**Dr. Mohammed Karim**

Professor and Coordinator  
Math Program  
  
**EDUCATION**  
  
Ph.D.(Mathematics), Concordia University, Montreal, QC. Canada (1997)  
M.Sc.(Mathematics), Concordia University, Montreal, QC. Canada (1992)  
M.Sc.(Applied Mathematics), Dhaka University, Dhaka, Bangladesh (1986)  
B.Sc.(Honors in Mathematics), Dhaka University, Dhaka, Bangladesh (1983)  
  
  
**PUBLICATIONS**   
  
1. Karim, M. R., "Solutions of Higher-Degree Reduced Polynomial Equations by Using   Unipodal Numbers",   
    The Theoretical Mathematics & Applications, vol. 2, no. 1, 13 - 21(2012).  
  
2. Karim, M. R., “The Sums of Alternating Series of Odd Powers of the Reciprocals of Odd Positive Integers”,  
   KBM Journal of Mathematical Sciences and Computer Applications, 1(1): 14 - 22 (2010).  
  
3. Karim, M. R., “Solutions of Pentagonal Equation under Certain Conditions”, KBM   Journal of Mathematical  
    Sciences and Computer Applications,  1(2), 33 - 39 (2010).  
  
4. Karim, M. R., Leisher, D., and Liu, C., “Precalculus Algebra: Original Purpose – Its Relevancy to Students’   
    Needs – and Some Suggestions”, KBM Journal of Science Education, 1 (2), 19 - 23 (2010).  
  
5. Karim, M. R., Liu, C., “Approximation of Apery’s Constant”, International Journal of Academic Research, vol  
    . 2,No. 6, 9 - 12, November 2010.  
  
6. Liu, C. and Karim, M. R., “Tune the Sequence (1+1/n)^(n+c) with the Parameter c”, International Journal of   
    Academic Research, vol. 2, No. 5, 11 - 17, September 2010.  
  
7. Karim, M. R. and Gonzalez, C, “A Class of Series and Sums” in the Proceedings of the National Conference  
    on Undergraduate Research, Missoula,Montana, April 15 – 17, 2010, pp. 20-24.  
  
8. Karim, M. R., “The Relationships Among Number Theoretic functions”, Journal of Mathematics, Statistics and  
    Allied Fields, Volume 3, Issue 1, 1–5 (2009).  
  
9. Karim, M. R., “Birthday Problem that Includes a Leap Day”, Math. Scientist, Vol.43,49-50 (2009).  
  
10. Karim, M. R., Dunning, R., “Leap Day Extension of the Birthday Problem”, in the proceedings of the National  
      Conference on Undergraduate Research, La Cross,Wisconsin, April 16- 18, 2009, pp. 315 – 318.  
  
11. Karim, M. R., Gonzalez, C., “Applications of Congruences in Finding the Day of a Given Date”, in the  
     proceedings of the National Conference on Undergraduate Research, La Cross, Wisconsin, April 16 – 18,  
     2009, pp. 310 -314.  
  
12. Karim, M. R., “Free Convection Flow Past an Accelerated Vertical Permeable Plate” in the proceedings of  
      Dynamical Systems & Applications 4 (2004), pp. 613 – 619.  
  
13. M. R. Karim and Kyle Siegrist, “Teaching Functions by Interactive Explorations”, in the Proceedings of Huntsville  
      Simulation Conference 2002, Huntsville, Alabama. pp.384- 386.     
  
14. R. Green, M. R. Karim, ‘’Some Formulae for Evaluation of a Class of Single and Repeated Indefinite Integrals’’,in  
      the Proceedings of the National Conference on Undergraduate Research, (NCUR) 2001, March 15 – 17, 2001,  
      Lexington, Kentucky.  
  
15. Egarievewe, S., Adebiyi, B., Onafowokan, O., Coke, D. Karim, M. R., Rigby, K.,Adetunji, O., “Web Based  
      Learning Environment for Functions and Graphs”,European Journal of Open Distance and E-Learning (2000).  
  
16. M. R. Karim and S.T. Ali and M. Bodruzzaman ‘’A Relativistic Windowed Fourier Transform”, in the proceedings  
      of IEEE SoutheastCon 2000, Nashville, Tennessee,2000, pp. 253 – 260.  
  
17. M. Bodruzzaman, R. Gupta, M. R. Karim, and S. Bodruzzaman, ‘’Neural Network-Based Codebook Search for  
      Image Compression”, in the proceedings of IEEE SoutheastCon2000, Nashville, Tennessee, April 7- 9,   
      2000,pp.417 – 424.  
  
18. C. Maxwell, M. R. Karim and M. Gunasekaran, ‘’A Model of Medical Decision Making”, in the proceedings of the  
      National Conference on Undergraduate Research (NCUR) 99, pp. 1281-1284.  
  
19. S.T. Ali, J-P. Gazeau and M. R. Karim, ‘’Frames, the beta-duality in Minkowski Space and Spin Coherent  
     States’’, J. Phys.  A: Math.  Gen. 29 (1996) 5529 - 55  
  
**EXTERNAL FUNDING**  
  
Three of our proposals have been funded by National Science Foundation (NSF) in the recent years: (I was a Co-PI in all the projects) and one proposal has been submitted to Department of Defense.  
  
1. Proposal Number: 0928904  
    Proposal Title: Strategic Plan to Enhance STEM Education and Research at AAMU  
    Total Funding: $2,163,679.00 for five years (current).  
  
2. Proposal Number: 0265155  
    Proposal Title: Strategic Plan for Enhancement, Expansion and Development of Undergraduate Programs  
    (SPEED – UP)  
    Total Funding: $2,100,000.00 for five years (ended in August 2011)  
  
3. Proposal Number: 0552678  
    Proposal Title: REU-Site at Alabama A&M University  
    Total Funding: $165,000.00 for three years (ended in summer 2009)