

# Behzad M. Dogahe

Coral Gables, FL

<http://www.dogahe.com>

Residency Status: U.S. Resident (Green Card)

## Education

- Doctor of Philosophy, Electrical and Computer Engineering, December 2015  
University of Miami, Coral Gables, FL GPA: 3.87/4.0  
Dissertation: Quantization and Transmission in Multi-Hop Wireless Networks
- Master of Science, Electrical and Computer Engineering, December 2004  
Villanova University, Villanova, PA GPA: 3.97/4.0  
Thesis: Applications of Linear Time-Frequency Signal Representations to Watermarking and Over the Horizon Radar
- Bachelor of Science, Electrical Engineering, June 2002  
Sharif University of Technology, Tehran, Tehran GPA: 16/20  
Thesis: Simulation and Implementation of RSA Cryptography System on FPGA

## Experience

- Dogahe  
Coral Gables, FL  
May 2011 – Present  
iOS and Android App Designer and Developer
  - Designing and developing apps for iPhone/iPad platforms using Objective-C, Swift, Xcode, Cocoa framework, Java, Eclipse, and Android Studio. To find out about the published apps look up “dogahe” on the App Store. Alternatively, links to the following apps can be found at <http://www.dogahe.com>
    - Scientific++ released on October 7, 2011
    - Calculator!! released on February 26, 2012
    - Statistics Calculator++ released on August 8, 2012
    - Statistics Calculator+++ (iPad) released on November 21, 2012
    - Scientific Calculator++ (iPad) released on December 10, 2012
    - Financial Calculator++ released on April 30, 2013
    - Financial Calculator+++ (iPad) released on December 4, 2013
    - Construction Calculator++ released on May 13, 2014
    - Outdoor Run++ released on December 17, 2015
- Apollo Aviation Group  
Miami, FL  
March 2013 – Present  
Lead Software Architect and Developer
  - Leading and developing in a small IT group in charge of developing Apollo Aviation proprietary software projects.
  - These projects consist of Windows Form, Web Services, Windows Services, iPhone and Android applications for Financial Modeling, Technical, Legal and Accounting departments at Apollo. These projects aim at gathering data from different resources (spreadsheets, email content, user data entry, third-part applications, etc.) and creating a centralized repository and analysis system for different departments. Creating reports, forecasting models, email alerts, scheduling reminders, which are essential tasks of the business, are automated through these

- software modules. Day-to-day activities of Apollo personnel have been transitioned to be performed using one or several modules developed. These day-to-day activities include acquiring airplane or engines, performing technical checks, tracking the lease, marketing, or consignment status of assets, tracking performance of models for forecasting revenues, etc.
- The use of these modules has increased the productivity of Apollo personnel, has increased the accuracy of the business operations, and has reduced the number of errors and the need to hire more workforce despite the increased volume in the business.
- **Klique, Inc**  
Miami, FL  
April 2015 – August 2015
    - iOS/Android App Designer and Developer Consultant  
Developing iOS and Android version of Klique, a social networking start-up based in Miami using Xcode, Swift, Android Studio, Eclipse, Java, third-party APIs and RESTful Web services.
  - **Physicians Development Program**  
Miami, FL  
May 2012 – September 2013  
Web Software Designer and Developer
    - Designing and developing web software for an online 360 degree survey acquisition and analysis system using ASP .Net, VB .Net, JavaScript, AJAX, and Microsoft SQL Server.
    - Designing and implementing new features based on the business and customers' needs and debugging issues in the current system.
  - **University of Miami**  
Coral Gables, FL  
January 2005 – January 2010  
Graduate Research Assistant
    - Acquired knowledge of information theory, probability and stochastic processes, communication networks and protocols and cross-layer design, wireless and mobile protocols, speech classification and quantization, linear and nonlinear programming, optimization, digital control systems, microwave transistor amplifier design
    - Designed a 12GHz Low Noise Amplifier (LNA) using Agilent's ATF-36077 transistor
    - Simulated the performance of TCP Reno/Vegas using NS-2 (Network Simulator)
    - Taught MATLAB to the sophomores/juniors as part of the course Linear Circuits and Signals for two semesters
    - Designed a congestion control algorithm for wireless networks that incorporated the delay requirement of the sources
    - Designing a quantizer that is optimized for classification performance at the decoder
  - **Ultimate Software**  
Weston, FL  
January 2011 – May 2011  
Software Developer Intern
    - Learned fundamentals of web programming and attained skills in C#, SQL Server, ASP .NET, Unit testing and FitNesse test
    - Applied the learned skills in fast paced projects that involved writing utilities that improved the performance of the UltiPro software as well as projects that were to convert classic ASP pages to ASP .NET framework

- Industrial Assessment Center at the University of Miami  
Coral Gables, FL  
September 2010 – January 2011 & January 2012 – August 2012
  - Conducted surveys of small and medium-sized plants and performed engineering measurements as basis for assessment recommendations within a team
  - Performed analysis for specific recommendations that includes estimates of costs, performance, and payback times
  - Wrote detailed analysis, findings, and recommendations to be sent to the plant in a confidential report
  
- Microsoft Corporation  
Redmond, WA  
May 2008 - August 2008  
Program Manager Intern in Windows Logo Program Group
  - White-boxing logo test contents:
    - Analyzed the benefits and risks of making the test codes written for Windows Logo certification shared with the partners (OEM, ODM, IHV) and open for their feedback and comments
    - Collaborated with test developer owners, customer support and services, legal department, OEM's and other partners to compare views
    - Proposed a vehicle capable of white-box testing with features that can address issues like scaling the partners' feedback to many contributing partners, handling undocumented and internal API's and libraries properly
    - Presented the results and findings to the management
  
- Center for Advanced Communications at Villanova University  
Villanova, PA  
August 2002 - December 2004  
Graduate Research Assistant
  - Acquired knowledge of array signal processing, digital communications and coding, digital signal processing, programming DSP processors, adaptive filters, image processing algorithms, watermarking and data hiding
  - Simulated various beam forming and array processing techniques like MUSIC and ESPRIT
  - Designed and implemented an echo canceller and IIR filter using TI Code Composer Studio on TM320C54 DSP
  - Designed a new watermarking scheme using image segmentation and time-frequency analysis
  
- Electronic Research Center at Sharif University of Technology  
Tehran, Tehran  
September 2000 - May 2002  
Research Assistant
  - Acquired knowledge of logic circuit design (combinational/sequential Systems), hardware design using CAD tools, microprocessors and their assembly language
  - Optimized and implemented an RSA cryptography system on FPGA
  - Designed and implemented a DDS (Direct Digital Synthesis) signal generator capable of generating sine, square, and triangular waveform output using Altera FPGA and microcontroller in a group project
  - Implemented various digital halftoning methods
  - Designed and implemented a digital metronome using 89C51 microcontroller

- Developed an interactive software package for simulation of PCM coding system as a kit for educational purposes
- Designed a telephone touch-tone recognition system
- Micromodje Industries  
Tehran and Karaj Locations, Tehran  
June 2000 - April 2001  
Digital Circuit Designer
  - Attained hands-on experience with measurement instruments like logic analyzers, oscilloscopes, digital voltmeters, signal generator, spectrum analyzer
  - Took part in digital circuit design projects using VHDL and programmable logic design tools

### **Publications**

- B. M. Dogahe, and M. N. Murthi, “Quantization for Classification Accuracy in High-Rate Quantizers,” IEEE Digital Signal Processing Workshop, Sedona, AZ, January 2011
- B. M. Dogahe, M. N. Murthi, X. Fan, and K. Premaratne, “A Distributed Congestion and Power Control Algorithm to Achieve Bounded Average Queuing Delay in Wireless Networks,” Telecommunication Systems, Volume 44, Numbers 3-4, August 2010, Pages 307-320
- Y. Zhang, B. Mobasseri, B. M. Dogahe, and M. G. Amin, “Image-adaptive watermarking using 2-D chirps,” Signal, Image and Video Processing, Volume 4, Number 1, March 2010, Pages 105-121
- B. M. Dogahe, X. Fan, M. N. Murthi, and K. Premaratne, “Balancing Power and Rate to Achieve Bounded Average Delay in Wireless Networks,” IEEE Military Communications Conference (MILCOM), Orlando, FL, October 2007
- B. Mobasseri, Y. Zhang, M. G. Amin, and B. M. Dogahe, “Designing robust watermarks using polynomial phase exponentials,” IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Philadelphia, PA, March 2005
- Y. Zhang, B. M. Dogahe, M. G. Amin, and B. Mobasseri, “Digital watermarking using two-dimensional FM waveforms,” Advanced Signal Processing Algorithms, Architectures, and Implementations XIV, Denver, CO, August 2004
- Y. Zhang, M. G. Amin, B. M. Dogahe, and G. J. Frazer, “Time-frequency analysis for maneuvering target detection in over-the-horizon radars,” International Symposium on Signal Processing and its Applications (ISSPA), Paris, France, July 2003
- B. M. Dogahe, A. Alavi, and A. M. Pezeshk, “Simulation and Implementation of RSA Cryptography System (on FPGA),” The First Iranian Conference of Cryptography, Tehran, October 2001

### **Services and Recognitions**

- Granted Vitas Student Fellowship to attend Global Business Forum hosted by the School of Business at the University of Miami
- Selected Commitment of Actions by Clinton Global Initiative University 2010 (1000 Commitment of Actions were selected out of 4000 applicants)
- Granted Knight Student Fellowship to attend Global Business Forum hosted by the School of Business at the University of Miami
- Member of the Graduate Engineering Student Council at the University of Miami
- Granted Research Assistantship for graduate studies at the University of Miami
- Granted Research Assistantship for graduate studies at Villanova University
- Ranked 2<sup>nd</sup> and awarded Silver Medal in the National Physics Olympiad
- Ranked 20<sup>th</sup> among more than 300,000 participants in the Nationwide University Entrance Exam for Bachelor Degree

**Computer Skills & Languages**

- Programming Languages: C, C++, C#, Objective-C, Swift, Android, Java, SQL Server, ASP .NET, AJAX, Visual Basic, VB .Net, Java, Pascal, Delphi, Python, Tcl/Tk, Assembly
- Software Packages: MATLAB, Visual Studio, Xcode, Eclipse, Android Studio, SPICE, PROTEL, ORCAD, Microsoft Office, AUTOCAD
- VHDL/FPGA Tools: ModelSim, Leonardo Spectrum, MaxPlusII
- DSP Tools: Texas Instruments Code Composer Studio
- NS-2 (Network Simulator), LATEX
- Fluent in Farsi, Basic Spanish