

CURRICULUM VITAE
M. R. POURNAKI
AUGUST 14, 2024

PERSONAL PROFILE

Name: Mohammad Reza Pournaki
Date of Birth: January 14, 1971
Place of Birth: Tehran, Iran
Gender: Male
Nationality: Iranian
Marital Status: Married to Parvaneh Farzaneh Behelgardi (September 08, 2000)
Children: One son, Parsa, who was born on February 21, 2004

CONTACT INFORMATION

Office Address: Department of Mathematical Sciences
Sharif University of Technology
P.O. Box 11155-9415
Tehran, Iran

Phone: (+98 21) 6600 5217
Fax: (+98 21) 6600 5117

Homepage: pournaki.ir
Email: pournaki@ipm.ir

EDUCATION

- I got my undergraduate and master degrees from Sharif University of Technology and my Ph.D. from the University of Tehran. Also I have been a Post-Doctoral Research Fellow at Institute for Research in Fundamental Sciences, formerly called Institute for Studies in Theoretical Physics and Mathematics (IPM), for four years.
- 1. 1990–1994: B.Sc. studies in mathematics at the Department of Mathematical Sciences, Sharif University of Technology
- 2. 1995–1996: M.Sc. studies in mathematics at the Department of Mathematical Sciences, Sharif University of Technology, under the supervision of Professor M. Hesaaraki (Title of the thesis: The Existence and Behavior of Viscous Structure for Plane Detonation Waves)
- 3. 1997–1999: Ph.D. studies in mathematics at the School of Mathematics, Statistics and Computer Science, College of Science (formerly called the Department of Mathematics and Computer Science), University of Tehran, under the supervision of Professor M. R. Darafsheh (Title of the dissertation: Symmetry Class of Tensors Associated with Certain Groups)

REFERENCES

- Professor Edgar Enochs
Affiliation: University of Kentucky (USA)
E-mail: e.enochs@uky.edu
- Professor Naoki Terai
Affiliation: Okayama University (Japan)
E-mail: terai@okayama-u.ac.jp
- Professor Volkmar Welker
Affiliation: Philipps-Universität Marburg (Germany)
E-mail: welker@mathematik.uni-marburg.de
- Professor Siamak Yassemi
Affiliation: Purdue University (USA)
E-mail: syassemi@purdue.edu

ERDÖS NUMBER

- My Erdős number is 3 as the following papers show:
 1. A. Balog, P. Erdős, G. Tenenbaum, On arithmetic functions involving consecutive divisors, *Analytic Number Theory (Allerton Park, IL, 1989)*, 77–90, *Progr. Math.* **85**, Birkhäuser Boston, Boston, MA, 1990.
 2. A. Balog, C. Bessenrodt, J. B. Olsson, K. Ono, Prime power degree representations of the symmetric and alternating groups, *J. London Math. Soc. (2)* **64** (2001), no. 2, 344–356.
 3. C. Bessenrodt, M. R. Pournaki, A. Reifegerste, A note on the orthogonal basis of a certain full symmetry class of tensors, *Linear Algebra Appl.* **370** (2003), 369–374.

ACADEMIC HONORS

- 1990–Present: Member of the Iranian Mathematical Society (IMS)
- 1994: Top student in first Farhangestane Olum’s competition
- 1995: Top student in M.Sc. entrance exam of all Iranian universities
- 1995–1996: Top student in M.Sc. class
- 1997: Top student in Ph.D. entrance exam of the University of Tehran
- 1997–1999: Top student in Ph.D. class
- 2000–2001: Editor of Mahnameh-ye Riyaziat (A monthly mathematics magazine for high school students of Iran)

- 2001–2007: Editor of Farhang va Andishe-ye Riyazi (An expository mathematics journal published by the Iranian Mathematical Society)
- 2001–2004: Director of problems section in Farhang va Andishe-ye Riyazi
- 2002: Member of the International Linear Algebra Society
- 2003–2006: Member of the scientific committee of mathematics competition for Iranian university students
- 2003: Member of the scientific committee of the 15th Iranian National Seminar in Algebra
- 2003: Member of the scientific committee of designing Calculus curriculum at the University of Tehran
- 2005–Present: Referee of some mathematical journals
- 2007–Present: Reviewer of the American Mathematical Reviews
- 2009–Present: Member of the American Mathematical Society (AMS)

ACADEMIC AWARDS

- 1998: Scholarship grant for excellence in Ph.D. studies, Institute for Studies in Theoretical Physics and Mathematics (IPM), for two years
- 2001: Post-doctoral research fellow award, Institute for Studies in Theoretical Physics and Mathematics (IPM), for four years
- 2002: Young mathematicians prize, Foundation for Research in Mathematics
- 2005: Distinguished assistant professor award for teaching, Sharif University of Technology
- 2006: Distinguished assistant professor award for research, Sharif University of Technology
- 2007: TWAS-UNESCO associateship award, The Academy of Sciences for the Developing World (TWAS), for three years
- 2012: Gundishapur programme award, French National Institute for Agricultural Research (INRA), for two years
- 2013: Distinguished associate professor award for teaching, Sharif University of Technology
- 2016: Distinguished associate professor award for research (international relation section), Sharif University of Technology
- 2016: Erasmus Mundus scholarship award for research activity and development of further exchange programme, Technical University of Berlin, for one month

- 2017: TWAS-UNESCO associateship award, The World Academy of Sciences for the Advancement of Science in Developing Countries (TWAS), for three years
- 2019: Distinguished professor award for research (book authoring section), Sharif University of Technology

SCIENTIFIC VISITS

- March 2002: Visiting Institut für Algebra und Geometrie, Fakultät für Mathematik, Otto von Guericke Universität Magdeburg, Magdeburg, Germany (Supported by IPM for three months)
- June 2002: Visiting the Mathematics Section, The Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy (Supported by ICTP for three months)
- March 2005: Visiting the Laboratoire d'Analyse, Topologie, Probabilités (LATP), Université de Provence, Marseille, France (Supported by LATP for one month)
- March 2007: Visiting the Departamento de Álgebra y Análisis Matemático, Universidad de Almería, Almería, Spain (Supported by the Universidad de Almería for one month)
- July 2007: Visiting the Theoretical Statistics and Mathematics Unit, Indian Statistical Institute – Delhi Center (ISID), New Delhi, India (Supported by TWAS and ISID for two months)
- January 2010: Visiting the Theoretical Statistics and Mathematics Unit, Indian Statistical Institute – Delhi Center (ISID), New Delhi, India (Supported by TWAS and ISID for one month)
- March 2011: Visiting the Department of Mathematics, Faculty of Science, Kasetsart University, Bangkok, Thailand (Supported by Sharif University of Technology and IPM for twenty days)
- September 2012: Visiting the Institut Mathématique de Jussieu, Université Pierre et Marie Curie, Paris, France (Supported by French National Institute for Agricultural Research for two weeks)
- June 2013: Visiting the Department of Mathematics, Faculty of Science, Izmir Institute of Technology, Izmir, Turkey (Supported by IPM and Izmir Institute of Technology for one week)
- June 2015: Visiting the Institute of Mathematical Sciences, University of Malaya, Kuala Lumpur, Malaysia (Supported by IPM and University of Malaya for one month)
- June 2016: Visiting the Institut de Mathématiques de Jussieu-Paris Rive Gauche, Université Paris Diderot, Paris, France (Supported by Sharif University of Technology and IPM for one week)

- January 2018: Visiting the Department of Mathematics-DDE, Madurai Kamaraj University, Madurai, India (Supported by Sharif University of Technology and Madurai Kamaraj University for one week)
- March 2018: Visiting the Institute of Mathematics, Vietnam Academy of Science and Technology (VAST), Hanoi, Vietnam (Supported by TWAS and VAST for two months)
- March 2024: Visiting Department of Mathematics, Dokuz Eylül University (DEU), Izmir, Turkey (Supported by Sharif University of Technology for one month)

EMPLOYMENT

- 2001–2004: Post-Doctoral Research Fellow, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2005–2007: Assistant Professor, Sharif University of Technology
- 2007–2017: Associate Professor, Sharif University of Technology
- 2017–Present: Professor, Sharif University of Technology

ACADEMIC POSITIONS

- 1995–2000: Lecturer, Sharif University of Technology
- 1997: Lecturer, Air University
- 1998: Lecturer, University of Tehran
- 1997–1999: Student Researcher, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2000: Junior Associate Researcher, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2001–2004: Post-Doctoral Research Fellow, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2005–2009: Junior Associate Researcher, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2010–2017: Associate Researcher, Institute for Studies in Theoretical Physics and Mathematics (IPM)
- 2005–2007: Assistant Professor, Sharif University of Technology
- 2007–2017: Associate Professor, Sharif University of Technology
- 2017–Present: Professor, Sharif University of Technology

ACADEMIC SERVICES

- October 2004–October 2006: Vice-Chairman in Student Affairs, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor M. Mahdavi-Hezavehi)
- October 2006–October 2008: Vice-Chairman in Academic Affairs, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor M. Ardeshir)
- March 2011–March 2013: Vice-Chairman in Graduate Studies, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor S. Shahshahani until July 2012 and then Professor M. Fotouhi)
- April 2015–April 2017: Director of International Affairs, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor M. Fotouhi until August 2016 and then Professor A. Daneshgar)
- January 2016–January 2018: Director of Pure Mathematics Section, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor M. Fotouhi until August 2016 and then Professor A. Daneshgar)
- May 2016–May 2018: Director of General Mathematics Courses, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor M. Fotouhi until August 2016 and then Professor A. Daneshgar)
- October 2017–October 2021: Vice-Chairman in Research and International Affairs, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor A. Daneshgar)
- August 2024–August 2026: Vice-Chairman in Academic Affairs, Department of Mathematical Sciences, Sharif University of Technology (Head of the Department: Professor H. R. Fanai)

TEACHING EXPERIENCES

- Over the past years I have taught **28** different courses, including **17** undergraduate courses and **11** graduate courses:

UNDERGRADUATE COURSES

- Calculus 1, Calculus 2, Differential Equations, Engineering Mathematics, Analysis 1, Analysis 2, Complex Functions 1, Elementary Functional Analysis, Elementary Theory of Ordinary Differential Equations, Topology 1, Introductory Algebraic Topology, Algebra 1, Algebra 2, Algebra 3, Linear Algebra 1, Linear Algebra 2, Number Theory

GRADUATE COURSES

- Real Analysis, Advanced Algebra, Homological Algebra 1, Homological Algebra 2, Commutative Algebra 1, Commutative Algebra 2, Homological Methods in Commu-

tative Algebra, Finite Groups, Linear Groups, Representation and Character Theory of Finite Groups, Topics in Algebra (Gröbner Bases Theory)

M.SC. PROJECTS SUPERVISED

1. Reza Sobhani, *Isoclinism Classes and Commutativity Degrees of Finite Groups*, September 2005
2. Mohammad Reza Oboudi, *Armendariz and Gaussian Rings*, September 2006
3. Hasan Pourmahmood, *Castelnuovo–Mumford Regularity of Projective Curves*, September 2006
4. Majid Saeidi-Nik, *Matlis Category Equivalence*, January 2007
5. Hashem Najafi, *Zero-divisor Graphs of Commutative Rings*, January 2007
6. Mehdi Alinejad, *Graphs Related to Conjugacy Classes of Groups*, June 2007
7. Anoosh Ghashghaei, *Coherent Rings*, October 2007
8. Amir Ghadermarzi, *On the Injectivity and Flatness of Simple Modules*, February 2008
9. Omid Hatami Varzaneh, *An Introduction to the Langlands Program*, September 2009
10. Saber Tavoussi, *Clean Elements in Commutative Reduced Rings*, December 2010
11. Maghsoud Parviz, *Some Applications of Gröbner Bases*, December 2010
12. Sina Rezazadeh Baghal, *Higher Composition Law*, July 2012
13. Erfan Manoochehri, *On Beck's Coloring of Posets*, September 2013
14. Ali Akbar Kamali, *Zero-divisor Graphs of Partially Ordered Sets*, September 2013
15. Ehsan Yavari, *The Zero-divisor Graph of a Qoset*, September 2013
16. Negar Janani, *The Reconstruction Conjecture and Edge Ideals*, September 2014
17. Parisa Ghoraishi, *Equality of Ordinary and Symbolic Powers of Stanley–Reisner Ideals*, September 2014
18. Pooneh Afsharijoo, *Colorings of Simplicial Complexes and Vertex Decomposability*, September 2014
19. And about 10 more (not completed list)

PH.D. THESIS SUPERVISED

1. Seyed Amin Seyed Fakhari, *Stanley Depth of Powers of Monomial Ideals*, January 2013

2. Milad Poursoltani Zarandi, *Commutative Algebra in Action: From Betti Numbers to Codes*, expected to graduate in 2024

RESEARCH INTERESTS

- I am mostly interested in group theory, ring theory, module theory and their applications. These lead to many other areas, including character theory, homological algebra and combinatorics.

PUBLICATIONS

HIGH SCHOOL TEXTS

1. With H. Hashemi and R. Monavari, *A First Step in Calculus*, 2nd Edition, 3rd Printing, Alavi Publication, 2005 (in Persian).
2. With Y. Tabesh, *Analytic Geometry and Linear Algebra* (the mathematics book being taught in the last year of Iran's high schools), 15th Printing, Education Ministry Press, 2015 (in Persian).

UNIVERSITY TEXTS

1. With M. Hesaaraki, *Complex Functions*, 2nd Edition, 3rd Printing, Fatemi Publication, 2012 (in Persian).
2. With S. Yassemi, *Introduction to Module Theory*, 2nd Edition, 7th Printing, Sharif University Press & Fatemi Publication, 2017 (in Persian).
3. With M. Fotouhi and M. Hesaaraki, *Engineering Mathematics*, 2nd printing, Sharif University Press & Fatemi Publication, 2018 (in Persian).
4. With P. Farzaneh Behelgard, *Mathematics for Humanities*, Sharif University Press, in final preparation (in Persian).
5. With S. Yassemi, *Homological Methods in Commutative Algebra*, Sharif University Press, in final preparation (in Persian).
6. *Introduction to Lebesgue Measure Theory*, Fatemi Publication, in final preparation (in Persian).
7. *Foundations of Algebra*, Fatemi Publication, in preparation (in Persian).

PAPERS IN REFEREED JOURNALS

1. With M. R. Darafsheh, On the dimensions of cyclic symmetry classes of tensors, *J. Algebra* **205** (1998), no. 1, 317–325.

2. With M. R. Darafsheh, On the orthogonal basis of the symmetry classes of tensors associated with the dicyclic group, *Linear and Multilinear Algebra* **47** (2000), no. 2, 137–149.
3. With M. R. Darafsheh, Computation of the dimensions of symmetry classes of tensors associated with the finite two dimensional projective special linear group, *Appl. Algebra Engrg. Comm. Comput.* **10** (2000), no. 3, 237–250.
4. With M. R. Darafsheh, Non-vanishing and orthogonal basis of symmetry classes of tensors, *Southeast Asian Bull. Math.* **24** (2000), no. 4, 525–531.
5. With M. R. Darafsheh and K. Mallahi, A note on Cayley-Hamilton theorem for generalized matrix function, *Pure Math. Appl.* **11** (2000), no. 4, 553–557.
6. Some non-trivial symmetry classes of tensors associated with certain characters, *Southeast Asian Bull. Math.* **25** (2001), no. 3, 523–527.
7. On the orthogonal basis of the symmetry classes of tensors associated with certain characters, *Linear Algebra Appl.* **336** (2001), no. 1-3, 255–260.
8. With M. Tousi, A note on the countable union of prime submodules, *Int. J. Math. Math. Sci.* **27** (2001), no. 10, 641–643.
9. With A. R. Moghaddamfar, Recognition of some symmetric groups by the set of the order of their elements, *Acta Math. Hungar.* **99** (2003), no. 4, 263–270.
10. With C. Bessenrodt and A. Reifegerste, A note on the orthogonal basis of a certain full symmetry class of tensors, *Linear Algebra Appl.* **370** (2003), 369–374.
11. With M. Tousi, Explicit description of a class of indecomposable injective modules, *Acta Math. Sci. Ser. B Engl. Ed.* **25** (2005), no. 3, 511–514.
12. With M. S. Lucido, Elements with square roots in finite groups, *Algebra Colloq.* **12** (2005), no. 4, 677–690.
13. With I. M. Isaacs, Generalizations of Fermat’s little theorem via group theory, *Amer. Math. Monthly* **112** (2005), no. 8, 734–740.
14. An extension of a result of Gauss to finite groups: a linear algebraic approach, *Elem. Math.* **61** (2006), no. 1, 24–31.
15. With H. R. Maimani and S. Yassemi, Zero-divisor graph with respect to an ideal, *Comm. Algebra* **34** (2006), no. 3, 923–929.
16. With M. Tousi and S. Yassemi, Tensor products of approximately Cohen–Macaulay rings, *Comm. Algebra* **34** (2006), no. 8, 2857–2866.
17. Groups acting on a set whose orbits are all singleton, *Bull. Austral. Math. Soc.* **73** (2006), no. 2, 231–234.

18. With A. Razani, On the existence of periodic solutions for a class of generalized forced Liénard equations, *Appl. Math. Lett.* **20** (2007), no. 3, 248–254.
19. With G. R. Omidi and B. Tayfeh-Rezaie, 3-Designs with block size 6 from $PSL(2, q)$ and their large sets, *Discrete Math.* **307** (2007), no. 13, 1580–1588.
20. With R. Sobhani, Probability that the commutator of two group elements is equal to a given element, *J. Pure Appl. Algebra* **212** (2008), no. 4, 727–734.
21. With M. S. Lucido, Probability that an element of a finite group has a square root, *Colloq. Math.* **112** (2008), no. 1, 147–155.
22. With A. Razani, Erratum to “On the existence of periodic solutions for a class of generalized forced Liénard equations” [*Appl. Math. Lett.* 20 (2007), no. 3, 248–254], *Appl. Math. Lett.* **21** (2008), no. 8, 880.
23. With S. A. Seyed Fakhari, M. Tousi and S. Yassemi, What is . . . Stanley depth? *Notices Amer. Math. Soc.* **56** (2009), no. 9, 1106–1108.
24. On the number of even permutations with roots, *Australas. J. Combin.* **45** (2009), 37–42.
25. With H. R. Maimani and S. Yassemi, Rings which are generated by their units: a graph theoretical approach, *Elem. Math.* **65** (2010), no. 1, 17–25.
26. With N. Ashrafi, H. R. Maimani and S. Yassemi, Unit graphs associated with rings, *Comm. Algebra* **38** (2010), no. 8, 2851–2871.
27. With H. R. Maimani and S. Yassemi, Weakly perfect graphs arising from rings, *Glasg. Math. J.* **52** (2010), no. 3, 417–425.
28. With M. R. Mokhtarzadeh and A. Razani, A note on periodic solutions of Riccati equations, *Nonlinear Dynam.* **62** (2010), no. 1-2, 119–125.
29. With H. R. Maimani and S. Yassemi, A class of weakly perfect graphs, *Czechoslovak Math. J.* **60(135)** (2010), no. 4, 1037–1041.
30. With H. R. Maimani and S. Yassemi, Necessary and sufficient conditions for unit graphs to be Hamiltonian, *Pacific J. Math.* **249** (2011), no. 2, 419–429.
31. With H. R. Maimani, A. Tehranian and S. Yassemi, Graphs attached to rings revisited, *Arab. J. Sci. Eng.* **36** (2011), no. 6, 997–1011.
32. With A. Goodarzi, S. A. Seyed Fakhari and S. Yassemi, On the h -vector of a simplicial complex with Serre’s condition, *J. Pure Appl. Algebra* **216** (2012), no. 1, 91–94.
33. With M. Alizadeh, A. K. Das, H. R. Maimani and S. Yassemi, On the diameter and girth of zero-divisor graphs of posets, *Discrete Appl. Math.* **160** (2012), no. 9, 1319–1324.

34. With M. R. Mokhtarzadeh and A. Razani, An existence-uniqueness theorem for a class of boundary value problems, *Fixed Point Theory* **13** (2012), no. 2, 583–592.
35. With M. Alizadeh, H. R. Maimani and S. Yassemi, An ideal theoretic approach to complete partite zero-divisor graphs of posets, *J. Algebra Appl.* **12** (2013), no. 2, 1250148, 11 pp.
36. With S. A. Seyed Fakhari and S. Yassemi, On the Stanley depth of weakly polymatroidal ideals, *Arch. Math. (Basel)* **100** (2013), no. 2, 115–121.
37. With S. A. Seyed Fakhari and S. Yassemi, On the h -triangles of sequentially (S_r) simplicial complexes via algebraic shifting, *Ark. Mat.* **51** (2013), no. 1, 185–196.
38. With A. K. Das and R. K. Nath, A survey on the estimation of commutativity in finite groups, *Southeast Asian Bull. Math.* **37** (2013), no. 2, 161–180.
39. With S. A. Seyed Fakhari and S. Yassemi, Stanley depth of powers of the edge ideal of a forest, *Proc. Amer. Math. Soc.* **141** (2013), no. 10, 3327–3336.
40. With B. Torrecillas, M. Tousi and S. Yassemi, Pure-injectivity of tensor products of modules, *Algebra Colloq.* **21** (2014), no. 1, 151–156.
41. With S. A. Seyed Fakhari and S. Yassemi, A generalization of the Swartz equality, *Glasg. Math. J.* **56** (2014), no. 2, 381–386.
42. With A. K. Das, H. R. Maimani and S. Yassemi, Nonplanarity of unit graphs and classification of the toroidal ones, *Pacific J. Math.* **268** (2014), no. 2, 371–387.
43. With S. A. Seyed Fakhari, N. Terai and S. Yassemi, Simplicial complexes satisfying Serre’s condition: a survey with some new results, *J. Commut. Algebra* **6** (2014), no. 4, 455–483.
44. With A. Constantinescu, S. A. Seyed Fakhari, N. Terai and S. Yassemi, Cohen–Macaulayness and limit behavior of depth for powers of cover ideals, *Comm. Algebra* **43** (2015), no. 1, 143–157.
45. With S. Kiani, H. R. Maimani and S. Yassemi, Classification of rings with unit graphs having domination number less than four, *Rend. Semin. Mat. Univ. Padova* **133** (2015), 173–195.
46. With S. A. Seyed Fakhari and S. Yassemi, New classes of set-theoretic complete intersection monomial ideals, *Comm. Algebra* **43** (2015), no. 9, 3920–3924.
47. With H. Amraei, H. R. Maimani and A. Zaeembashi, The nonorientable genus of some Jacobson graphs and classification of the projective ones, *Publ. Math. Debrecen* **88** (2016), no. 3-4, 425–437.
48. With H. Amraei, H. R. Maimani and A. Zaeembashi, Classification of the toroidal Jacobson graphs, *Bull. Malays. Math. Sci. Soc.* **41** (2018), no. 1, 321–334.

49. With A. Y. M. Chin, S. A. Seyed Fakhari and S. Yassemi, Combinatorics comes to the rescue: h -vectors in commutative algebra, *Math. Intelligencer* **41** (2019), no. 1, 16–21.
50. With T. Asir, H. R. Maimani and T. Tamizh Chelvam, Some bounds for the genus of a class of graphs arising from rings, *Houston J. Math.* **45** (2019), no. 2, 371–384.
51. With A. Y. M. Chin, S. Kiani and H. R. Maimani, Some bounds for the domination number of a class of graphs arising from rings, *Util. Math.* **117** (2020), 159–168.
52. With Z. Goodarzi, M. R. Mokhtarzadeh and A. Razani, A note on periodic solutions of matrix Riccati differential equations, *Appl. Math. E-Notes* **21** (2021), 179–186.
53. With D. T. Hoang, H. R. Maimani and A. Mousivand, Cohen–Macaulayness of two classes of circulant graphs, *J. Algebraic Combin.* **53** (2021), no. 3, 805–827.
54. With T. Ashitha and T. Asir, A class of graphs with a few well-covered members, *Expo. Math.* **39** (2021), no. 2, 302–308.
55. With T. Ashitha, T. Asir and D. T. Hoang, Cohen–Macaulayness of a class of graphs versus the class of their complements, *Discrete Math.* **344** (2021), no. 10, Paper No. 112525, 9 pp.
56. With N. Nemati and S. Yassemi, Componentwise linearity and the gcd condition are preserved by the polarization, *Bull. Math. Soc. Sci. Math. Roumanie (N.S.)* **64(112)** (2021), no. 4, 391–399.
57. With M. Poursoltani, N. Terai and S. Yassemi, A brief survey on pure Cohen–Macaulayness in a fixed codimension, *Acta Math. Vietnam.* **47** (2022), no. 1, 181–196.
58. With A. Y. M. Chin, H. R. Maimani, M. Sivagami and T. Tamizh Chelvam, Unitary Cayley graphs whose Roman domination numbers are at most four, *AKCE Int. J. Graphs Comb.* **19** (2022), no. 1, 36–40.
59. With K. Kimura, S. A. Seyed Fakhari, N. Terai and S. Yassemi, A glimpse to most of the old and new results on very well-covered graphs from the viewpoint of commutative algebra, *Res. Math. Sci.* **9** (2022), no. 2, Paper No. 29, 18 pp.
60. With K. Kimura, N. Terai and S. Yassemi, Very well-covered graphs and local cohomology of their residue rings by the edge ideals, *J. Algebra* **606** (2022), 1–18.
61. With K. Shibata, N. Terai and S. Yassemi, A note on monomial ideals which are Cohen–Macaulay in a fixed codimension, *Comm. Algebra* **50** (2022), no. 11, 4988–4996.
62. With T. Ashitha and T. Asir, A large class of graphs with a small subclass of Cohen–Macaulay members, *Comm. Algebra* **50** (2022), no. 12, 5080–5095.
63. With M. Poursoltani, N. Terai and S. Yassemi, Simplicial complexes satisfying Serre’s condition versus the ones which are Cohen–Macaulay in a fixed codimension, *SIAM J. Discrete Math.* **36** (2022), no. 4, 2506–2522.

64. With T. Ashitha and T. Asir, Some Cohen–Macaulay graphs arising from finite commutative rings, *J. Algebra Appl.* **22** (2023), no. 6, Paper No. 2350129, 11 pp.
65. With M. Poursoltani, N. Terai and S. Yassemi, On the dimension of dual modules of local cohomology and the Serre’s condition for the unmixed Stanley–Reisner ideals of small height, *J. Algebra* **632** (2023), 751–782.
66. With H. R. Maimani, L. Parsaei-Majd and M. Poursoltani, On the structure of matroids arising from the gain graphs, *Discrete Math.* **346** (2023), no. 12, Paper No. 113637, 9 pp.
67. With T. Ashitha, T. Asir and D. T. Hoang, Some bounds for the regularity of the edge ideals and their powers in a certain class of graphs, *Studia Sci. Math. Hungar.* **60** (2023), no. 4, 237–248.
68. With E. Enochs and S. Yassemi, A necessary and sufficient condition for a direct sum of modules to be distributive, *Comm. Algebra* **52** (2024), no. 2, 900–907.
69. With E. Enochs and S. Yassemi, An injective-envelope-based characterization of distributive modules over commutative Noetherian rings, *Comm. Algebra* **52** (2024), no. 6, 2358–2367.
 - With E. Enochs and S. Yassemi, Distributive modules over the rings of formal power series and polynomials, *J. Commut. Algebra*, to appear.
 - With T. Ashitha, T. Asir and D. T. Hoang, Betti numbers of edge ideals of Grimaldi graphs and their complements, *Bull. Malays. Math. Sci. Soc.*, to appear.
 - With E. Enochs and S. Yassemi, A combinatorial approach for computing the determinants of the generalized Vandermonde matrices, *Elem. Math.*, to appear.
 - With A. Y. M. Chin, H. R. Maimani and S. Yassemi, An upper bound on the strong edge chromatic number for a class of bipartite graphs, submitted.
 - With T. Ashitha and T. Asir, A class of graphs that complementation makes infinitely many Cohen–Macaulay members, submitted.
 - With T. Ashitha, T. Asir and D. T. Hoang, Regularity of the edge ideals and their powers for a class of graphs versus the class of their complements, submitted.
 - With T. Ashitha, T. Asir and D. T. Hoang, A lower bound for the induced matching number of a class of graphs due to Grimaldi and the Castelnuovo–Mumford regularity, submitted.
 - With T. Ashitha, T. Asir and P. V. Cheri, Vertex-decomposable, Cohen–Macaulay and well-covered zero-divisor graphs, submitted.
 - With T. Asir, P. V. Cheri and M. Subathra, Cohen–Macaulayness and vertex-decomposability of a class of graphs versus the class of their complements, submitted.

- With M. Poursoltani, N. Terai and S. Yassemi, Level simplicial complexes of codimension two and three conjectures on pure O -sequences, submitted.
- With Y. Muta and N. Terai, A local cohomological viewpoint on edge rings associated with multi-whisker graphs, submitted.

INVITED EXPOSITORY PAPERS (IN PERSIAN)

1. A high school proof for Fermat's two square theorem, *Mathematics Education Journal* **15** (1999), no. 57, 50-53 (in Persian).
2. Symmetry class of tensors, *Farhang va Andishe-ye Riyazi* **18** (1999), no. 1, 49-64 (in Persian).
3. Euler arithmetic function, *Mahnameh-ye Riyaziat* **1** (2000), no. 1, 19-24 (in Persian).
4. Arithmetic functions, *Mahnameh-ye Riyaziat* **1** (2000), no. 2, 16-20 (in Persian).
5. Matrices and conic sections, *Mathematics Education Journal* **17** (2001), no. 65, 12-24 (in Persian).
6. An extension of a theorem of Gauss to finite groups, *Nashr-e Riyazi* **15** (2005), no. 1, 50-53 (in Persian).

ACADEMIC TALKS

1. *On the Dimensions of Cyclic Symmetry Classes of Tensors*, University of Tehran, Tehran, Iran, March 1998.
2. *On the Dimensions of Cyclic Symmetry Classes of Tensors*, The 10th Iranian National Seminar in Algebra, University of Kordestan, Sanandaj, Iran, October 1998.
3. *The Relation Between Group Theory and Number Theory*, University of Tehran, Tehran, Iran, November 1998.
4. *On the Orthogonal Basis of the Symmetry Classes of Tensors Associated with the Dicyclic Group*, The 30th Annual Iranian Mathematics Conferences, Mohaghegh Ardebili University, Ardebil, Iran, August 1999.
5. *A Note on the Symmetry Classes of Tensors*, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran, October 1999.
6. *Computation of the Dimensions of Symmetry Classes of Tensors Associated with the Finite two Dimensional Projective Special Linear Group*, The 11th Iranian National Seminar in Algebra, Isfahan University of Technology, Isfahan, Iran, October 1999.
7. *A Note on Cayley-Hamilton Theorem for Generalized Matrix Function*, The 12th Iranian National Seminar in Algebra, Shahid Beheshti University, Tehran, Iran, March 2000.

8. *A Survey of Symmetry Classes of Tensors*, Tarbiat Modares University, Tehran, Iran, October 2000.
9. *A Survey of Symmetry Classes of Tensors*, The 2nd National Seminar in Linear Algebra, Persian Gulf University, Boshehr, Iran, January 2001 (Invited speaker).
10. *Symmetry Classes of Tensors Associated with Certain Groups*, The 2nd National Seminar in Linear Algebra, Persian Gulf University, Boshehr, Iran, January 2001 (Invited speaker).
11. *On the O-basis of Symmetry Classes of Tensors*, Yazd University, Yazd, Iran, May 2001 (Invited speaker).
12. *O-basis and Symmetry Classes of Tensors*, Otto von Guericke University, Magdeburg, Germany, April 15, 2002 (Invited speaker).
13. *On the Orthogonal Basis of a Certain Full Symmetry Class of Tensors*, The 15th Iranian National Seminar in Algebra, Guilan University, Rasht, Iran, July 2003 (Invited speaker).
14. *Numbers, Groups, and Linear Algebra*, Alzahra University, Tehran, Iran, November 2004 (Invited speaker).
15. *An Application of Linear Algebra in Generalization of a Theorem of Number Theory to Finite Groups*, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran, September 2005 (Invited speaker).
16. *Strength of Tensor Products of Vector Spaces*, The 2nd Seminar on Commutative Algebra and Related Topics, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran, November 2005 (Invited speaker).
17. *An Extension of a Result of Number Theory to Groups by Linear Algebraic Methods*, University of Almeria, Almeria, Spain, March 28, 2007 (Invited speaker).
18. *Gauss' Theorem in Number Theory*, University of Tehran, Tehran, Iran, November 2007 (Invited speaker).
19. *Gauss' Theorem in Number Theory*, Amirkabir University of Technology, Tehran, Iran, December 2007 (Invited speaker).
20. *Generalizations of Fermat's Little Theorem*, Sharif University of Technology, Tehran, Iran, November 2009 (Invited speaker).
21. *Simplicial Complexes, Stanley–Reisner Rings and Edge Ideals*, Workshop on Combinatorial Commutative Algebra, Guilan University, Rasht, Iran, February 2011 (Invited speaker).
22. *Generalizations of Fermat's Little Theorem via Linear Algebra*, Kasetsart University, Bangkok, Thailand, March 17, 2011 (Invited speaker).

23. *Generalizations of Fermat's Little Theorem via Group Theory*, Thammasat University, Bangkok, Thailand, March 21, 2011 (Invited speaker).
24. *Unit Graphs Associated with Rings*, Chulalongkorn University, Bangkok, Thailand, March 29, 2011 (Invited speaker).
25. CM_t *Simplicial Complexes and their h -Vectors*, Institut Mathématique de Jussieu, Université Pierre et Marie Curie, Paris, France, September 14, 2012 (Invited speaker).
26. *Cohen–Macaulay Graphs*, Sharif University of Technology, Tehran, Iran, February 2013 (Invited speaker).
27. *Rings which are Generated by their Units: A Graph Theoretical Approach*, Izmir Institute of Technology, Izmir, Turkey, June 19, 2013 (Invited speaker).
28. *Rings which are Generated by their Units: A Graph Theoretical Approach*, Sharif University of Technology, Tehran, Iran, September 2013 (Invited speaker).
29. *A Number-Theoretic Identity due to Gauss*, University of Malaya, Kuala Lumpur, Malaysia, June 17, 2015 (Invited speaker).
30. *Unit Graphs and their Importance*, University of Malaya, Kuala Lumpur, Malaysia, July 01, 2015 (Invited speaker).
31. *Rings which are Generated by their Units: A Graph Theoretical Approach*, International Conference on Algebra and Discrete Mathematics-2018 (ICADM-2018), Madurai Kamaraj University, Madurai, India, January 10, 2018 (Invited speaker).
32. *Some Identities Involving Numbers*, An International Seminar, Hajee Karutha Rowther Howdia College, Uthamapalayam, India, January 11, 2018 (Invited speaker).
33. *Edge Ideals Associated to Unit Graphs*, Vietnam Institute for Advanced Study in Mathematics (VIASM), Hanoi, Vietnam, March 29, 2018 (Invited speaker).
34. *A Number-Theoretic Congruence which is Little Known to Number Theorists!*, Vietnam Academy of Science and Technology (VAST), Hanoi, Vietnam, April 11, 2018 (Invited speaker).
35. *Stanley Depth and a Related Disproved Conjecture*, Vietnam Academy of Science and Technology (VAST), Hanoi, Vietnam, April 25, 2018 (Invited speaker).
36. *When Three Subjects of Mathematics Meet Each Other*, Dokuz Eylül University (DEU), Izmir, Turkey, March 08, 2024 (Invited speaker).
37. *A Glimpse to Unit Graphs: The Graphs Arising From Rings*, Dokuz Eylül University (DEU), Izmir, Turkey, March 15, 2024 (Invited speaker).
38. *A Glimpse to the Stanley Depth: A Geometric Invariant for Modules*, Dokuz Eylül University (DEU), Izmir, Turkey, March 22, 2024 (Invited speaker).

39. *A Countable Prime Avoidance Theorem and Its Generalization to Prime Submodules*, Dokuz Eylül University (DEU), Izmir, Turkey, March 29, 2024 (Invited speaker).