RESUME

ASAF KHAN

Permanent address: Village Pato Talash, P/O Nasafa & Tehsil Timergara District Dir (L) KPK, Pakistan.

Postal Address: Department of Mathematics & Statistics, University of Swat, KPK, Pakistan.

Contact # +92-345-9810045

1. OBJECTIVE

Seeking challenging and responsible position where my education, ability, potentials can be fully and effectively utilize with opportunities of growth, enhancement of knowledge and to serve in building the nation. Moreover, to further explore the skills capabilities which I gained in the whole academic career and to serve in a challenging work environment equally vast opportunities of career development based upon achievements and result.

2. Personal Information

Father Name	:	BACHA
Date of Birth	:	05-02-1990
Passport Number	:	SS4136842
NIC Number	:	15302-0926684-5
Sex	:	Male
Religion	:	Islam
Nationality	:	Pakistani
Marital Status	:	Married
Domicile	:	DIR (lower) KPK
Email address	:	asafkhan@uswat.edu.pk
		asafkhan319@ymail.com

3. Academics

Qualification	Session	PERCENTAGE	Institute
PhD (Applied Mathematics) (In progress)	2016-2019	4/4(CGPA)	University of Malakand Department of Mathematics
M. Phil (Applied Mathematics)	2013-2015	3.97/4 (CGPA)	University of Malakand Department of Mathematics
BS(Hons) Mathematics	2008-2012	87.98%	University of Malakand Department of Mathematics
F. Sc. (Pre-engineering)	2006-2008	72.5%	B.I.S.E Malakand
S.S.C.	2006	72.1%	B.I.S.E malakand

PhD Thesis Title: Dynamics and Control Theory of Age-structured Epidemic Models with Applications

MPhil Thesis Title: Stability Analysis of an Age-Structured SIR Epidemic Model

BS (4-Years) Thesis Title: Fractional Order SEIR Model with Density Dependent Death Rate

4.   *Research Area*

- Epidemic Dynamics
- Age-structured Modeling
- Age-since-infection Modeling
- Infectious Diseases with Optimal Control
- Working on methods for the numerical and analytical solutions of Partial Differential Equations and Ordinary Differential Equations

Moreover, I am highly appreciating any research activity in others area of applied mathematics.

5.   *Awards*

- Certificate of Distinction, Award of Gold medal in BS (4-Years) Mathematics
- First position in MPhil course work among 25 students securing 3.97/4 GPA.
- Certificate of Distinction, 1st position in 8th Sub Regional Science and Technology Competition 2009-2010 (Malakand Sub Region)

6.   *Experiences*

- I am working as a lecturer in Mathematics in the Department of Mathematics & Statistics, University of Swat, Khyber Pakhtunkhwa, Pakistan, since April 30, 2021 till date.
- Worked as a Lecturer in Mathematics in the Department of Mathematics, FATA University, Khyber Pakhtunkhwa, Pakistan, since March 20, 2019 till April 29, 2021.
- Worked as a Lecturer in Mathematics in the Department of Mathematics & Statistics, University of Swat from November 12, 2013 to March 19, 2019.
- Worked as BS Mathematics program coordinator in the Department of Mathematics & Statistics, UoS, from July 06, 2017 to March 20, 2019.

7.   *Conferences Attended*

- 7th Symposium on Computational Complexities, Innovations and Solutions (CCIS) on May 12-13, 2014 at COMSATS Abbottabad, Pakistan.
- 1st National Conference on Mathematical Sciences 2014 (1st NCMS 2014) from 2-4 September 2014 at University of Malakand, Pakistan.
- Cascading Workshop on teaching effectiveness, held at university of Swat, from 13th October to 18th October 2014.
- 12th Conference on Recent Advances in Mathematical Methods, Models & Applications April 08 – 09, 2017.
- 13th Conference on Recent Advances in Mathematical Methods, Models & Applications April 07 – 08, 2018.

8.   *Publications*

Published

1. Gul Zaman and **Asaf Khan,** "Dynamical Aspects of Age-structured SIR Endemic Model", *Computer and Mathematics with Applications*, 72 (2016) 1690–1702. **(I.F 2. 811**)

2. Fazal Haq, Kamal Shah, **Asaf Khan**, Muhammad Shahzad, Ghaus ur Rahman, "Numerical Solution of Fractional Order Epidemic Model of a Vector Born Disease by Laplace Adomian Decomposition Method", *Punjab University Journal of Mathematics (ISSN 1016-2526)*, 49(2)(2017) 13-22.

3. **Asaf Khan**, Gul Zaman, "Global analysis of an age-structured SEIR endemic model", Chaos, Solitons and Fractals 108 (2018) 154–165. **(I.F 3.064**)

4. Ghaus ur Rahman, Ravi P. Agarwal, Lili Liu, **Asaf Khan**, "Threshold dynamics and optimal control of an age-structured giving up smoking model", *Nonlinear Analysis: Real World Applications,* 43 (October 2018) 96–120. **(I.F 2.085)**

5. **Asaf Khan**, Gul Zaman, "Optimal control strategy of SEIR endemic model with continuous age-structure in the exposed and infectious classes", *Optimal Control, Applications and Methods,* 39(2018), 1716-1727. **(I.F 1.452)**

   https://doi.org/10.1002/oca.2437

6. **Asaf Khan**, Gul Zaman, "Asymptotic behavior of an age structure SIRS endemic model", *Applied and Computational Mathematics*, 17(2) (2018) 185-204. **(I.F 3.160)**

   http://acmij.az/view.php?lang=az&menu=journal&id=475

7. Amir Khan, **Asaf Khan**, Tahir Khan and Gul Zaman, Extension of triple Laplace transform for solving fractional differential equations, Discrete and Continuous Dynamical Systems-Series S, 13(3)(2020) 755-768. **(I.F 0.545)** doi:10.3934/dcdss.2020042 March 2020

8. Rukhsar Ikram, Amir Khan, **Asaf Khan**, Tahir Khan, Gul Zaman, Analytical approximate solution of leptospirosis epidemic model with non-linear incidence rate, *Computational Methods for Differential Equations,* 7(3) (2019) 370-382*.*

9. Asaf Khan, Gul Zaman, Roman Ullah and Nawazish Naveed, Optimal control strategies for a heroin epidemic model with age-dependent susceptibility and recovery-age, *AIMS Mathematics*, 6(2): 1377–1394. **(I.F 0.882) Q2 Journal**

10. Anwarud Din, Tahir Khan, Yongjin Li, Hassan Tahir, Asaf Khan and Wajahat Ali Khan, Mathematical analysis of dengue stochastic epidemic model, *Results in Physics*, 20 (2021) 103719. **(I.F 4.019) Q1 Journal** https://doi.org/10.1016/j.rinp.2020.103719

11. Asaf Khan, **Gul Zaman**, Roman Ullah and Nawazish Naveed, Correction: Optimal control strategies for a heroin epidemic model with age-dependent susceptibility and recovery-age, *AIMS Mathematics*, 6(7): 7318–7319. **(IF 0.882**) DOI:10.3934/math.2021429

12. H. Tahir, A. Khan, A. Din, A. Khan and **G. Zaman**, Optimal control strategy for an age-structured SIR endemic model, *Discrete and Continuous Dynamical Systems Series-S*, **14**(7) (2021), 2535-2555. **IF 1.233** doi:10.3934/dcdss.2021054

13. Asaf Khan, Gul Zaman, Optimal controlling strategies for an age-structured SEIR epidemic model, *Mathematical Methods in the Applied Sciences*, (In Production)

Submitted:

1. Asaf Khan, Gul Zaman, Mathematical analysis and control theory of an age-structured coronavirus disease model, *Numerical Methods for Partial Differential Equations*, Review submitted

Conference Papers:

1. Asaf Khan and Gul Zaman, Optimal control of a giving up smoking with age-structured in smoking classes, Conference paper, presented in COIA-2018 held on 11-13 July, 2018 in Baku, Azerbaijan.

9.   Personal Characteristics

- Optimistic thinking
- Self-Motivated & able to take initiative
- Able to adjust in different Environment
- Studious & confident
- Good researcher

10.   Language Skill

S/No	Language	Read	Write	Speak
1.	English	Excellent	Excellent	Excellent
2.	Urdu	Excellent	Excellent	Excellent
3.	Pashto	Excellent	Very good	Excellent
4.	Arabic	Excellent	Good	Very good

11.   References

1. Prof. Dr. Gul Zaman, Professor in Mathematics, Vice Chancellor University of Malakand, KPK, Pakistan.
   Email:gzaman@uom.edu.pk, talash74@yahoo.com   **Cell No:** +92-343-897-0237.
2. Dr. Ghaus Ur Rahman, Associate Professor in Mathematics, Chairman Department of Mathematics & Statistics, University of Swat, KPK, Pakistan.
   Email: dr.ghaus@uswat.edu.pk, ghaus957@yahoo.com   **Cell No:** +92-346-914-0474