

MUDASIR YOUNIS, Ph.D.

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Mudasir Younis is currently working as an Assistant Professor at the Department of Mathematics, at Sakarya University, Turkey. Prior to joining Sakarya University, he worked as a postdoctoral fellow at the Department of Mathematics and Statistics, Indian Institute of Technology Kanpur, Uttar Pradesh, India (World QS University Ranking 263). For the last five years, he has been researching diverse fixed-point theorems within the graph structure of metric spaces, which is a relatively fresh addition to the relevant topic. In this context, he obtained several novel results. He worked on determining the existence of solutions to

various real-world engineering science and physics problems, such as a damped spring-mass system, deformation of an elastic beam, vibrations of a vertical heavy hanging cable, ascending motion of a rocket, tuning circuit problem, and so on. With more than 35 research papers published in SCI/ESCI/Scopus-listed journals and seven other papers communicated to prestigious international publications, he has received national and international fellowships. He is the recipient of the "Abel Visiting Scholar Program 2022." He is the reviewer of more than 30 peer-reviewed international journals. Dr Younis has also presented his scientific work at more than 20 international conferences in India and abroad. His recent book, "Recent Developments in Fixed-Point Theory Theoretical Foundations and Real-World Applications," is published by Springer Singapore and can be accessed at <https://link.springer.com/book/9789819995455>. His academic work can be accessed at <https://orcid.org/0000-0001-5499-4272>.

Date of Birth: 04 January, 1990

H-Index : 14 ; H-Index : 15

RESEARCH INTERESTS

- Metric Fixed Point Theory and Engineering Applications
- Graph Theory
- Nonlinear Analysis
- Proximal Point Theory

EDUCATION

- **Ph.D.**, Applied Mathematics, Rajiv Gandhi Technical University., India, **March 2021**
Advisor: Prof. Dr.Deepak Singh
Dissertation: Some Fixed Point Theorems and Their Applications in Abstract Spaces.
- **MS**, Mathematics, Central University of Kashmir, Jammu and Kashmir, India, **2013**
Advisor: Prof. Dr. Aftab Hussain Shah
Thesis: On Completeness of Banach Spaces
- **BS**, Mathematics, University of Kashmir, Jammu and Kashmir, India, **2010**

EMPLOYMENT HISTORY

- **Assistant Prof. Dr.** Sakarya University (SAU), Turkey 2024 – Present
- **Visiting Fellow** Zhejiang Normal University, China 2023-2024

- **Postdoctoral Fellow** Indian Institute of Technology Kanpur, India 2022 – 2024
Mentor: Prof. Dr. Dharendra Bahuguna
- **Assistant Prof. Dr.** Jammua and Kashmir Institute of Mathematical Sciences, Kashmir, India 2021 – 2022
- **Assistant Prof. Dr.** Jammua and Kashmir Institute of Mathematical Sciences, Kashmir, India 2021 – 2022
- **Assistant Prof. Dr.** Jammua and Kashmir Institute of Mathematical Sciences, Kashmir, India 2013 – 2016

Miscellaneous (Awards and Achievements)

- **Project on** “Evolution Equations with Fractional Order Derivatives and Nonlocal Conditions and their Applications” awarded by National SERB-Science and Engineering Research Board, New Delhi, India. (15725 USD approx.)
- Research Fellowship Program Türkiye Scholarships, Presidency for Turks Abroad and Related Communities. 2022
- Recipient of Abel Visiting Scholar 2022 (**IMU-Abel Grant**), University of Göttingen, Germany, supported by the International Mathematical Union.
- Student Travel Award, International De Pure and Applied Mathematics (CIMPA), France. 2019
- International Travel Grant, National Science and Engineering Research Board (SERB/DST) India. 2018
- Student Travel Award, Society for Industrial and Applied Mathematics (SIAM).
- Young Scientist Award, Young Scientist Congress organized by the Madhya Pradesh Council of Science and Technology (MPCST).
- Qualified for the Joint CSIR-UGC National Eligibility Test, All India rank 112. 2014 Certification
- Institute talk at Institute for Numerical and Applied Mathematics University of Göttingen 37083 Göttingen, Germany. 2023
- Membership certificate, American Mathematical Society. 2022
- Membership certificate, International Mathematical Union. 2022
- Membership certificate, European Mathematical Society (ID: 29880). 2021
- Visiting researcher. Indian Institute of Technology, IIT (ISM) Dhanbad. 2019
- Research talk certificate, Henan Normal University, Xinxiang City, China. 2019
- Fellowship for the training of young scientists, Madhya Pradesh Council of Science and Technology (MPCST) Bhopal India. 2018
- Research talk certificate, University of Brighton, U.K.

PUBLICATIONS

A. Articles

i) Journals Covered by Web of Science **16 Q1** **6 Q2** **3 Q3** **3 Q4**

1. **M. Younis***, H. Ahmad, Fahim Ud Din, Fixed Point Analysis of Fractional Dynamics of Heat Transfer in Chaotic Fluid Layers, *Journal of Computational and Applied Mathematics*, (Accepted/Under Production 16 July 2024). SCI/Q1
2. H. Ahmad, **M. Younis**, M.E. Koksai, D. Lateef, Nonunique Fixed-Point Results in a General Setting with an Application, *Journal of Mathematics*, 2024, Article ID: 9190867, 1-13, 2024. SCI/Q1
3. **M. Younis***, H. Ahmad, and D. Bahuguna, “Novel proximal type coincidence point results with applications,” *Chinese Annals of Mathematics Ser B* SCI, vol. Accepted (15 May, 2024), 2024. SCI/Q1

4. **M. Younis***, A. Mutlu, H. Ahmad,, Ciric Contraction with Graphical Structure of Bipolar Metric Spaces and Related Fixed Point Theorems. Hacettepe Journal of Mathematics and Statistics, pp.1-19. <https://dergipark.org.tr/en/pub/hujms/issue/42398/1302743> SCI/Q3
5. **Younis M***, Abdou A.A.N., Novel Fuzzy Contractions and Applications to Engineering Science, *Fractal and Fractional*, 2024, 8(1), 28 (2024). SCI/Q1 <https://doi.org/10.3390/fractalfract8010028>
6. **Younis M.***, Ahmad H., Shi L.: Proximal type coincidence point results with novel applications, Accepted: Optimization (April, 2024) SCI/Q1.
7. **Younis M.***, Ahmad H., Shahid W. Best Proximity Points for Multivalued Mappings and Equation of Motion, *Journal of Applied Analysis & Computation*, 14(1): 298-316 (2024). SCI/Q1 <http://www.jaac-online.com/article/doi/10.11948/20230213>
8. **Younis M.***, Ahmad H., Chen L., Han M., Computation and Convergence of Fixed Points in Graphical Spaces with an Application to Elastic Beam Deformations, *Journal of Geometry and Physics*, 192:104955 (October 2023). SCI/Q1 <https://doi.org/10.1016/j.geomphys.2023.104955>
9. Jabeen S., Koksai M.E., **Younis M.** Convergence results based on graph-Reich contraction in fuzzy metric spaces with application. *Nonlinear Analysis: Modelling and Control*, 27:1-25 (October 2023). SCI/Q1 <https://doi.org/10.15388/name.2024.29.33668>
10. Ahmad H., **Younis M.****, A.A.N Abdou, Bipolar b-Metric Spaces in Graph Setting and Related Fixed Points. *Symmetry*. 2023; 15(6):1227. SCI/Q2 <https://doi.org/10.3390/sym15061227>.
11. **Younis M.**, Jabeen S., Isik H., On some novel results for C-weak-fuzzy contractions. TWMS Journal of Applied and Engineering Mathematics, *TWMS Journal of Applied and Engineering Mathematics*, 13(2), 531-545 (April 2023). ESCI/Q4 <https://hdl.handle.net/11729/5480>
12. **Younis M.***, Dar A.H., Hussain N., Revised algorithm for finding a common solution of variational inclusion and fixed point problems. *Filomat*, 37(20), 6949–6960 (March 2023) SCI/Q2. <https://doi.org/10.2298/FIL2320949Y>
13. **Younis M.***, Bahuguna, D.: A unique approach to graph-based metric spaces with an application to rocket ascension. *Computational and Applied Mathematics*, 42, 44 (January 2023) SCI/Q1. <https://doi.org/10.1007/s40314-023-02193-1>
14. **Younis M.**, Mirkov N., Radenovic S., Some critical remarks on recent results concerning F-contractions in b-metric spaces. *CUBO, A Mathematical Journal*, 25(1), 57-66 (2023) <https://doi.org/10.56754/0719-0646.2501.057>
15. **Younis M.**, Singh D., Chen L. Metwali M, A Study of the Solutions of Notable Engineering Problems, *Mathematical Modelling and Analysis*, 27(3), 492-509 (August, 2022). SCI/Q1 <https://doi.org/10.3846/mma.2022.15276>
16. **Younis M.**, Singh D.*: On the existence of the solution of Hammerstein integral equations and fractional differential equations, *Journal of Applied Mathematics and Computing*, 68, 1087–1105 (April, 2022). SCI/Q1 <https://doi.org/10.1007/s12190-021-01558-1>
17. Meena G., Singh D., **Younis M.***, Joshi V.: Applications of multivalued \mathcal{F}_Δ -contraction with stability results. Thai Journal of Mathematics, 20(2), 527--544 (June 2022)
18. **Younis M.**, Singh D., Abdou A,N.: A fixed point approach for tuning circuit problem in b-dislocated metric spaces, *Mathematical Methods in the Applied Sciences*, 45(4), 2234-2253 (March, 2022). SCI/Q1 DOI: <https://doi.org/10.1002/mma.7922>
19. **Younis M.**, Sretenovic A., Radenovic S.*: Some critical remarks on “Some new fixed point results in rectangular metric spaces with an application to fractional-order functional differential equations.” *Nonlinear Analysis: Modelling and Control*, 27(1), 163-178. doi: 10.15388/name.2022.27.25193 (January, 2022). SCI/Q1 DOI: <https://doi.org/10.15388/name.2022.27.25193>

20. Ahmad H, **Younis M.**, Koksai M.E: Double controlled partial metric type spaces and convergence results, *Journal of Mathematics*, 2021, Article ID 7008737 (December 2021). SCI/Q1 DOI: <https://doi.org/10.1155/2021/7008737>
21. **Younis M.***, Singh D., Shi L. (2021): Revisiting graphical rectangular b-metric spaces, *Asian-European Journal of Mathematics*, 15(4), 2250072 (June, 2021). ESCI/SCOPUS/Q3 DOI: <https://doi.org/10.1142/S1793557122500723>
22. **Younis M.***, Singh D., Altun I, Chauhan V.: Graphical structure of extended b-metric spaces: An application to the transverse oscillations of a homogeneous bar, *International Journal of Nonlinear Sciences and Numerical Simulation* (April, 2021). SCI/Q2 DOI: <https://doi.org/10.1515/ijnsns-2020-0126>
23. Wairojjana N., **Younis M.**, Rehman H.*, Pakkaranang N., Pholasa N. (2020): Modified viscosity subgradient extragradient-like algorithms for solving monotone variational inequalities problems. *Axioms*, 9(4):118 (October 2020). SCI/Q1 DOI <https://doi.org/10.3390/axioms9040118>
24. **Younis M.***, Deepak S., Radenović S, Imdad M. (2020): Convergence theorems for generalized contractions and applications. *Filomat*, 34(3), 945-964 (March, 2020). SCI/Q2 DOI <https://doi.org/10.1515/ijnsns-2020-0126>
25. **Younis M.***, Deepak S., Asadi M., Joshi V. (2019): Results on contractions of Reich type in graphical b-metric spaces with applications. *Filomat*, 33(17), 5723-5735. SCI/Q2 (December, 2019). DOI: <https://doi.org/10.2298/FIL1917723Y>
26. **Younis M.**, Singh D., Petrusel A.* (2019): Applications of graph Kannan mappings to the damped spring-mass system and deformation of an elastic beam. *Discrete Dynamics in Nature and Society*, Article ID 1315387, 1-9. (June, 2019). SCI/Q2 DOI: <https://doi.org/10.1155/2019/1315387>
27. **Younis M.**, Deepak S.*, Gopal D., Goyal A., Rathore M.S. (2019): On applications of generalized F-contraction to differential equations. *Nonlinear Functional Analysis and Applications*, 24(1), 155- 177. (April, 2019). SCOPUS/Q4
28. **Younis M.**, Deepak S.*, Goyal A. (2019): A novel approach of graphical rectangular b-metric spaces with an application to the vibrations of a vertical heavy hanging cable. *Journal of Fixed Point Theory and Applications*/Springer, 21(1):33, (March, 2019). SCI/Q1 <https://doi.org/10.1007/s11784-019-0673-3>

B. Proceedings

i) International Conference Proceedings

1. **Younis M.***, Bahuguna D., Singh D. (2023). An Existence Result for a Class of Integral Equations via Graph-Contractions. In: Constanda, C., Bodmann, B.E., Harris, P.J. (eds) *Integral Methods in Science and Engineering*. IMSE 2022. Birkhäuser, Cham. https://doi.org/10.1007/978-3-031-34099-4_28
2. **Younis M.***, Ahamad H., Ahmad A. (2021), C. Novel Convergence Results in Vector Valued Metric Spaces, **5th International Conference on Mathematics: "An Istanbul Meeting for World Mathematicians"**, 01-03 Dec 2021, Istanbul, Turkey, pp. 194-207.

ii) National Conference Proceedings

C. Book Chapter

1. **Younis M.***, Singh, D., Chen, L. (2024). A Careful Retrospection of Metric Spaces and Contraction Mappings with Computer Simulation. In: Younis, M., Chen, L., Singh, D. (eds) *Recent Developments in Fixed-Point Theory*. Industrial and Applied Mathematics. Springer, Singapore. https://doi.org/10.1007/978-981-99-9546-2_1

2. **Younis M.***, Singh D., Goyal A. (2019): Solving existence problems via F-Reich contraction: Constanda C., Harris P. (eds.) Integral Methods in Science and Engineering. Springer Birkh"ausser, Cham, 451-463 (July, 2019). [SPRINGER BOOK CHAPTER] DOI: https://doi.org/10.1007/978-3-030-16077-7_35
3. Singh A.*, **Younis M.**, Singh S. (2019): Existence of non-linear problems: An applicative and computational approach: Constanda C., Harris P. (eds.) Integral Methods in Science and Engineering. Springer Birkh"ausser, Cham, 437-450 (July, 2019). [SPRINGER BOOK CHAPTER] DOI: https://doi.org/10.1007/978-3-030-16077-7_34

CITATIONS

- **Indexed within WOS:** Total number of citations is **239**, H-index is **11**
- **Indexed within Google Scholar:** Total number of citations is **419**, H-index is **14**

Served as a referee for the following journals:

Fixed Point Theory and Applications/Springer (SCIE);
 Nonlinear Analysis: Modelling and Control (SCIE);
 Soft Computing (SCIE),
 Mathematical Sciences (SCIE);
 Advances in Applied Clifford Algebras/Springer (SCIE);
 Numerical Functional Analysis and Optimization (SCIE);
 Journal of Function Spaces (SCIE);
 Applied Sciences (SCIE);
 Computer Modeling in Engineering and Sciences (SCIE);
 Mathematics (MDPI) (SCIE); Symmetry (SCIE);
 Sustainability (SCIE); Mathematical Problems in Engineering (SCIE);
 International Journal of Mathematics and Mathematical Sciences (SCIE);
 Electronics (SCIE); Energies (SCIE);
 Journal of Mathematical Analysis;
 Mathematical Analysis and its Contemporary Applications;
 Journal of Applied Mathematics and Informatics (ESCI/Scopus);
 Facta Universitatis, Series: Mathematics and Informatics (ESCI/Scopus);
 Nonlinear Functional Analysis and Applications (Scopus);
 Fundamental Journal of Mathematics and Applications;
 Gulf Journal of Mathematics;
 Journal of Advanced Mathematical Studie;
 AIMS Mathematics (SCIE);
 Constructive Mathematical Analysis;
 Universal Journal of Mathematics and Applications;
 Journal of Nonlinear Modeling and Analysis;
 Bulletin of Mathematical Analysis and Applications (ESCI);
 Fractal and Fractional (SCIE);
 International Journal of Mathematics and Mathematical Sciences (SCIE);
 Hacettepe Journal of Mathematics and Statistics (SCIE);

PLOS ONE (SCIE);
Advances in Fuzzy Systems (SCIE);
Fixed Point Theory (SCIE);
Journal of King Saud University-Science/Elsevier (SCIE).

Reviewer for Mathematical Reviews of the American Mathematical Society (AMS) (MR Number: 1308954)

Books

1. Recent Developments in Fixed-Point Theory: Theoretical Foundations and Real-World Applications (Springer) ISBN: 978-981-99-9546-2 <https://link.springer.com/book/9789819995455>
2. Fourier Analysis, Directorate of Distance Education, University of Kashmir, Hazratbal Srinagar; ISBN:978-93-82097-72-3.
3. Futuristic Trends in Physical Sciences, Iterative International Publishers (IIP), ISBN : 978-93-5747-785-7
4. Metric Spaces and Elementary Topology (Under Review/Springer)

National and International Conferences:

1. Presented a paper entitled "Variants of contractions in Graphical Metric Spaces with Applications" in International Conference on Recent Trends in Analysis and Optimization (ICR-TAO2020), National Institute of Technical Teachers' Training and Research, Bhopal, M.P., India.
2. Participated in "International Workshop on Fixed Point Theory and its Applications" held at the Department of Mathematics, Jamia Millia Islamia, New Delhi, India.
3. Poster presentation on "Existence of solutions of various nonlinear problems via fixed point technique" in Young Scientists Conference under the banner of India International Science Festival held at Indira Gandhi Pratishthan, Lucknow, U.P, India.
4. Presented a paper entitled "Fixed point results for generalized F-contraction with application to integral equations" in 33rd M.P. Young Scientist Congress Organized by M.P. Council of Science and Technology (MPCST), Jabalpur India.
5. Presented a paper entitled "Fixed point theorems for Kannan type mappings in b-metric-like spaces" in the International conference on Mathematical Sciences and Applications (ICMSA-2018) at Guru Ghasidas University (a Central University), Bilaspur, Chhattisgarh, India.
6. Participated in short-term training program on "Numerical Computations and Optimization Techniques NCOT-2018" held at Department of Applied Mathematics, Jabalpur Engineering College, Jabalpur, M.P., India.
7. Participated in Science academics' Lecture workshop on "Geometry and Topology" at Indian Institute of Science Education and Research (IISER), Bhopal, India. 2017
8. Presented a paper entitled "Some fixed point theorems and their applications in partial b-metric spaces" in the International Conference on Analysis and its Applications (ICAA-2017) at Department of Mathematics, Aligarh Muslim University (AMU), Aligarh India.
9. Participated in a course on "Nonlinear Analysis and its Applications to Optimization Techniques" under the auspices of professional development program at IIT(ISM) Dhanbad, Jharkhand India.

10. Presented a paper entitled "Applications of fixed point theorems in partial b-metric spaces" in National Seminar on National Development through Science and Technology in Indian Science Congress (Srinagar Chapter), University of Kashmir, Srinagar, JK, India.
11. Presented a paper entitled "Fixed point theorems in partial b-metric spaces invoking Geraghty type F-Berinde contraction" in International conference on Mathematical Analysis and its Applications (ICMAA-2017) at Dayanand Science College, Latur, Maharashtra, India.
12. Participated in one day International workshop on "Applications of Fixed Point Theory to Nonlinear Problems in Engineering Applications" at Department of Engineering Mathematics, LNCT, Bhopal.
13. Presented a paper entitled "Geraghty type fixed point results via generalized almost F-contraction" in International conference on Recent Advancement in Science and Technology (ICRAST-2017) at Technocrats Institute of Technology, Bhopal.
14. Talk on "Contraction Mappings and Their Applicative Approach Towards Nonlinear Problems in Engineering and Science", Institute for Numerical and Applied Mathematics, University of Göttingen, Göttingen Germany. 2022
15. Presented a paper entitled "A study of the solutions of notable engineering problems" in 6th International Conference on Mathematics (ICOM) "An Istanbul Meeting for World Mathematicians", Istanbul.
16. Presented a paper entitled "A study of the solutions of notable engineering problems" in 5th International Conference on Mathematics (ICOM) "An Istanbul Meeting for World Mathematicians", Istanbul Turkey.
17. Presented a paper entitled "Invariant Point Results in Graphical Metric Spaces with Applications" in 13th International Conference on Fixed Point Theory and Applications (ICFPTA2019), Henan Normal University, Xinxiang City, China.
18. Presented a paper entitled "Fixed Point **Theorems** and Their Applications" in 15th International Conference on Integral Methods in Science and Engineering (IMSE2018), University of Brighton, U.K.