



Ildar Sadeghi

Professor

College: Faculty of Basic Sciences

### Curriculum Vitae

**Ildar Sadeghi, PhD**

Professor of Mathematics

Personal:

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### Current Positions

- Professor- Sahand University of Technology- Iran

### Professional Experience:

- Researcher Assistant- Simon Fraser University-Canada (2000)
- Assistant Professor-Sahand University of Technology -Iran (2001-2008)
- Associate Professor- Sahand University of Technology- Iran(2008-2018)
- Chair's office Faculty of Basic Sciences, Sahand University of Technology- Iran (2012-2014)
- One year sabbatical leave at the university of British Columbia, 2017
- Chair's office Faculty of Basic Sciences, Sahand University of Technology- Iran (2020)
- Member of Editorial board for SCMA
- Editor-in-chief for the journal of Sahand Communications in Mathematical Analysis(2020-2023)

### Education:

1997-2001: Ph. D., Tabriz University-Tabriz-Iran.

1995-1997: M. Sc., Tabriz University-Tabriz-Iran.

1991-1995: B. Sc., Tabriz University-Tabriz-Iran.

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Professional Membership:

- Member of CECM Simon Fraser University- Burnaby- Canada. 2000-present
- Member of Working Group on Generalized Convexity (WGGC). 2000-present
- Member of Iranian Mathematical Society, 1995-present
- Member of Iranian Fuzzy Systems Society, 2007-present

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**Research Interests:**

Geometry of convex analysis, Variational Analysis, Functional analysis, Fuzzy mathematics.

**Teaching Experience:**

**Graduate:** Real Analysis, Functional Analysis, Operator Theory, Convex Analysis, Geometry of Banach Spaces, Variational Analysis.

**Undergraduate:** Calculus, Mathematical Analysis, Complex Analysis

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Awards and Distinctions:

- Top researcher of the Faculty of Science, Sahand University of Tech., 2009.
- Top researcher of the Faculty of Science, Sahand University of Tech., 2011.
- Holding 8-th place of Iranian student math tournament at the Kerman University, Kerman, 1995.
- First ranked M.Sc graduate of Pure Mathematics at the Tabriz University-Tabriz-Iran.1995.

**Current Doctoral Students at the Sahand University of Technology:**

- Farnaz Yaghob Azari
- Samira Fatemi

**Graduate Students:**

(Ph.D. Supervision)

- 1- Mitra Salehi Paydar, Ph.D., (Supervisor) Stability of solution set for equilibrium problems in topological vector spaces, September 2015
- 2- Hassan Gazanfary Asll, Ph.D., (Supervisor) The proof of some integral inequalities for fuzzy integrals, April 2017
- 3- Ali Hassanzadeh, Ph.D., (Supervisor) Extremal principles in Abstract cones and domains, May 2017
- 4- Somayeh Nadi, Ph.D., (Supervisor) Subdifferentials of set-valued functions on Banach spaces, August 2018
- 5- Sima Hassankhali, Ph.D., (Supervisor) Differentiability of support function, Nov. 2019

(M. Sc., **Supervision**):

1. M. R. Azimi, Local spectral properties of weighted shifts, Sep. 2005.
2. Ali Amiripour, Fuzzy bounded linear operators, May 2007.
3. Mitra Salehi Paydar, Topological degree theory and fixed point theorems in fuzzy normed space, Feb. 2008
4. Farnaz Solati Kia, Fuzzy normed linear spaces and fixed point theorems, Tan. 2008.
5. Camelia G. Alizadeh, Recession methods for generalized vector equilibrium problems, October 2008.
6. Rasoul Mahjoubi, Hopf  $C^*$ -algebras, Sep. 2008.
7. Farnaz Y. Azari, A comparative study of fuzzy norms on a linear space, Feb. 2009.
8. Mina Mokhlesi, Some generation of Ekeland type variational principle with application to equilibrium problems and fixed point theory, Feb. 2010.
9. Mahin Mokhtari, Variational analysis of extended generalized equations via coderivative calculus in Asplund spaces, Feb. 2010.
10. Soheyla Azarmi, The  $q$ -numerical range of normal operators, Feb. 2010.
11. Generalized symmetric vector quasiequilibrium problems, Tan. 2010.
12. Raziye Maadi, Global Lipschitz continuity of solutions to parameterized variational inequalities, January 2011.
13. Somayeh Shoorcheh, On existence theorem for monotone and non-monotone variational inequalities and their application in network equilibrium problems, Sep. 2011.
14. Hossein Aghebatkheir, On the commutativity degree of compact group, Sep. 2011.
15. Rasoul Zohrabi, Critical point theorems and Ekeland type variational principles, Sep. 2012.
16. Sedigheh Abolghasemi, Existence of solutions of vector variational inequalities and vector

complementarity problems, Sep, 2012.

17. Rana Esmaeli aghdam, Lipschitz continuity of an approximate solution mapping to equilibrium problems, July 2013.
18. Nasim Hooshdari, Continuity of solutions for parametric variational inequalities in Banach space, July 2013.
19. Asghar Ghaffarian, Existence of solutions of strong vector equilibrium problems,
20. Fariba Ahmadi, Strong convergence theorem by a new hybrid method for equilibrium problems and variational inequality problems, Sep. 2014.
21. Samira Reyhani, Multi-step implicit iterative methods with regularization for minimization problems and fixed point problems, Sep. 2014.
22. Mahmood Moslem, Condensing operators and topological degree theory in standard fuzzy normed spaces, Sep. 2014.
23. Zahra Chalipa, Non smooth vector optimization problems and Minty vector variational inequalities, Sep, 2014.
24. Somayeh Dehghanpor, Some applications of the KKM mapping principle in Hyperconvex metric spaces, Sep. 2014.
25. Masoumeh Velayati, Relation between the convexity of a set and the differentiability of the support function, Sep. 2015.
26. Fariba Tahmasbnia, Generalized vector variational like inequalities and vector optimization in Asplund spaces, Sep. 2015.
27. Hazhar Khalekani, The Lipschitzianity of convex vector and set-valued functions, Tan. 2018.
28. Nasim Nazari, Study of vector complementarity problems and its relation to the variational inequalities, Jan. 2018.
29. Amin Sezari, Linear convergence of circumcentered isometry methods, Sept. 2023.

#### Technical Reports:

- I. Sadeqi, "A note on the Bishop-Phelps theorem", *CECM, Simon Fraser University, Canada, 2001.*
- I. Sadeqi, (Invited Speaker) "Geometry of Banach Spaces and variational inequality", *The 20th Seminar on Mathematical Analysis and Its Applications, University of Maragheh, Maragheh- Iran, July 2012.*
- I. Sadeqi, (Invited Speaker) "A note on variational analysis", *Bonab University, 2011.*

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#### References:

- Prof. J. Borwein, Simon Fraser University, Burnaby-Canada.
- Prof. Y. Dehghan, Tabriz University- Tabriz-Iran.
- Prof. Boris Mordokhovich, Wayne state university, USA.
- Prof. Heinz Baushke, UBC, BC, Canada

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## Publications:

1. I. Sadeqi, Y. Dehghan, *The role of Support functionals in topological vector space*, *IJAM*, 7(1999), 757-764.
2. I. Sadeqi, Y. Dehghan, *Tangent hyperplanes for convex closed sets in topological vector spaces*, *IJAM*, 7(1999), 839-842.
3. I. Sadeqi, Y. Dehghan, *Some applications of support functionals(sets) in  $C^*$ - algebras and convexity*, 2(2002), 197-202.
4. I. Sadeqi, *Support functionals and their realation to the Radon –Nikodym property*, *IJMMS*, 16(2004), 827-832.
5. Sh. Rezapour, I. Sadeqi, *Fuzzy best approximation*, *The Aligarh Bulletin of Mathematics*, 23 (2004), 89-92
6. I. Sadeqi, Y. Dehghan, *The unit ball of  $C^*$ -algebra and diff. of convex function*, *Analisis in Theory and Application*, 1 (2005), 53-57.
7. I. Sadeqi, F. Solaty, *FNLS and its topological structure*, *Chaos solitons and fractals*, *Chaos, Solitons & Fractals*, 40 (2009), 2576--2589
8. I. Sadeqi, F. Solati, *Some fixed point theorems in fuzzy reflexive B-Space*, *Chaos, Solitons & Fractals*, 41 (2009), 2606--2612
9. I. Sadeqi, M. Salehi, *Fuzzy compact operators and topological degree rheory*, *Fuzzy Sets and Systems*,9 (2009), 1277-1285
10. I. Sadeqi, F. Solati, *The category of fuzzy normed linear spaces*, *Journal of fuzzy mathematics*, 3 (2010)
11. I. Sadeqi, F. Yaghoub azari, *Gradual normed linear space*, *IJFS*, 5(2011), 131-139.
12. I. Sadeqi, K. Alizadeh, *Existence of solutions of GVEP in reflexive B-spaces*, *Nonlinear Analysis: Theory, Methods & Applications*, 6(2011), 2226-2234.
13. I. Sadeqi, F. Solati, *The Notion of Fuzzy Banach Algebra*, *Journal of fuzzy mathematics*, *JFM*, 4(2011), 939-950.
14. Sadeqi, I., Moradlou, F., Salehi, M., *On approximate Cauchy equation in Felbin's type fuzzy normed linear spaces*, *Iran. J. Fuzzy Syst.* 10, No. 3, 2013, pp. 51-63.
15. F. Moradlou, S. Rezaee, I. Sadeqi, *Approximate quadratic functional equation in Felbin's type normed linear spaces*, *Hacettepe J. Math. Stat.*, 42 (2013) 501-516
16. I. Sadeqi, M. Salehi, *The comparative study of F-hemicontinuity and B-pseudomonotonicity of mappings and existence results*, *Journal of optimazition theory and application*, 2015,344-358
17. I. Sadeqi, F. Yaghoub azari, *The comprative study of gradual and fuzzy normed linear spaces*, *journal of Intelligent and Fuzzy Systems*,2016, 1195-1198.
18. I. Sadeqi, M. Salehi, *Lipschitz continuity of an approximate solution mapping for set-valued vector equilibrium problems*, *Journal of Optimization*.65(5), 2016,
19. F. Moradlou, S.Rezaee and I. Sadeqi; "Approximate Quadratic functional equation in Felbin's type normed linear spaces" *Hacet. J. Math. Stat.* 42 (5) (2013), 501 - 516.

20. H. Abbasi, G. Haghghat Doost, I. Sadeqi, *Property (T) for C\*-dynamical systems*, *Wavelets and Linear Algebra*, 1 (2014) 51-62.
21. I. Sadeqi, A. Hassanzadeh, *Bishop-Phelps Theorem for Normed Cones (in Persian)*, *Mathematical Researches*, (2018).
22. I. Sadeqi, Hassan Ghazanfary Asll, Bayaz Daraby. *Favard's inequality for seminormed fuzzy integral and semiconormed fuzzy integral*, *Mathematica – Tome 58 (81), No 1-2 (2016)*.
23. I. Sadeqi, Ali Hassanzadeh, *Differentiability and subdifferentiability on semilinear spaces*, *Bull. Iranian Math. Soc.*, Volume 44, [Issue 4](#), pp 1045–1057 (2018)
24. Ali Hassanzadeh, Ildar Sadeqi and Asghar Ranjbari , *A Domain-Theoretic Bishop-Phelps theorem*, *Fixed Point theory*, (2017)
25. Ali Hassanzadeh, Ildar Sadeqi, *A cone theoretic Krein-Milman theorem in semitopological cones*, *Sahand Communications in Mathematical Analysis*, Volume 9, No 1, PP. 143-150 (2017)
26. Ali Hassanzadeh, Ildar Sadeqi, *Extremal principles of convex sets in ordered topological cones (Submitted)*
27. Ali Hassanzadeh, Ildar Sadeqi, *Some result on extreme points in ordered topological cones*, *Romanian Journal of Mathematics and Computer science*, v7, *Issue 2*, p.93-98, (2017)
28. Bayaz Daraby, Hassan Ghazanfary Asll, Ildar Sadeqi, *General related inequalities to Carlson-type inequality for the Sugeno integral*, *Appl. Math. Comput.* 305 (2017) 323-329.
29. Bayaz Daraby, Hassan Ghazanfary Asll, Ildar Sadeqi, *Favard's inequality for pseudo-integral*, *Asian-Eur. J. Math.* 0 18500 (2017).
30. Ildar Sadeqi, Hassan Ghazanfary Asll, Bayaz Daraby, *Gauss type inequality for Sugeno integral*, *J. Adv. Math. Stud.* 10 (2017) 167-173.
31. Bayaz Daraby, Hassan Ghazanfary Asll, Ildar Sadeqi, *Gronwall's inequality for pseudo-integral*, *Fac. Matematica*, Tom XXX (2017)1 67-74.
32. Ildar Sadeqi, Hassan Ghazanfary Asll, Bayaz Daraby, *Favard's inequality for seminormed fuzzy integral and and semiconormed fuzzy integral*, *App. Math. Comput.*, 2017.
33. Ildar Sadeqi, S. Nadi, *Normed and mixed partial second-order subdifferential in variational analysis and optimization*, *Positivity*, 2017.
34. Ildar Sadeqi, S. Nadi, *Vector optimization problems and generalized vector variational like inequalities*, *SCMA*, 2018.
35. Ildar Sadeqi, Sima Hassankhali, *Smulyan lemma and diff. of the support function*, *Analysis in theory and application*, 2018.
36. Ildar Sadeqi, Sima Hassankhali, **On polar cones and differentiability in reflexive Banach spaces**, *SCMA*, 2018.
37. Ildar Sadeqi, A. Hassanzadeh, *Bishop-Phelps theore on normed cones*, *Research on Mathematics*, 2(2019)
38. Sima Hassankhali, Ildar Sadeqi, *Some notes on diff. of support function*, *Bulletin of the Iranian Mathematical Society*

volume 46, pages 1211-1222(2020)

39. F. Yaghub Azari, I. Sadeqi, The study of Felbin and BS fuzzy normed linear spaces, SCMA, 19(2022)

40. I. Sadeqi, R. Zohrabi, F. Azari, Critical point results and their applications, J App. and Eng, Math., V. 13, N. 4, pp 1551-1564(2023)

#### **Presentations:**

1. I. Sadeqi, *Support sets and support functionals & their app. to  $C^*$ -algebra*, Progress in analysis, Berlin, 2001.

2. I. Sadeqi, *Support point and its relation to the RNP*, 33rd Iranian mathematics conference, Ferdowsi Univ/Mashhad/Iran, Aug 30-sep 02/2002.

3. I. Sadeqi, *Differentiability of support convx function*, 34rd Iranian mathematics conference, Shahrood University. of Technology, Aug 30-Sep 02/2003.

4. I. Sadeqi, *Quasi-Hausdorff fuzzy topology*, 3rd seminar on geometry and topology, Tabriz-Iran, 15-17 july 2004.

5. I. Sadeqi, *Topological properties of support points*, 3rd seminar on geometry and topology, Tabriz-Iran, 15-17 july 2004.

6. I. Sadeqi, *Strongly exposed points for closed convex and bounded subsets of  $L_p$* , 35 th Annual Iranian mathematics, Ahvaz, Iran January 26-29,2005.

7. I. Sadeqi, *A note on the Bishop- Phelps property*, Banach algebras 2005, Bordeaux, france, July 3 - 13 2005.

8. I. Sadeqi, *Compact strongly exposed  $L_p$ -operators*, 21th Int. Conf. On opeartor theory, West Univ. of timisora and Inst. Of Math. Of the Romainan academy, June 29-july 4 -2006.

9. I. Sadeqi, M. Salehi, *Fuzzy real numbers and their relation to the TVS*, First joint Cong. On fuzzy and intelligent systems, Ferdowsi University of Mashhad, 29-31 Aug 2007.

10. I. Sadeqi, F. Solati kia, *Fuzzy seminormed linear space*, First joint Cong. On fuzzy and intelligent systems, Ferdowsi University of Mashhad, 29-31 Aug 2007.

11. I. Sadeqi, *Fuzzy Banach algebra*, 17th seminar of math. Analysis and its applications, Arak Univ. 3-6 sep. 2007.

12. I. Sadeqi, *Application of BP-theorem in the app. Theory*, Int. Conf on nonlinear analysis and opt. Isfahan University, 25-27 April 2007.

13. I. Sadeqi, *Application of BP-theorem in the app. Theory*, Int. Conf on nonlinear analysis and opt. Isfahan University, 25-27 April 2007.

14. I. Sadeqi, F. Solati kia, M. Salehi, *An example of a FNLS which is not a normed space*, 39th annual Iranian mathematical conf. Kerman University. 24-27 aug 2008.

15. I. Sadeqi, K. G. Alizadeh, *Topological properties of the solution set of generalized vector Eq. problems, 39th annual Iranian mathematical conf, Kerman University. 24-27 aug 2008.*
16. I. Sadeqi, M. Salehi, *Stability and fuzzy normed linear spaces, 39th annual Iranian mathematical conf, Kerman University. 24-27 aug 2008.*
17. I. Sadeqi, M. Salehi, *Compact operator and topological degree, 17th seminar of math. Analysis and its applications, Arak University, 23-25 april 2008.*
18. I. Sadeqi, M. Salehi, *Topological vector spaces and FNLS, 17th seminar of math. Analysis and its applications, Arak University, 23-25 april 2008.*
19. I. Sadeqi, *C\*-dynamical system with property (T), Int. Conf. 2010: The 6th Dynamical systems and applications,*
20. I. Sadeqi, *generalized vector equilibrium problems on reflexive Banach space, 51th workshop and conference on variational analysis and applications, Erice-Sicily-2009.*
21. I. Sadeqi, F. Y. Azari, M. Salehi, *The space of all fuzzy bounded operators is BS-fuzzy normable, the 40th Annual Iranian mathematics conference, Sharif University of Technology, Tehran, Iran, 14-17 August 2009.*
22. I. Sadeqi, F. Y. Azari, *The space of gradual numbers, 10th Iranian conf. on fuzzy systems,*
23. I. Sadeqi, *Some results in fuzzy Banach algebra, 10th Iranian conf. on fuzzy systems,*
24. I. Sadeqi, *Menger Probabilistic Normed Space and TV spaces, 10th Iranian conf. on fuzzy systems,*
25. I. Sadeqi, K. Alizadeh, *A note on strong generalized vector equilibrium problems, 40th annual Iranian mathematical conf., 2009.*
26. I. Sadeqi, M. Salehi, S. Shoorcheh, *The competitive study of F-hemicontinuity and B-pseudomonotonicity of mappings, the 20th Seminar on Mathematical analysis and Its Applications, University of Maragheh, Maragheh, Iran, 9-11 July 2012.*
27. I. Sadeqi, M. Salehi, S. Shoorcheh, *The solution set of variational inequality related to the B-pseudomonotone mappings, The 43th Iranian Mathematics Conference, University of Tabriz, Tabriz, Iran, 27-30 August 2012.*
28. Sadeqi, I., Salehi, M., *Stability of solutions on variational inequality problems, The 44th Iranian Mathematics Conference, Ferdowsi University of Mashhad, Mashhad, Iran. 27-30 August 2013.*
29. F. Moradlou, I. Sadeqi and S. Rezaee, *Stability of Cauchy functional equation in fuzzy normed linear spaces, Sahand university of Tech. 19- Aug-2014.*
30. I. Sadeqi, M. Salehi, *Fuzzy normed linear spaces are not classical normable in general, Sahand university of Tech. 19- Aug-2014.*
31. I. Sadeqi, A. Hassanzadeh, *Bishop-Phelps type Theorem for Normed Cones, The 45th Annual Iranian Mathematics Conference, 26-29 August 2014, University of Semnan, Semnan, Iran, pp. 68-71.*
32. I. Sadeqi, *Sequential continuity of solution mapping for parametric variational inequalities, 6th German Polish conference on optimization, Wittenberg 2014.*
33. I. Sadeqi, A. Hassanzadeh, A. Ranjbari, *Some results on Bishop-Phelps type theorem for s-cones, The 21th Seminar on Mathematical analysis and Its Applications, 26-27 November 2014, Islamic Azad University, Hamedan, Iran, pp. 367-369.*



34. H. Ghazanfary Asll, B. Daraby, I. Sadeqi, *Generalization of Favard's inequality for pseudo-integral*, *The 47th Annual Iranian Mathematics Conference*, 28-31 August 2016, Kharazmi University, Karaj, Iran.
35. Ildar Sadeqi, *Some Calculus Rules in Variational Analysis*, Winter Meeting; September 8-11, 2017-Waterloo University.
36. Sima Hassankhali, I. Sadeqi, *On the Gateaux differentiability of the support function of compactly epilipschitzian sets*, 22th seminar on mathematical analysis and applications, Bonab-Iran 2017.
37. Sima Hassankhali, I. Sadeqi, *On the solidness of the polar cones*, Bonab-Iran 2017.
38. Sima Hassankhali, I. Sadeqi, *Some notes on the differentiability of support functions*, 4 th International Conference on Nonlinear Analysis and Optimization, Zanjan-Iran 2018.
39. I. Sadeqi, *A note on variational analysis*, 5 th Seminar on Nonlinear Analysis and Optimization 1-3 Julay, 2020, Tabriz, Iran.
40. S. Fatemi, I. Sadeqi, F. Moradlou, *Minimizing a composite fuzzy function in terms of subgradient*, 9th Iranian joint congress on fuzzy and intelligent systems, Kerman- Iran 2022.
41. S. Fatemi, I. Sadeqi, F. Moradlou, *Calculus rules of fuzzy subdifferential on n-dimensional time scales*, 25th seminar on analysis and its applications, Lorestan university, 2023.
42. S. Fatemi, I. Sadeqi, F. Moradlou, *Monotonicity and convexity of the value function of a fuzzy minimization problem*, *The 7th seminar on fuctional analysis*, Imam Khomeyni int. univ. of Qazvin, Iran 2023.
43. F. Azari, I.Sadeqi, *The Comparative Study of Uncertainty Measures in Evidence Theory*, Lorestan university, 2023.