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About me I have PHD in Topology and Algebra and I am interested into studying and publishing articles about general toplogy and point-free topolgy.

Current position

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Birth Date

Saturday, December 22, 1962, Sabzevar, Iran

Nationality and Native Language

Iranian , Persian

Areas of specialization

Ring of continuous functions
Frame (Pointfree topology)

Education

1999-2001: PhD in Mathematical Algebra,
Dept. Math. Chamran University, Ahvaz, Iran

1989-1991: MSc in Mathematical Algebra
Dept. Math. Chamran University, Ahvaz, Iran

1984-1987: B.Sc. in Pure Mathematics
Birjand University, Birjand, Iran.

Teaching Fields

- Rings and Modules
- Commutative algebra
- Topology
- Frame and Stone spaces
- Lattice theory

Membership of societies

Iranian Mathematical Society

Journal articles

2003 A.A. Estaji and O. A. S. Karamzadeh, On $C(X)$ Modulo its Socle, *Communications in Algebra* Volume 31, Issue 4, 1561–1571.

2007 A.A. Estaji, On -self-injectivity, *Far East Journal of Mathematical Sciences (FJMS)* Volume 25, Issue 2, 375 384.

2008 A.A. Estaji, On Almost Discrete Space, *Archivvm Mathe maticvm (BRNo)* 44, 6976.

2010a A.A. Estaji and M. Shabani, A not on multiplication S-act, *Far East Journal of Mathematical Sciences (FJMS)* Volume 36, Issue 2, 133 150.

2010b Ali Akbar Estaji and Melvin Henriksen, On a-Kasch space, *Archivum Mathematicum*, Vol. 46, No. 4, 251262.

2011a Ali Akbar Estaji, Somayeh Khodaii and Solmaz Bahrami, On rough set and fuzzy sublattice, *Information Sciences* 181 (2011) 3981–3994.

2011b A.A. Estaji and S. Tajnia, Prime Subacts Over Commutative Monoids with Zero, *Lobachevskii Journal of Mathematics*, Vol. 32, No. 4, pp. 358365.

2012a Ebrahim Hashemi and Ali Akbar Estaji, On polynomials over abelian rings, *Vietnam Journal of Mathematics* 40:1, 47-55.

2012b Ali Akbar Estaji and Hamed Zeinaliyan, Fuzzy Primary and Fuzzy P-primary Subacts *World Applied Sciences Journal* 16 (11): 1571–1577.

2012c A.A. Estaji, M.R. Hooshmandasl, B. Davvaz, Rough set theory applied to lattice theory, *Information Sciences* 200, 108122.

2012d Ali Akbar Estaji, z-Weak Ideals and Prime Weak Ideals, *Iranian Journal of Mathematical Sciences and Informatics* Vol. 7, No. 2, 53-62.

2013 Ali Akbar Estaji, Ali Saghafi Khorasani and Samaneh Baghdari, Multiplication ideals in Γ-rings, *Journal of Hyperstructures* 2 (1), 30-39.

2014a A.A. Estaji, A. As. Estaji, A. S. Khorasani, S. Baghdari, On multiplication Γ-modules, *Ratio Mathematica*, 26, 21-38.

2014b Ali Akbar Estaji and Ali Asghar Estaji, Some results on Noetherain simegroup, *Journal of Algebra and Related Topics*, Vol. 2, No 1, 43-53.

2015a A.A. Estaji, A. Karimi Feizabadi, M. Abedi, Zero sets in pointfree topology and strongly z-ideals, *Bull. Iranian Math. Soc.*, Vol. 41, No. 5, 1071-1084.

2015b A.A. Estaji, T. Haghdadi, and A. As. Estaji, Zero divisor graphs for S-act, *Lobachevskii Journal of Mathematics*, Vol. 36, No. 1, 18.

2015c Ali Akbar Estaji, Masomeh Shabani, Some notes on quasi P-rings, *Transactions on Algebra and its Applications*, 1 (1), 19-26.

2015d A.A. Estaji, A. Karimi Feizabadi, M. Abedi, Strongly fixed ideals in C(L) and compact frames, *Archivum Mathematicum*, 51, 112.

2015e Ali Akbar Estaji, Ali Asghar Estaji, Nexus over an Ordinal, *Journal of Uncertain Systems* Vol.9, No.3, 183-197.

2015f A. Karimi Feizabadi, A.A. Estaji, M. Abedi, *Pointless form of rough sets*, Kyungpook Math. J., 55, 549-562.

2015g A. A. Estaji, T. Haghdadi and J. Farokhi, *Fuzzy nexuse over ordinal*, Journal of Algebraic Systems Vol. 3, No. 1, (2015), 65–82

2016a A.A. Estaji, A. Karimi Feizabadi, and M. Zarghani, *The ring of real-continuous functions on a topoframe*, Categories and General Algebraic Structures with Applications, Volume 4, Number 1, February 2016, 75–94.

2016b R. A. Borzooei, A.A. Estaji and M. Mobini, *On the category of rough sets*, Soft Comput. Online: 05 April 2016.

2016c A. Karimi Feizabadi, A.A. Estaji, and M. Zarghani, The ring of real-valued functions on a frame, *Categories and General Algebraic Structures with Applications,* Volume 5, Number 1, July 2016, 85-102.

2017a A. Karimi Feizabadi, A.A. Estaji, and B. Emamverdi, *$\mathcal{R}L$-valued f-ring homomorphisms and lattice-valued maps*, Categories and General Algebraic Structures with Applications, Volume 7, Special issue on the Occasion of Banaschewskis 90th Birthday, July 2017, 141–163.

2017b A.A. Estaji, A. Karimi Feizabadi, and M. Zarghani, *Zero elements and z-ideals in modified pointfree topology*, Bull. Iranian Math. Soc., 43 (2017), No. 7, 2205–2226.

2018a A.A. Estaji, A. Karimi Feizabadi and M. Abedi, *Intersection of essential ideals in the ring of real-valued continuous functions on a frame*, Journal of Algebraic Systems, Vol. 5, No. 2, (2017), pp 149-161

2018b A. As. Estaji, E. Hashemi and A. A. Estaji, *On Property (A) and socle of the f-ring $Frm(\mathcal{P}(\mathbb{R}), L)$*, Categories and General Algebraic Structures with Applications, Volume 8, Number 1, January 2018, 61–80.

2018c A. Karimi Feizabadi, A. A. Estaji and M. Abedi *On minimal ideals in the ring of real-valued continuous functions on a frame*, Archivum Mathematicum, Vol. 54 (2018), No. 1, 113.

2018d A. A. Estaji, A. Karimi Feizabadi and B. Emamverdi, *Representation of real Riesz maps on a strong f-ring by prime elements of a frame*, Algebra Univers. (2018) 79:14.

2018e A. A. Estaji and F. Bayati, *On Rough Sets and Hyperlattices*, Ratio Mathematica, Vol. 34, 2018, pp. 15–33

2018f A.A. Estaji and A. Mahmoudi Darghadam, *On maximal ideals of* $\mathcal{R}_\infty L$, Journal of Algebraic Systems, Vol. 6, No. 1, (2018), pp 43–57.

2018g L. Sharifan, A.A. Estaji and G. Malekbala, *Primary decomposition of ideals of lattice homomorphisms*, The electronic journal of combinatorics 25(3) (2018).

2018h A. A. Estaji and M. Mobini, *On injectivity in category of rough sets*, Soft Computing, https://doi.org/10.1007/s00500-018-3472-7.

2018i A. A. Estaji and A. Mahmoudi Darghadam, *Rings of continuous functions vanishing at infinity on a frame*, Quaestiones Mathematicae 2018: 1-17, http://dx.doi.org/10.2989/16073606.2018.1509151.

2018j Hossien Eghdami, Ali Akbar Estaji, and Toktam Haghdadi, *Fuzzy roughness in Lie algebra by reference point*, Journal of Intelligent & Fuzzy Systems 35 (2018) pp. 887–899, DOI:10.3233/JIFS-171620.

2018k A. Karimi Feizabadi, A.A. Estaji, and M. Robat Sarpoushi, *Pointfree topology version of image of real-valued continuous functions*, Categories and General Algebraic Structures with Applications, Volume 9, Number 1, July 2018, 59–75.

2018l Ali Akbar Estaji and Mostafa Abedi, *On injectivity of the ring of real-valued continuous functions on a frame*, Bull. Belg. Math. Soc. Simon Stevin 25 (2018), 467–480.

2018m Mohammad Zarghania and Ali Akbar Estaji, *A New Pointfree Form of Subspaces*, Filomat 32:8 (2018), 2721–2733.

2018n A.A. Estaji, A. Mahmoudi Darghadam and H. Yousefpour, *Maximal Ideals in Rings of Real Measurable Functions*, Filomat 32:15 (2018), 5191–5203.

2019a A. A. Estaji, M. Vatandoost and R. Pourkhandani, *Fixed points of covering upper and lower approximation operators* Soft Computing, https://doi.org/10.1007/s00500-019-04113-0

2019b A.A. Estaji, A. Karimi Feizabadi, and M. Robat Sarpoushi, *z_c-Ideals and prime ideals in the ring $\mathcal{R}_cL$*, Filomat, 32:19 (2018), 6741–6752. https://doi.org/10.2298/FIL1819741E

2019c A.A. Estaji and M. Taha, *z-Ideals in the real continuous function ring $\mathcal{R}(L_\tau)$*, Bulletin of the Iranian Mathematical Society, https://doi.org/10.1007/s41980-019-00239-x.

2019d Mehdi Vatandoost, Ali Akbar Estaji and Rahimeh Pourkhandani, *A generalized modal logic in causal structures*, Theoret. Comput. Sci. (2019). https://doi.org/10.1016/j.tcs.2019.02.006.

2019e M. Abedi and A.A. Estaji, *Closed ideals in the uniform topology on the ring of real-valued continuous functions on a frame*, Rend. Sem. Mat. Univ. Padova, (2019), 1–18.

2019f M. Abedi and A.A. Estaji, *Compactification of completely regular Frames based on their cozero part*, Mathematical Researches, 5(1), (1398), 53–66.

2019g A.A. Estaji, M. Abedi and A. Mahmoudi Darghadam, *On self-injectivity of the f-ring $\mathbf{F}rm(\mathcal{P}(\mathbb{R}), L)$*, Math. Slovaca 69 (2019), No. 5, 999–1008. https://doi.org/10.1515/ms-2017-0284

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2020d A.A. Estaji, H. Eghdami and T. Haghdadi, *Category of soft Lie algebra* Soft Computing https://doi.org/10.1007/s00500-019-04583-2

2020e A.A. Estaji, A.As. Estaji and M. Taha, *On socle and property (A) of the f-ring*,

2020f T. Dube, A.A. Estaji and M. Robat Sarpoushi, *Some relative normality properties in locales*, Math. Slovaca 70 (2020), No. 4, 779–794. DOI:10.1515/ms-2017-0391

2020g M. Elyasi, A. A. Estaji and M. Robat Sarpoushi, *Locally functionally countable subalgebra of $\mathcal{R}(L)$*, Archivum Mathematicum, 56 (2020), No. 3, 127–140. http://dml.cz/dmlcz/148290

2020h Ali Akbar Estaji and Ahmad Mahmoudi Darghadam, *Free ideals and real ideals of the ring of frame maps from $\mathcal{P}(\mathbb{R})$ to a frame*, Algebraic Structures and Their Applications 7(2) (2020), 93–113.
2021a A.A. Estaji and T. Haghdadi, *On n-absorbing ideals in a lattice*, Kragujevac Journal of Mathematics, 45(4) (2021), 597–605.

2021b Ali Akbar Estaji, Toktam Haghdadi and Javad Farokhi Ostad, *L-ideals and rough sets based on L-ideals*, Knowledge and Information Systems, https://doi.org/10.1007/s10115-020-01529-1
2021c H. Yousefpour, A.A. Estaji, A. Mahmoudi Darghadam and G. Sadeghi, *m-topology on the ring of real-measurable functions*, Journal of Algebraic Systems, Vol. 9, No 1, (2021), 83–106. https://doi.org/10.22044/jas.2020.9557.1470.
2021d A. A. Estaji and M. Robat Sarpoushi, *On CP-frames*, JART, Vol. 9, No. 1, (2021), 109–119.
2021e Ali Akbar Estaji and Mostafa Abedi, *On regularity and injectivity of the ring of real-continuous functions on a topoframe*, Algebra Univers. (2021) 82:60, https://doi.org/10.1007/s00012-021-00753-2
2021f Ali Akbar Estaji, Javad Farokhi Ostad and Toktam Haghdadi, *Base and Weight of Boolean I-Contact Algebras*, Bulletin of the Iranian Mathematical Society, https://doi.org/10.1007/s41980-021-00583-x
2022a Ali Akbar Estaji, Maryam Robat Sarpoushi and Ali Barzanouni, *Localic transitivity*, Algebra Univers. Vol. 83 (2022) no. 29. https://doi.org/10.1007/s00012-022-00783-4
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2022c S. Khodaii, A.A. Estaji and S. M. Anvariyeh, *On category of T-rough sets*, Filomat 36 (2022), no. 6, 1873–1893.
2022d T. haghdadi and A. A. Estaji *Isotonic closure function on a locale*, Journal of Algebraic Systems Vol. 11, (2024), no. 2, 13–32.
2022e A. A. Estaji, T. haghdadi and J. Farokhi Ostad, *Topobooleans and Boolean contact algebras with interpolation property*, Filomat 35 (2021), no, 9, 2895–2909.
2023a A. A. Estaji and T. haghdadi, *Rings of quotients of the ring $\mathcal{R}(L)$ by coz-filters* , J. Iran. Math. Soc. 4 (2023), no. 2, 131-147.
2023b A. A. Estaji and A. Mahmoudi Darghadam, *Some properties of algebras of real-valued measurable functions*, Archivum Mathematicum Tomus 59 (2023), 383395.
2023c M. Abedi and A. A. Estaji, *On c-completely regular frames*, Journal of Frame and Matrix Theory 1 (2023), No. 1, 23–33.
2024a A. A. Estaji and M. Taha, *The clean elements of the ring $\mathcal{R}(L)$*, Czech. Math. J. 74 (2024), No. 1, 211–230.
2024b M. Taha, Maryam,A.A. Estaji and M. Robat Sarpoushi, *The point-free version of $C_c(X)$ via the ranges of functions*, Math. Slovaca 74 (2024), No. 1, 27–40.
2024c A.A. Estaji and A. Mahmoudi Darghadam, *Rings of real measurable functions vanishing at infinity on a measurable space*, Journal of Frame and Matrix Theory 1 (2023), No. 2, 1–21.

2024d A. A. Estaji and T. Haghdadi, *Z-ideals and Z-congruences on semiring* $\mathcal{R}^+(L)$, Accapted by Categories and General Algebraic Structures with Applications.
2024e A. A. Estaji and T. Haghdadi, *z-ideals in the semiring* $\mathcal{R}^+(L_\tau)$, Scientific Annals of Computer Science 34 (2024), No. 2, 139–162, doi: 10.47743/SACS.2024.2.139
2024f Z. Norozi Khoshmardana, A. A. Estajia and R. Pourkhandania, *On r-ideals of* $\mathcal{R}(L)$, Filomat 38 (2024), No. 33, 1711–11729, https://doi.org/10.2298/FIL2433711K
2025a A. A. Estaji, R. Pourkhandani and M. Vatandoost, *Compact ICA-topobooleans and the Smirnov compactification theorem*, Algebra Univers. 86 (2025) Pages 15, https://doi.org/10.1007/s00012-025-00885-9

Books

2004 Ali Akbar Estaji, *Algebra of continuous functions*, Sabzevar Tarbiat Moallem University.
1396 Ali Akbar Estaji and Toktam Haghdadi, *Matrix Foundations and Linear Algebra*, 4derakht, 1396.

Seminar articles & Talks

2007a A.A. Estaji, On the Krull intersection theorem for S-act, 18th seminar on Algebra, March. 2007, Basic Science Damghan University, Damghan, Iran.

2007b A.A. Estaji and M. Shabani, Multiplication S-acts, 38 th Annual Iranian Mathematics Conference, 3-6 September 2007, Zanjan University, Zanjan, Iran.
2007c A.A. Estaji, A note on the Noetherian space and Noetherian semigroup, Conference on semigroups, acts and categories June 2007, University of Tartu, Estonia.

2008a A.A. Estaji , F. Namazi and A.AS. Estaji, Some results on prime S-act, Extended Abstract of 19 th Algebra Seminan,12-13 march 2008 , semnan university, semnan Iran, page 42-45.

2008b A.A. Estaji, A. Saberi and A.AS. Estaji, The notion of product of two Subacts of multiplication S-act, Extended Abstract of 19 th Algebra Seminan,12-13 march 2008 , semnan university, semnan , Iran page 38-41.

2008c A.A. Estaji, On the z-ideal of Semigroup (C(X), .), International Conference on Mathematics and Statistics 15-19 June 2008, Athens, Greece.

2008d A.A. Estaji and S. Tajnia, Some result on second and secondary subacts, 39 th Annual Iranian Mathematics Conference, August 2008, Kerman, Iran.

2009a A.A. Estaji and H. Zeinalian, Fuzzy primary subacts, Tarbiat Moallem University, 20th Seminar on Algebra 2-3 Ordibehesht, 1388 (Apr. 22-23, 2009) pp 62-65.
2009b A.A. Estaji and F. Mohammadzadeh, Subacts of Multiplication S-acts, 5th Seminar on Commutative Algebra and Related Topics, Isfahan, Iran, page 6.

2009c A.A. Estaji and Z. Hatamikia, On multiplication s-act, 40th Annual Iranian Mathematics Conference, Sharif University of Technology.
2010a Ali Akbar Estaji, Somayeh Khodaeii, and Solmaz Bahrami, On Rough Set and Fuzzy Sublattice, 21th Algebra Seminar of Iran, 10-11 November 2010,
Faculty of Mathematical Sciences, University of Tabriz.

2010b Ali Akbar Estaji, and Elahe Hoseiny, Strongly irreducible subact, 21th Algebra Seminar of Iran, 10-11 November 2010, Faculty of Mathematical Sciences, University of Tabriz.

2012 Ali Akbar Estaji, Ali Saghafi Khorasani and Samaneh Baghdari, GCD and LCM of ideals in Γ-rings, Extended Abstracts of the 1st Algebraic Structures Seminar 15th-16th November 2012 Hakim Sabzevari University, Sabzevar, Iran.

2013 A.A. Estaji, A. Karimi Feizabadi, M. Abedi, Partitions of a lattice and galois, The Extended Abstracts of The 44th Annual Iranian Mathematics Conference 27-30 August 2013, Ferdowsi University of Mashhad, Iran.

2014a A.A. Estaji, T. Haghdadi, and J. Farrokhi Ostad, Fuzzy nexus over an ordinal, Kharazmi University, 24th Iranian Algebra Seminar, 21-22 Aban, 1393 (November 12-13, 2014), pp:65-67.

2014b A.A. Estaji, A. Karimi Feizabadi, M. Abedi, z-filters and zero sets in pointfree topology, Kharazmi University, 24th Iranian Algebra Seminar, 21-22 Aban, 1393 (November 12-13, 2014), pp:11-14.

2015a M. Abedi, A.A. Estaji, A. Karimi Feizabadi, Weakly spatial frames, 46th Annual Iranian Mathematics Conference 25-28 August 2015 Yazd University
2015b A.A. Estaji and M. Zarghani, Pointless form of grills, 8th Seminar on Geometry and Topology, Amirkabir University of Technology, December, 15-17, 2015.

2016a A.A. Estaji and F. Bayati, Approximation of a fuzzy subset on a hyperlattice, 25th Iranian Algebra Seminar, Hakim Sabzevari University, July 20-21, 2016.

2016b A.A. Estaji and M. Robat Sarpoushi, pointfree topology version of image of real-valued continuous functions with finite image, 25th Iranian Algebra Seminar, Hakim Sabzevari University, July 20-21, 2016.

2016c A.A. Estaji, A. Karimi Feizabadi and B. Emamverdi, Realize of lattice valued functions, 4th Seminar on Algebra and its Applications, University of Mohaghegh Ardabili, August 9-11, 2016.

2016d A.A. Estaji, A. Karimi Feizabadi, B. Emamverdi, Bounded Lattice-valued functions, Proceeding of The 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, 28-31 August 2016, page 730-736.

2016e M. Zarghani, A.A. Estaji and A. Karimi Feizabadi, A new pointfree form of topology, Proceeding of The 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, 28-31 August 2016, page 885-889.

PhD Students

2012-2015: Mostafa Abedi, Zero sets in pointfree topology
2013-2017: Mohammad Zarghani, The ring of real continuous functions on a topoframe
2013-2018: Ahmad Mahmoudi Darghadam, Rings of continuous functions vanishing at infinite on a frame
2013-2017: Batool Emamverdi, Lattice-valued functions and cozero maps
2014-2017: Maryam Robat Sarposhi, Pointfree version of continuous functions with countable image
2015-2020: Hasan Yousefpour, The pointfree version of real measurable functions
2016-2021: Mahtab Elyasi, Pointfree topology version of continuous functions with locally countable image
2017-2021: Maryam Taha, Pointfree topology version of $C_c(X)$ via the range of functions

2020- 2024: Zoreh Norozi Khoshmardan, r-ideals in a frame L and in the ring $\mathcal{R}(L)$