

# CURRICULUM VITAE

## ASMA HAMZEH

### Contact Information

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Insurance Research Center  
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### Personal Data

Date of Birth: September 11, 1985  
Place of Birth: Kashan, Iran  
Nationality: Iranian  
Marital status: married

### Education

2003–2007, Kashan, B.Sc Iran	Mathematics	University of Kashan
2007–2009, Kashan, M.Sc Iran	Mathematics	University of Kashan
2010– 2014, Tehran, Ph.D Iran	Mathematics	University of Tarbiat Modares
2013-2014, Budapest for six leave months	Sabbatical Mathematics	Obuda University
2016-2017, Kashan, PostDoc Iran	Mathematics	University of Kashan, sponsored by Iran National Science Foundation (INSF).

2017-2018, Kashan, PostDoc Mathematics University of Kashan, sponsored by  
Iran the National Elites Foundation.

### **Academic Employment**

- 2019-present Assistant Professor of Insurance Research Center, Tehran, Iran.
- 2021-2022 Head of Research Department, Insurance Research Center, Tehran, Iran.
- 2022-present Head of Department of Modern Insurance Technologies, Insurance Research Center, Tehran, Iran.

### **Subject Taught**

- Calculus, Ordinary Differential Equation, Statistics.

### **Research Experience**

- Worked with Professor Tamás Réti in Budapest for six months.

### **Conference Organizer**

- Member of Scientific Committee: The First National Conference on Computational Methods in Math/Chem/Bio, Islamic Azad University Branch of Saveh 2016.
- Member of Scientific Committee: The 26th Insurance and Development Conference, Insurance Research Center, Tehran, 2019.
- Member of Scientific Committee: The 27th Insurance and Development Conference, Insurance Research Center, Tehran, 2020.
- Member of the Scientific Committee: The non-life insurance conference from theory to application, Shahid Beheshti University, 2020.
- Member of Scientific Committee: The 28th Insurance and Development Conference, Insurance Research Center, Tehran, 2021.
- Member of Scientific Committee: The 29th Insurance and Development Conference, Insurance Research Center, Tehran, 2022.
- Member of Scientific Committee: The 30th Insurance and Development Conference, Insurance Research Center, Tehran, 2023.

## Papers Published in Journals

1. S. Hossein-Zadeh, A. Hamzeh and A. R. Ashrafi, *Wiener-type invariants of some graph operations*, Filomat, 23, 2009, 103-113.
2. A. R. Ashrafi, T. Došlić and A. Hamzeh, *The Zagreb coindices of graph operations*, Discrete Applied Mathematics, 158, 2010, 1571- 1578. **[Top 25 Hottest Articles July to September 2010, No 1; October to December 2010, No 21.]**
3. S. Hossein-Zadeh, A. Hamzeh and A. R. Ashrafi, *Extremal properties of Zagreb coindices and degree distance of graphs*, Miskolc Mathematical Notes, 11, 2010, 129-137.
4. G. H. Fath-Tabar, A. Hamzeh and S. Hossein-Zadeh, *GA2 index of graph operations*, Filomat, 24, 2010, 21-28.
5. A. Hamzeh, S. Hossein-Zadeh and A. R. Ashrafi, *y-Wiener index of composite graphs*, Applied Mathematics Letters, 24, 2011, 1099- 1104.
6. A. R. Ashrafi, A. Hamzeh and S. Hossein-Zadeh, *Computing Zagreb, Hyper-Wiener and Degree-Distance indices of four new sums of graphs*, Carpathian Journal of Mathematics, 27, 2011, 153 -164.
7. A. R. Ashrafi, T. Došlić and A. Hamzeh, *Extremal graphs with Respect to the Zagreb coindices*, Match Communications in Mathematical and in Computer Chemistry, 65, 2011, 85-92.
8. G. H. Fath-Tabar, S. Hossein-Zadeh, A. Hamzeh, *On the first geometric-arithmetic index of product graphs*, Utilitas mathematica, 86, 2011, 279-287.
9. A. R. Ashrafi, A. Hamzeh and S. Hossein-Zadeh, *Calculation of some topological indices of splices and links of graphs*, Journal of Applied Mathematics and Informatics, 29, 2011, 327 - 335.
10. A. Hamzeh, A. Iranmanesh, S. Hossein-Zadeh and M. V. Diudea, *Generalized degree distance of trees, unicyclic and bicyclic graphs*, Studia Universitatis Babes-Bolyai, Seria Chemia, 4, 2012, 73-85.
11. S. Hossein-Zadeh, A. Hamzeh, A. R. Ashrafi, *The Wiener, eccentric connectivity and Zagreb indices of the Hhierarchical product of graphs*,

- Serdica Journal of Computing, 6, 2012, 409-418.
12. A. Hamzeh, A. Iranmanesh, S. Hossein-Zadeh and M. A. Hossein-Zadeh, *The Hosoya index and the Merrifield-Simmons index of some graphs*, Transactions on Combinatorics, 4, 2012, 51-60.
  13. A. Hamzeh, A. Iranmanesh and S. Hossein-Zadeh, *Some results on generalized degree distance*, Open Journal of Discrete Mathematics, 3, 2013, 143-150.
  14. A. Hamzeh, S. Hossein-Zadeh and A. Iranmanesh, *Minimum generalization degree distance of  $n$ -vertex unicyclic and bicyclic graphs*, Kragujevac journal of science, 35, 2013, 49-60.
  15. A. Hamzeh, A. Iranmanesh and S. Hossein-Zadeh, *Minimum generalized degree distance of  $n$ -vertex tricyclic graphs*, Journal of Inequalities and Applications, 548, 2013, 1-8.
  16. A. Hamzeh, S. Hossein-Zadeh, A. R. Ashrafi, *Extremal graphs under Wiener-type invariants*, Match Communications in Mathematical and in Computer Chemistry, 69, 2013, 47-54.
  17. A. Hamzeh, A. Iranmanesh, T. Réti and I. Gutman, *Chemical graphs constructed of composite graphs and their  $q$ -Wiener index*, Match Communications in Mathematical and in Computer Chemistry, 72, 2014, 807-833.
  18. S. Hossein-Zadeh, A. Iranmanesh, A. Hamzeh and M. A. Hossein-zadeh, *on the common neighborhood graphs*, Electronic Notes in Discrete Mathematics, 45, 2014, 51-56.
  19. A. Hamzeh T. Réti, *An analogue of Zagreb index inequality obtained from graph irregularity measures*, Match Communications in Mathematical and in Computer Chemistry, 72, 2014 669-683.
  20. T. Réti, I. László and A. Hamzeh, *On the topological characterization of fullerene-like materials using Zagreb indices-based topological descriptors*, Materials Science Forum, 812, 2015, 459-464.
  21. S. Hossein-Zadeh, A. Iranmanesh, M. A. Hosseinzadeh, A. Hamzeh, M. Tavakoli and A. R. Ashrafi, *Topological efficiency under graph operations*, Journal of Applied Mathematics and Computing, 2016, 1-12.

22. S. Hossein-Zadeh, A. Iranmanesh, A. Hamzeh, M. A. Hosseinzadeh, *Common neighborhood graph*, Journal of New Researches in Mathematics, 2, 2016, 71-80.
23. A. Hamzeh and A.R. Ashrafi, *Automorphism group of supergraphs of the power graph of a finite group*, European Journal of Combinatorics, 60, 2017, 82–88.
24. A. Hamzeh, *Spectrum and L-spectrum of the cyclic graph*, Southeast Asian Bulletin of Mathematics, 42, 2018, 875-884.
25. A. Hamzeh and A.R. Ashrafi, *The main supergraph of the power graph of a finite group*, submitted.
26. A. Hamzeh and A.R. Ashrafi, *Spectrum and L-spectrum of the power graph and its main supergraph for certain finite groups*, Filomat, 31:16, 2017, 5323-5334
27. A. Hamzeh, *Signless and normalized Laplacian spectrums of the power graph and its supergraphs of certain finite groups*, Journal of the Indonesian Mathematical Society, 24, 2018, 61-69.
28. A. Hamzeh, A. Iranmanesh, S. Hossein-Zadeh, M. A. Hossein-zadeh, I. Gutman, *On common neighborhood graphs II*, Iranian Journal of Mathematical Chemistry, 9, 2018, 37-46.
29. A Hamzeh, A. R. Ashrafi, *The order supergraph of the power graph of a finite group*, Turkish Journal of Mathematics 42 (4), 2018, 1978-1989.
30. A.Hamzeh, A.R. Ashrafi, *Some Remarks on the Order Supergraph of the Power Graph of a Finite Group*, International Electronic Journal of Algebra, 2019, 1-12.
31. S. Hossein-Zadeh, A. Iranmanesh, M. A. Hosseinzadeh and A. Hamzeh, *Some bounds for topological efficiency of graphs*, Utilitas Mathematica, 110, 2019, 327-341.
32. A. Hamzeh, *Dependence, independence, vertex cover and clique polynomials of the power graph and its supergraphs*, Mathematics Interdisciplinary Research, 5, 1, 2020, 13-22.
33. A. Hamzeh, *On the automorphisms groups of infinite power graphs*,

- Facta Universitatis, Series Mathematics and Informatics, 36, 2021, 119-123.
34. A. Hamzeh, M. R. Farzaneh, F. Banimostafaarab, M. J. Khordadi, *Role of the Insurance Industry in the Perception of Climate Change Impacts and the Development of Insurance Products in Iran*, *ECOPERSIA* 2023;11(1):65-81.
  35. The Rating of Insurance Companies Based on The Regulatory Indicators Using Three Different Scenarios, *Journal of Mathematics and Modeling in Finance*, 2022, 1-14.
  36. A. Hamzeh, N. Hozarmoghadam, M. Ghanbarzadeh, *Investigating the level of satisfaction of policyholders with supplementary insurance health in Iran*, *BMC public health*, 2023, 1-8.
  37. A. Hamzeh, M. Ghanbarzadeh, *Analysis of Demand for Takaful Insurance: A Case Study in Iran*, *Journal of Islamic Accounting and Business Research*, 2023, 1-11.
  38. M. Ghanbarzadeh, A. Hamzeh, N. Hozarmoghadam, *Consumers' Acceptance toward Takaful Products in Iran*, Submitted.
  39. A. Hamzeh, M. R. Farzaneh, F. Banimostafaarab, M. J. Khordadi, *Evaluating Climate Change Underwriting Approaches in Iran's Insurance Industry*, 2024, *ECOPERSIA* 2024; 12 (2) :153-173.
  40. M. Ghanbarzadeh, A. Hamzeh, N. Hozarmoghadam, *Clustering of Countries based on Human Development Indices and Insurance Analysis of Clusters*, Submitted.
  41. A. Hamzeh, M. Ghanbarzadeh, F. Banimostafaarab, *Measuring the acceptance rate of Usage-Based Insurance (UBI) based on statistical methods (case study: Saman Insurance Company)*, *Journal of Mathematics and Modeling in Finance*, 2024, 37-55. doi: 10.22054/jmmf.2024.78086.1121.
  42. M. J. Nadjafi, M. Doostali, A. Hamzeh, *Fraud Detection and Credibility Evaluation in Automobile Insurance Industry*, Submitted.

## Persian Papers

1. S. Hossein-Zadeh, A. Iranmanesh, A. Hamzeh, M. A. Hossein- Zadeh, *The Common neighborhood graph*, Journal of New Researches in Mathematics, 2016, 71-80.
2. A. Hamzeh, F. Atatalab, *Investigating the effect of sanctions on the insurance industry with an emphasis on inflation and monetary transfer problems*, Financial Economics, 12, 2018, 147-165.
3. N. Hozarmoghadam, M. Ghanbarzadeh, A. Hamzeh, M. Ghafoorboroojerdi, *Investigating the Effects of the Coronavirus Outbreak on Life, Health and Travel Insurance*, Iranian Journal of Health Insurance, 3, 2020, 148-161.
4. M. Ghanbarzadeh, A. Hamzeh, N. Hozarmoghadam. *Wearable Technologies and Internet of Things in Life and Health Insurance*, Iranian Journal of Health Insurance, 4, 2021, 2-13.
5. M. Rostamian, G. Golarzi, A. Hamzeh, N. Hozarmoghadam, *Determination of the optimal premium of non-life insurance via the Stochastic Dynamic Programming method*, Journal of Industrial Management, 12, 2021, 655-671.
6. A. Hamzeh, M. Ghanbarzadeh, N. Hozarmoghadam, *The effects of climate change risk on the insurance industry*, Investment knowledge, Accepted.
7. A. Hamzeh, *Risk management of environmental hazards through insurance*, Man and the environment, Accepted.
8. A. Hamzeh, F. Banimostafa, *Identifying the requirements and challenges of using blockchain technology in natural disaster insurance*, Development of industrial technology, 20, 2022, 73-84.
9. A. Hamzeh, M.R. Farzaneh, M.J. Khordadi, F. Banimostafa, *Challenges of developing countries taking advantage of the non-structural strategy of insurance in order to adapt to climate change*, Journal of Climate Research, Accepted.
10. A. Hamzeh, N. Hozarmoghadam. M. Ghanbarzadeh, *Consequences of sanctions on the insurance industry*, Journal of

- Financial and Economic Policy, 10, 2022, 39-65.
11. A. Khadivar, A. Hamzeh, Z. Alimohammadi, Identify and Ranking the Key Factors of Success in Implementing a Smart Contract in the Insurance Industry, *Iranian Journal of Information Management*, 14, 2022, 71-92.
  12. M. Ghanbarzadeh, M. Abbasi, A. Hamzeh, N. Hozarmoghadam, *Pathology of group medical insurance pricing in Iran's insurance industry*, *Strategic Management Studies*, Accepted.
  13. T. Sadeghian, H. Khademi Zareh, A. Hamzeh, A. Sadeghiyeh, *Providing a strategic model for evaluating the performance improvement of the current situation of the insurance industry (case study: insurance agencies in Yazd province)*, *Strategic Management Studies*, Accepted.
  14. A. Hamzeh, M. Mirbagheri Jam, S. Saboori, *Measuring the performance of insurance companies and ranking them using the I-Distance method*, *Strategic Management Studies*, Accepted.
  15. N. Atabakinia, O.M. Ebadati, A. Hamzeh, *Identification and ranking of the effects of InsurTech on the business model of insurance companies: A hybrid model of MCDM, DEMATEL and ANP*, *Iranian Journal of Insurance Research*, 2023, 12(3), 213-224. doi: 10.22056/ijir.2023.03.04
  16. A. Hamzeh, M.R. Farzaneh, *An analysis of the importance, dimensions and components of natural hazard insurance and flood insurance, Dam and hydropower plant of Iran*, 2023, 25-47.
  17. M. Farzaneh, B. Zamani, A. Hamzeh, *The environmental challenge of climate change, risks and opportunities related to the insurance industry*, *Man and environment*, Accepted.
  18. A. Hamzeh, M.R. Farzaneh, M.J. Khordadi, F. Banimostafa, *Non-structural strategy of insurance in developed countries to adapt to climate change*, *Journal of Climate Research*, Accepted.
  19. A. Hamzeh, *Identification and Ranking of Effective Financial ratios in the Evaluation and Financial Stability of Insurance Companies in Iran*. qjerp



2023; 31 (105) :181-212

20. A. Hamzeh, S. Mireh, Z. Kalhor, H. Fathi, *Reflection on cyber risk and types of cyber security insurance coverage*, *Scientific Journal of Electronic and Cyber Defense*, Accepted.
21. A. Hamzeh, M. Ghanbarzadeh, *Measuring and analyzing the level of awareness of consumer-oriented car insurance*, Submitted.
22. M. Bastami, M. Rahman, A. Hamzeh, *Assessing the performance of the earthquake insurance industry with spatial statistics methods: a case study of the Sarpol-Zahat earthquake*, *Bulletin of Earthquake Science and Engineering*, Accepted.

### **Conference Papers**

1. Degree distance of graph operations, The Second Conference and Workshop on Mathematic-Chemistry, University of Kashan, Iran-Kashan, April 14-16, 2009.
2.  $\gamma$ -Wiener index of composite graphs, The First Iranian Conference on Chemical Graph Theory, Srtt University, Iran-Tehran, October 6-7, 2010.
3. Counting the number of (3,6)- fullerenes, The Third Conference and Workshop on Mathematical Chemistry, University of Tarbiat Modares, Iran-Tehran, February 22-24, 2010.
4. Reverse wiener index of composite graphs, The First Iranian Conference on Algebraic Graph Theory and The Second Conference on Chemical Graph Theory, Srtt University, Iran-Tehran, October 20 - 22, 2011.
5. Topological index of degree distance of graphs and calculation of this index for fullerenes, The Ninth Conference on Nano Technology, University of Tarbiat Modares, Iran-Tehran, March 3-4, 2011.
6. On the splice and link of some graphs, The Fifth Conference on Algebraic Combinatorics and Graph Theory, University of Kashan, Iran-Kashan, July 3-4, 2012.

7. Generalization of degree distance of unicyclic and bicyclic graphs, The Fifth Conference and Workshop on Mathematical Chemistry, Payame Noor University of Yazd, Iran-Yazd, February 15 -17, 2012.
8. Some results of generalization degree distance, The Forth International Congress on Nanoscience and Nanotechnology, University of Kashan, Iran-Kashan, September 8 -10, 2012.
9. An Analogue of Zagreb Index Inequality Obtained from Graph Irregularity Measures, The Seventh Conference and Workshop on Mathematic-Chemistry, Payam Noor University, Iran-Saveh, February 4-6, 2015.
10. Power graph of finite groups, The First National Conference on Computational Methods in Math/Chem/Bio, Islamic Azad University Branch of Saveh, Iran- Saveh, March 10-11, 2016.
11. Automorphism groups of the power graph of a finite group, The Ninth Iranian Group Theory Conference (IGTC 2017), University of Kashan, Iran, February 1-3, 2017.
12. Signless and normalized Laplacian spectrums of the power graph and its supergraphs of certain finite groups, The 10th Conference on Graph Theory and Algebraic Combinatorics, Yazd University, Yazd-Iran School of Mathematical Sciences, January 17-18, 2018.
13. A Survey on Data Mining Methods for Customer Churn Prediction in Insurance Industry, The 6th Financial Engineering and Actuarial Conference, Knowledge research institute, Tehran, 2020.
14. Some remarks on graph polynomials of the power graph and its supergraphs, 12th Group Theory Conference, Tarbiat Modares University, Tehran, 2020.
15. Examining the role of international communication on insurance penetration, The 26th Insurance and Development Conference, Insurance Research Center, Tehran, 2019.
16. The need to pay attention to flood insurance in the management of risks caused by climate change, The 27th Insurance and Development Conference, Insurance Research Center, Tehran, 2020.

17. Investigating and analyzing the effects of the spread of the coronavirus on travel medical insurance, The 27th Insurance and Development Conference, Insurance Research Center, Tehran, 2020.
18. Investigating the influence channels of climate change on non-life insurance, Non-life insurance from theory to application, Shahid Beheshti University, Tehran, 2021.
19. Identifying the applications of blockchain technology in the field of natural disaster insurance, The 28th Insurance and Development Conference, Insurance Research Center, Tehran, 2021.
20. Identifying effective indicators in rating insurance companies and their weighting, The 16th Iranian Statistics Conference, Mazandaran University, 2022.
21. Investigating insurance products in the field of exposure of the insurance industry to climate change phenomenon in selected countries, The 2nd conference on risk measurement of Iran, Shahid Beheshti University, Tehran, 2022.
22. Identifying and ranking factors affecting the demand for Takaful insurance in Iran, 10th ASEAN International Conference on Islamic Finance, Malaysia ASEAN, 2022.
23. Analysis of Acceptance' Level of Takaful Products in Iran, 10th ASEAN International Conference on Islamic Finance, Malaysia ASEAN, 2022.
24. Investigating factors affecting the demand for takaful insurance in Iran and prioritizing it, The 29th Insurance and Development Conference, Insurance Research Center, Tehran, 2022.
25. The impact of insuretech on the business model of Iran's insurance industry (identification of factors), The 29th Insurance and Development Conference, Insurance Research Center, Tehran, 2022.
26. Evaluation of the level of awareness and acceptance of takaful products in Iran, The 29th Insurance and Development Conference, Insurance Research Center, Tehran, 2022.

27. Investigating the impact of Islamic Financial Development and Innovation on Takaful, The 30th Insurance and Development Conference, Insurance Research Center, Tehran, 2023.
28. Using the capacity of new technologies in the development of takaful insurance, The 30th Insurance and Development Conference, Insurance Research Center, Tehran, 2023.
29. Investigating the impact of Islamic financial development and insurance on economic growth, The 30th Insurance and Development Conference, Insurance Research Center, Tehran, 2023.
30. Integration of the data coverage analysis model and the best-worst method to rank the agents of the selected insurance company, 9th industrial and systems engineering conference, Mashhad Ferdowsi University, 2023
31. Organized fraud detection using graph theory and poisson, The 12th Conference on Algebraic Combinations and Graph Theory, Tafresh University, 2023.

## **Books**

1. M. Ghanbarzadeh, N. Hozarmoghadam, A. Hamzeh, Big data for insurance companies, Translated to Persian, Insurance Research Center, Tehran, 2022.
2. A. Hamzeh, F. Banimostafa, M.J. Khordadi, M.R. Farzaneh, Insurance Systems in Times of Climate Change Insurance of Buildings Against Natural Hazards, Translated to Persian, Insurance Research Center, Tehran, 2022.
3. N. Hozarmoghadam, A. Hamzeh, M. Ghanbarzadeh, Long-term care in Europe, Translated to Persian, Insurance Research Center, Tehran, 2023.
4. A. Hamzeh, M. Ghanbarzadeh, N. Hozarmoghadam, F. Banimustafa Arab, Natural Catastrophes Insurance Cover. A Diversity of Systems, Translated to Persian, Insurance Research Center, Tehran, 2023.

5. A. Hamzeh, Y. Mahmoodian, *Pandemics: Insurance and Social Protection*, Translated to Persian, Insurance Research Center, Tehran, 2023.

### **Book Chapters**

1. A. Hamzeh, A. Iranmanesh, S. Hossein-Zadeh, M. A. Hossein- Zadeh, The Hosoya index and the Merrifield-Simmons index of some nanostructures, *Distance, Symmetry, and Topology in Carbon Nanomaterials, Carbon Materials: Chemistry and Physics*, 2016, 269-280.
2. A. Hamzeh, A. Iranmanesh, *Degree Distance, New Frontiers in Nanochemistry: Concepts, Theories, and Trends, Volume 2: Topological Nanochemistry*, 2020.
3. A. Hamzeh, A. Iranmanesh, *Q-Wiener Index, New Frontiers in Nanochemistry: Concepts, Theories, and Trends, Volume 2: Topological Nanochemistry*, 2020.
4. A. Hamzeh, A. Iranmanesh, *Zagreb Indices, New Frontiers in Nanochemistry: Concepts, Theories, and Trends, Volume 2: Topological Nanochemistry*, 2020.
5. Hamzeh, A., Ghanbarzadeh, M. (2023). Identifying and Ranking Factors Affecting the Demand for Takaful Insurance in Iran. In: Mansour, N., Bujosa Vadell, L.M. (eds) *Islamic Sustainable Finance, Law and Innovation. Contributions to Management Science*. Springer, Cham. [https://doi.org/10.1007/978-3-031-27860-0\\_2](https://doi.org/10.1007/978-3-031-27860-0_2)
6. Ghanbarzadeh, M., Hamzeh, A., Hozarmoghadam, N. (2023). Analysis of Acceptance's Level of Takaful Products in Iran. In: Mansour, N., Bujosa Vadell, L.M. (eds) *Islamic Sustainable Finance, Law and Innovation. Contributions to Management Science*. Springer, Cham. [https://doi.org/10.1007/978-3-031-27860-0\\_1](https://doi.org/10.1007/978-3-031-27860-0_1)

## **Research projects**

1. Reviewing the effects of sanctions on the country's insurance industry, 2019, Insurance Research Center.
2. Reviewing the Instructions on Establishment and Framework for the Activities of surety companies, 2019, Insurance Research Center.
3. Rating of insurance companies using regulatory indicators, 2020, Insurance Research Center.
4. The road map of the insurance industry in the face of climate change, 2020, Insurance Research Center.
5. Investigating the effects of climate change on the occurrence of droughts (from the past to the future) in the world and Iran (with an emphasis on drought risk zoning with the approach of the insurance industry), 2020, Insurance Research Center.
6. The necessity of developing a national flood insurance program in order to face the possible conditions of climate change, 2020, Insurance Research Center.
7. The impact of the spread of the corona virus on travel insurance, 2020, Insurance Research Center.
8. The effects of the spread of the corona virus on the economy and the insurance industry of the world and Iran, 2020, Insurance Research Center.
9. Investigating the occurrence of hurricanes in the world and Iran with the approach of climate change risk management in the insurance industry, 2020, Insurance Research Center.
10. Risks and solutions of the insurance industry in the face of climate change, 2020, Insurance Research Center.
11. Examining the insurance coverage of environmental risks, 2021, Insurance Research Center.
12. Investigating the risk management strategies of climate change effects on the insurance industry with a focus on hurricanes, 2021, Insurance

- Research Center.
13. The role of blockchain in natural disaster insurance, 2021, Insurance Research Center.
  14. The role of the insurance industry in the prevention of damages in natural disasters, 2021, Insurance Research Center.
  15. Investigating natural disaster risk transfer tools in the insurance industry, 2021, Insurance Research Center.
  16. Risk calculations and determination of earthquake insurance rates for residential buildings for the country's natural disaster insurance fund, 2021, Insurance Research Center.
  17. Risk calculations and determination of building earthquake insurance rates for the country's natural disaster fund, 2021, Insurance Research Center.
  18. Examining the solutions of the insurance industry in the face of climate change, 2022, Insurance Research Center.
  19. Providing operational solutions for the development and expansion of usage-based car insurance in Saman Insurance Company, 2023, Insurance Research Center.

### **Invitations and Visits**

- November 2013-May 2014: The sabbatical leave in the Obuda University of Budapest.
- Spring 2014: I visited the BME University in Budapest. The visit was supported by (*Prof. Tamás Réti*).
- 2022: International IFRS training course with emphasis on IFRS 17, Dubai Legend Education Center.
- 2023: The second Takaful specialized training course, INCEIF University Malaysia.

## **Honors and Awards**

- Top Student in Master's program in 2009, University of Kashan, Iran.
- Top student in the country in Master's program, 2011.
- Top Student in Ph.D program in 2014, University of Tarbiat Modares.
- Distinguished Researcher of University of Tarbiat Modares, 2015.
- Membership in the National Elites Foundation.
- Member of the American Mathematical Society.
- Member of the Iranian Mathematical Society.
- Top researcher of Insurance Research Center, 2020.
- Top researcher of Insurance Research Center, 2021.
- Top researcher of Insurance Research Center, 2022.
- Top researcher of Insurance Industry, 2023.

## **Major areas of research interest**

New technologies and insurance, Application of graph theory in insurance, Actuary, Modeling in insurance, Finite Group Theory, Graph Theory, Algebraic Graph Theory, Mathematical Chemistry.

## **Peer Review Activities**

1. Iranian Journal of Mathematical Sciences and Informatics.
2. Iranian Journal of Mathematical Chemistry.
3. International Journal of Graphs and Combinatorics.
4. Transactions on Combinatorics.
5. American Mathematical Society.



6. Algebraic Structures and Their Applications.
7. International Journal of Industrial Mathematics.
8. Iranian Journal of Insurance Research.