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The Hashemite University, Zarqa, Jordan

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EDUCATION

- Ph.D. Mathematics (October 2010)
University of Manitoba, Winnipeg, Manitoba, Canada.
G.P.A 4.5/4.5
- M.Sc. Mathematics (June 2004)
University of Jordan, Amman, Jordan.
G.P.A 3.69/4.00
- B.Sc. Mathematics (June 2001)
The Hashemite University, Zarqa, Jordan.
First Class Division. G.P.A 3.77/4.00

RESEARCH

● **INTERESTS**

- Differential Equations, Dynamical Systems, Mathematical Biology,
Fractional Calculus

● **M.Sc. THESIS**

- Title: On The Fractional Differintegrated Form Solutions of Some
Special Differential Equations
- Supervisor: Professor Nabil T . Shawagfeh

- **Ph.D. THESIS**

- Title: Mathematical Analysis of The Role of Quarantine and Isolation in Epidemiology
- Supervisor: Professor Abba, B. Gumel

- **EXPERIENCE**

- Assistance Professor, The Hashemite University, Department of Mathematics, Feb 2011-Till date.
- Post-doctoral fellow, University of Manitoba, Department of Mathematics, Nov. 2010- Feb. 2011.
- Teaching Assistant, University of Manitoba, Department of Mathematics, Sep. 2006- Oct. 2010.
- Research and Teaching Assistant, The Hashemite University, Department of Mathematics, Oct. 2004- Aug. 2006.
- Teacher, UN Schools, Jordan, Jan. 2003-Sep. 2004.
- Teacher, AL-Ittihad private schools, Amman, Jordan, Sep. 2001-Dec. 2002.

AWARDS & HONORS

- Graduate Award for Excellence in Mathematics, University of Manitoba, for 2008/2009.
- TransCanada Pipelines Graduate Fellowship, University of Manitoba, for 2007/2008.
- Graduate Award for Excellence in Mathematics, University of Manitoba, for 2007/2008.
- University of Manitoba Graduate Fellowship, University of Manitoba, April 2007 - August 2010.
- International Graduate Student Scholarship, University of Manitoba, 2007/2008.
- Graduate Assistantship, Department of Mathematics, University of Manitoba, 2006/2007.

- International Graduate Student Entrance Scholarship, University of Manitoba, 2006.
- University Prize for the Best All Round Graduating Student, The Hashemite University, Zarqa, Jourdan 2001.

MISCELLANEOUS

● PROFESSIONAL AFFILIATIONS

- Member, Society for Industrial and Applied Mathematics (SIAM)
- Member, Canadian Mathematical Society (CMS)
- Member, Canadian Applied and Industrial Mathematics Society (CAIMS)

● COMPUTER PROGRAMMING SKILLS

- Matlab, Maple, Mathematica, Scientific Workspace

CONFERENCES ATTENDED

- (i) Fourth Annual PNRMS Meeting 2010
Co-hosts: University of Manitoba & The University of Winnipeg
Paper Title: Mathematical analysis of quarantine/isolation model with time delay.

- (ii) ICIAM 2011 : 7th International Congress on Industrial and Applied Mathematics
Paper Title: Mathematical Analyses of Disease Transmission Models with Quarantine and Isolation.

REFEREED JOURNAL PUBLICATIONS

13. **M. A. Safi** (2014). Global dynamics of treatment models with time delay. *Comp. Appl. Math.*
12. **M. A. Safi** and A. B. Gumel (2014). Dynamics Analysis of a Quarantine Model in Two Patches. *Math. Meth. Appl. Sci.*
11. **M. A. Safi**, Dessalegn Y. Melesse and A. B. Gumel (2013). Dynamics Analysis of a Multi-strain Cholera Model with an Imperfect Vaccine. *Bull. of Math. Biol.* **75**: 1104-1137
10. **M. A. Safi**, A. B. Gumel and E. H. Elbasha (2013). Qualitative Analysis of an Age-Structured SEIR Epidemic Model with Treatment. *Appl. Math. Comput.* **219**: 10627-10642.
9. S. M. Garba and **M. A. Safi** (2013). Mathematical Analysis of West Nile Virus Model with Discrete Delays. *Acta Math. Sci.* **33B**(5) :1439-1462
8. S. M. Garba, **M. A. Safi** and A. B. Gumel (2013). Cross-Immunity-Induced Backward Bifurcation for a Model of Transmission Dynamics of Two Strains of Influenza. *Nonlinear Anal.-Real World Appl.* **14**: 1384-1403.
7. **M. A. Safi** and A. B. Gumel (2013). Dynamics of a Model with Quarantine-adjusted Incidence and Quarantine of Susceptible Individuals. *J. Math. Anal. Appl.* **399**: 565-575.
6. **M. A. Safi** and S. M. Garba (2012). Global Stability Analysis of SEIR Model with Holling type II Incidence Function. *Comput. Math. Methods Med.* **2012**, Article ID 826052, 8 pages.
5. **M. A. Safi**, M. Imran and A. B. Gumel (2012). Threshold dynamics of a quarantine/isolation model in a periodic environment. *Theory Biosci.* **131**: 19-30.
4. **M. A. Safi** and A. B. Gumel (2011). Qualitative study of a quarantine/isolation model with multiple disease stages. *Appl. Math. Comput.* **218**: 1941-1961.

3. **M. A. Safi** and A. B. Gumel (2011). Mathematical analysis of a disease transmission model with quarantine, isolation and an imperfect vaccine. *Comput. Math. Appl.* **61**: 3044-3070.
2. **M. A. Safi** and A. B. Gumel (2011). Effect of incidence function on the dynamics of quarantine/isolation model with time delay. *Nonlinear Anal.-Real World Appl.* **12**: 215-235.
1. **M. A. Safi** and A. B. Gumel (2010). Global asymptotic dynamics of a model for quarantine and isolation. *Discrete Contin. Dyn. Syst. Ser. B.* **14**: 209-231.

REFERENCES

- (i) Professor Abba B. Gumel (Ph.D. Advisor)
Director (Institute of Industrial Mathematical Sciences)
Department of Mathematics, University of Manitoba
Phone : (204) 474-7486
Email : gumelab@cc.umanitoba.ca
- (ii) Professor S. Lui (Ph.D. Co-Advisor)
Department of Mathematics, University of Manitoba
Phone : (204) 474-9578
Email : luish@cc.umanitoba.ca
- (iii) Professor Nabil T. Shawagfeh (M.Sc. Advisor)
President of Al al-Bayt University, Mafraq, Jordan
Email: shawagfeh@aabu.edu.jo, shawagnt@index.com.jo.
- (iv) Professor Mufid M. Azzam
Department of Mathematics, University of Jordan
Email: azzamm@ju.edu.jo