A Special Session on
Fuzzy Logic Aided Software Reliability and
Software Cost Estimation Methods
organized by Alaa Sheta

The 20\textsuperscript{th} century witnesses a tremendous attention of software engineering research activities such as modeling, design, quality assurance, security, testing, architecture, reuse, languages, cost estimation, reliability, education and many others. Software methods and techniques expanded such that no single engineer can handle all methods in his domain. Software itself was not the target but how software can serve diversity of application in business; manufacture process modeling, imaging systems design, automation and control, space and military systems. This session shall cover two topics of interest: software reliability and software cost estimation and how fuzzy logic can provide innovative solutions for these problems.

1. Software reliability is defined according to J. Muse in 1987 as, “the probability of failure free operation of a computer program in a specified environment for a specified period of time”. Failure process modeling represents a challenge because of the various natures of faults discovered and the methodologies to be used in order to isolate the faults. Unstable and unreliable software system can affect people life.

2. Developing cost-effective software systems became a challenge due to the \textit{increasing complexity of software systems}. To bid for software system contracts we must estimate the cost of a project. Accurate estimation of effort and time will have a great impact on budget computation and project success. Inaccurate estimates could lead to failure to make a profit, possibility for incomplete project, and delay of project delivery date.

This special session seeks submissions of papers which represent new trends in software reliability and cost/effort estimation using fuzzy logic or hybrid fuzzy logic methods. Papers should present original work that has not been published or considered for publication. Papers with real-world industrial applications are especially welcomed. The main topic of the special session includes fuzzy logic aided software reliability and cost estimation, theory and applications.
Short biography of the organizer(s) and contact information:

Alaa F. Sheta received his B.E., M.Sc. degrees in Electronics and Communication Engineering from the Faculty of Engineering, Cairo University in 1988 and 1994, respectively. He received his Ph.D. from the Computer Science Department, School of Information Technology and Engineering, George Mason University, Fairfax, VA, USA in 1997. He published over 100 papers and book chapters. He also published two books in the area of Landmine Detection and Classification and Image Reconstruction of a Manufacturing Process by LAP LAMBERT Academic Publishing. He is the co-editor of the book entitled,” Business Intelligence and Performance Management - Theory, Systems and Industrial Applications” by Springer Verlag, United Kingdom, published in March 2013. He received the Best Poster Award from the SGAI International Conference on Artificial Intelligence, Cambridge, UK on December 2011 for his publication on Quality Management of Manufacturing Processes. He was the Program Chair of the Science and Information Conference 2013 sponsored by the SAI Organization and Co-Sponsor by the IEEE Computational Intelligence Society, London, UK on October 2013. He has been an invited speaker in number of national and international conferences. He worked as a consultant for the Ministry of Communication and Information Technology, Egypt on the years 2002-2004. Prof. Sheta is a member of the IEEE Evolutionary Computations and ACM societies. He held number of management position during the years 2006-2009. He was the Vice Dean of Prince Abdullah Bin Ghazi Faculty of Science and Information Technology, Al-Balqa Applied University (BAU), Jordan (Fall 2008- Spring 2009) and the Dean Assistant for Planning and Development with BAU, Jordan (Fall 2006-Summer 2008). His scientific research interests include Evolutionary Computation, Software Reliability Modeling, Software Cost Estimation, Modeling and Simulation of Dynamical Nonlinear Systems, Image Processing, Biotechnology, Business Intelligence, Robotics, Swarm Intelligence, Automatic Control, Fuzzy Logic and Neural Networks.

Important Dates

- Paper submission
  **February 8, 2015**
- Notification of acceptance for papers
  **March 23, 2015**
- Camera-ready paper submission
  **April 21, 2015**
- Early registration deadline
  **April 23, 2015**
- Conference
  **August 2-5, 2015**
Submission of the papers

Please submit your papers for this special session to both the organizers and conference online submission system (http://fuzzieee2015.org/) by indicating the title of the special session.