Name: Behnaz Tolue Haghighi
Current Position: Assistant Professor
Department of Mathematics,
Hakim Sabzevari University,
Sabzevar, Iran.
Starting date: September 22, 2012.
Home page Address: http://profs.hsu.ac.ir/tolue/
E-mail: b.tolue@gmail.com, b.tolue@hsu.ac.ir

Education Background:

- **Bsc**: Pure Math., Ferdowsi University of Mashhad, 1998-2002
- **Msc**: Pure Math., Group Theory, Ferdowsi University of Mashhad, 2002-2004
- **Thesis Topic**: Groups with Finite Nilpotent Upper Central Factors
- **Courses**: Advanced Algebra, Real Analysis, Infinite Groups, Finite Groups, Homological Algebra, Manifold Geometry.
- **PhD**: Pure Math., Ferdowsi University of Mashhad, 2008-2012
- **Supervisor**: Dr. Ahmad Erfanian
  E-mail: erfanian@math.um.ac.ir
- **Thesis Topic**: Some Aspects in Probability Group Theory and Associated Graphs
- **Courses**: Concepts of the structure and classification of finite and infinite groups, Introduction to symmetric groups, Introduction to finite group theory, Probability group theory.

Research Interests: Group Theory, Algebra, Algebraic Graph Theory and Probability Group Theory

List of Publications:

1. A. Erfanian, **B. Tolue** and N. H. Sarmin, Some considerations on the n-th commutativity degrees of finite groups, Ars Comb. Vol. CXXII, July (2015) 257-267.

2. A. Erfanian and **B. Tolue**, Conjugate graphs of finite groups, Discrete Math. Algorithms Appl., Vol. 5, No. 2 (2012) 35-43.

3. A. Erfanian, R. Rezaei and **B. Tolue**, Some consequences of the equation $[x^n, y] = 1$ on the structure of compact group, J. Korean Math. Soc. 50, No. 1, (2013) 161-171.

4. **B. Tolue** and A. Erfanian, Relative graph of a finite group, J. Algebra Appl. Vol. 12, No. 2 (2013) 1-11.

5. A. Erfanian and **B. Tolue**, Relative n-th non-commuting graphs, Bull. Iranian Math. Soc. Vol. 39 No. 4 (2013) 671-682.

6. A. Erfanian and **B. Tolue**, Relative non nil-n graphs of finite groups, Science Asia 38 (2012) 201-206.

7. A. Erfanian, M. Farrokhi D. G. and **B. Tolue**, Non-normal graphs of finite groups, J. Algebra Appl. Volume No. 12, Issue No. 4. (2013) 1-9.

8. F. Normahia Abd Manaf, N. H. Sarmin, A. Erfanian and **B. Tolue**, The relative n-th commutativity degree of 2-generator p-groups of nilpotency class two accepted in Ars Comb. (2012).

9. **B. Tolue**, A. Erfanian and A. Jafarzadeh, A Kind of non-commuting graph of finite groups, Journal of Sciences, Islamic Republic of Iran 25(4) (2014) 379 - 384.

10. F. Mansoori, A. Erfanian and **B. Tolue**, Generalized conjugate graph, Georgian Math. J. 22 (1) (2015) 37-44.

11. **B. Tolue**, The non-Centralizer graph of a finite group, Math. Reports 17(67) 3 (2015) 265-275.

12. **B. Tolue**, The prime order Cayley graph, U.P.B. Sei. Bull., Series A. 77(3) (2015) 208-218.

13. S. Ghayekhloo, A. Erfanian, **B. Tolue**, The generalised non-commuting graph of a finite group, Comptes rendus de lAcademie bulgare des Sciences, 67(8) (2014), 1037-1044.

14. A. Erfanian, P. Niroomand, M. Parvizi and **B. Tolue**, Non-exterior square graph of finite groups, 31:3 (2017), 877-883, DOI 10.2298/FIL1703877N.

15. G. Moghaddasi, **B. Tolue** and P. Zolfaghari, On the structure of the ultra-groups over a finite group, U.P.B. Sei. Bull., Series A. Vol. 78, no. 2, (2016) 173-184.

16. Z. Karimi, A. Erfanian, **B. Tolue**, n-th central graph of a group, Comptes rendus de lAcademie bulgare des Sciences, Vol.69, no. 2, 2016.

17. **B. Tolue**, G. Moghaddasi and P. Zolfaghari, On the category of ultra-groups, to appear Hacettepe Journal of Mathematics and Statistics, Doi: 10.15672/HJMS.20174720335, 2016.

18. **B. Tolue**, The stable subgroup graph, to appear in Bol. Soc. Paran. Mat., 2016.

19. **B. Tolue**, Some graph parameters on the composite order Cayley graph, to appear in Caspian Journal of Mathematical Sciences, 2016.

20 **B. Tolue**, Vector space semi-Cayley graphs, Iranian Journal of Mathematical Sciences and Informatics, Accepted in 2016/12/21.

Conference Papers:

1. A. Erfanian, **B. Tolue** and N. Sarmin, Some considerations on the n-th commutativity degree, Universiti Teknologi Malaysia, Johor Bahru, Johor, Malaysia, 2011.

2. A. Erfanian and **B. Tolue**, On the n-relative nilpotency degree of two subgroups in a finite group, the 22nd Iranian Algebra Seminar, Hakim Sabzevari university, 2012.

3. A. Erfanian and **B. Tolue**, Some considerations of $[x^n, y] = 1$ on the structure of groups, Fifth International Group Theory Conference, Islamic Azad University, Mashhad Branch, 2012.

4. **B. Tolue**, Non-commuting graph generalizations, 44-th Iranian Mathematics Conference, Ferdowsi University of Mashhad, 2013.

5. **B. Tolue** and F. Mansoori, Conjugate graph and its generalization, 44-th Iranian Mathematics Conference, Ferdowsi University of Mashhad, 2013.

6. **B. Tolue**, Recognition of the non-commuting graph by the non-centralizer graph, The 7-th Seminar on Linear Algebra and its Applications, Ferdowsi University of Mashhad, 2014.

7. GH. Moghaddasi, **B. Tolue** and P. Zolfaghari, On ultra-groups, The 6-th group theory conference Gorgan, 2014.

8. **B. Tolue**, On the twin non-commuting graph and the metric dimiension of the non-commuting graph, The 7-th algebraic combinatorics conference Mashhad, 2014.

9. **B. Tolue**, The prime order Cayley graph of Abelian groups, 45-th Iranian Mathematics Conference Semnan, 2014.

10. **B. Tolue**, A note on the Cayley graph of composite order elements of a group, The third international biennial group theory conference Mashhad, 2015.

11. GH. Moghaddasi, **B. Tolue** and P. Zolfaghari, A gentel introduction to category of ultra-group over finite group, The third international biennial group theory conference Mashhad, 2015.

12. **B. Tolue**, The stable subgroup graph of p-groups, The 8-th group theory conference Tabriz, 2016.

13. **B. Tolue**, Some aspects of k-apex non-commuting graph of a finite group, 9th Iranian group theory conference, university of Kashan, 2017 [it was accepted but unfortunately because of the heavy snow I could not reach Kashan for presentation].

14. I. Shojaee, A. Erfanian and **B. Tolue**, Some topological indices of prime order Cayley graph, 9th Iranian group theory conference, university of Kashan, 2017 [Shojaee was the speaker].

15. **B. Tolue**, The classification of the graphs with respect to a special property, The 9th graph theory and algebraic combinatorics conference of Iran, Amirkabir university of Technology, Tehran, Iran, 2017.

16. I. Shojaee, A. Erfanian and **B. Tolue**, Some new results on composite order Cayley graph, The 9th graph theory and algebraic combinatorics conference of Iran, Amirkabir university of technology, Tehran, Iran, 2017 [Dr. Erfanian was the speaker].

Workshops:

1. I was the teacher of the workshop "GAP" in The third international biennial group theory conference Mashhad, 2015.

2. I took part in the workshop "Application of Group Theory in Cardiography" in The third international biennial group theory conference Mashhad, 2015.

3. I took part in the one day workshop of group theory, in Ferdowsi University of Mashhad, 2015.

4. I took part in the workshop "Numerical Linear Algebra Software", 2014.

5. I took part in the workshop "Parallel computing", Hakim Sabzevari university, 2017.

Supervision and Advisory of Thesis

1. Advisory of Ph.D Thesis; Parvaneh Zolfaghari, Hakim Sabzevari University.

2. Advisory of M.Sc Thesis; Fahimeh Shoraka, Hakim Sabzevari University.

3. Advisory of M.Sc Thesis; Masoome Eshraghi, Hakim Sabzevari University.

4. Advisory of M.Sc Thesis; Zahra Sohrabi, Hakim Sabzevari University.

5. Supervision of M.Sc Thesis; Soraya Salehi, Hakim Sabzevari University.

6. Supervision of M.Sc Thesis; Maryam Deldar, Hakim Sabzevari University.