groups, Bull. Aust. Math. Soc. 74 (2006) 121-132.

Presentation in Recent Conferences:

. China US Group Theory Summit 2024, University of Florida, Florida, February 22 to 25, 2024 (seaker).

. The 10-th Iranian Group Theory Conference, Kharazmi University, Tehran, Iran, 2018.

Title: a new characterization of A_5 by Nse

. The 8-th Iranian Group Theory Conference, University of Tabriz, Tabriz, Iran, 2016 (Invited speaker).

Title: on centralizers and non-commuting set in infinite groups.

. The 6-th Iranian Group Theory Conference, Golestan University, Golestan, Iran, 2014.

Title: a generalization of Mohres's Theorem on groups with all subnormal subgroups.

. The 2-th International Conference on Mathematical Science, Istanbul, Turkey, 2012.

Title: the influence of centralizers on finite groups .

. The 3-th Iranian Group Theory Conference, University of Tehran, Tehran, Iran, 2011.

Title: on the weakly nilpotent groups.

Advised Ph.D. Graduates, link:

* Ph.D. Thesis Advisor to S. Rahimirad (2022) at the University of Kurdistan, Iran.

Dissertation: On the probability of two elements have the same centralizers in a group.

* Ph.D. Thesis Advisor to K. Khoramshahi (2020) at the University of Kurdistan, Iran.

Dissertation: characterization of finite groups with the set of same-size conjugate classes.

* Ph.D. Thesis Advisor to N. Ahmadkhah (2020) at the University of Kurdistan, Iran.

Dissertation: some results on the number of centralizers of a group and the effect of centralizers on the structure of group.

* Ph.D. Thesis Advisor to S. Marzang (2019) at the University of Kurdistan, Iran.

Dissertation: on the number of isomorphism classes of derived subgroups.

* Ph.D. Thesis Advisor to L.J. Taghvasani (2018) at the University of Kurdistan, Iran.

Dissertation: characterization of nilpotent groups and some non-abelian simple groups.

* M.S. Thesis Advisor to 20 students at the University of Kurdistan, Iran.