

CURRICULUM VITAE

Feraydune (Fred) Kashefi, Ph.D., P.E. (Inactive)

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EDUCATION:

- M.S. (2007) in Bioengineering University of Texas at Arlington.
- Ph. D. (1999) in Physics and Electrical Engineering, from University of Texas at Dallas.
- M.S. (1990) in Physics from University of Texas at Dallas
- M.S. (1974) in Mathematics from University of Tehran
- B.Sc. (1972) in Mathematics from University of Tehran

EXPERTISE:

- Medical applications and imaging of near-infrared (NIR) techniques
- Nanotechnology and Nanobiotechnology
- Digital Signal Processing (DSP)
- Silicon processing
- Device physics
- IR spectroscopy
- Micro controller RF
- Optical study of biological tissue non-invasive
- Medical applications and imaging of near-infrared (NIR) techniques
- Knowledge of Civil Engineering methods and design
- Network management and security
- Mainframe, data center and database
- Project/program management
- Analysis, summarization and reporting of technical data
- Telecom system and network engineer
- Broadband network design and architecture

TEACHING EXPERIENCE:

Tabriz University, Biomedical Engineering Department, Associate Professor, 2010–2013

- Taught Electronic I, II, III, Communication Circuit, Control, Electromagnetic, Digital Signal Processing, Quantum Electronic, Measurement and Computer Modeling, Research Method, and Technical-writing courses, supervised undergraduate, graduate students.

Mashhad University, Assistant Professor, 2009–2012

- Built Biomedical Engineering undergraduate program to meet the demands and requirements of the global economy that influences health care technology, management and delivery.
- This development included new three emerging academic and research fields of:
Neural and Rehabilitation Engineering
- The focus was on building, neurochips, cognitive engineering, neural signal and image processing and modeling, and brain computer interface from hardware to experimentation.
- The new undergraduate program furthermore promote and expand close collaborations between medical centers and institutions.
- Taught Electrical Circuit I, II, Communication Circuit, Communication Technology, Control, Industrial Controllers and Technical-writing courses.
- Gave a series of talk and seminars on Telemedicine and Biotechnology.

University of Texas at Arlington, Research Associate and Adjunct Professor, 2003–2009

- Adjunct Professor for Mechanic Statics and Dynamics in department of Mechanic and Aerospace Engineering.
- Adjunct Professor for Physics in department of Physics.
- Adjunct Professor for Math courses in department of Mathematics.
- Built wireless sensor to monitor brain blood dynamics.
- Conducted several researches in NIR Imaging for biomedical engineering.
- Set up a laboratory for educating students in biotechnology and lab principles.
- Worked on Toll Pricing Model for Managed Lanes system for Texas DOT project.
- Set up a laboratory for studying electronic transition between quantum sub-bands in Silicon inversion and accumulation layers.
- Studies of optical and electronic properties and defects in MBE low-temperature grown GaAs (LT-GaAs) using IR spectroscopy, Photocurrent measurements and PL spectroscopy.

Richland College Richardson, Mountain view College Dallas, North Lake College Irving, and Tarrant County College, Fort Worth, TX, Part Time Teacher, 2001–2005

- Taught Introduction to Experimental Techniques, Digital System, Math, Physics, Fundamentals of Networking, (Network +), Basic router configuration, and Personal Computer Hrdware (A+ Certification) courses.

PROFESSIONAL EXPERIENCE:

Nortel Networks, *Senior Member of Scientific Staff*, Wireless e-Mobility, 1999 –2001

- Designed and engineered system and architecture wireless HLR authentication system.
- Supervised and led the development and implementation of the wireless satellite network system.
- Identified, developed and implemented standardized, industry recognized Project Management disciplines and supporting information and tools.
- Established and operated an Information Systems outsource vendor management system and participated in the re-negotiation of a multi-million dollar outsource agreement.

ALCATEL USA INC., Plano, Texas, Senior System Engineer, 1996–1999

- Led the team developing System Control Point (SCP) server initial product offering supplementary services including call forwarding, call hold, call waiting, call barring, etc. for the IN/IVR networking components.
- Coordinated multi-site service development interactions with the Advanced Intelligent Network (AIN) and SSP based Interactive Voice Response (IVR) development team, setup X.25 network for switching and SMS database server interfaces.
- Designed and established the technical infrastructure and security policies for call fraud detection and 800 call subscribers.
- Project leader for upgrade and release of several new switching products and Y2K compliance for the customers in Europe, Japan and Australia.

SABRE Decision Technologies, Dallas-Ft. Worth, Texas, Sr. Systems Analyst, 1992–1996

- Conducted software and operations research on reservation systems, quota management and forecasting models.
- Set up database, client server applications system and yield management products
- Managed government bids and proposals for \$5–20M programs

Arco Oil and Gas, Dallas, Texas, Sr. Systems Analyst, 1988–1992

- Set up multiplatform network and data communication system.
- Designed and implemented file and data transfer soft ware system.

University of Texas Southwest Medical School, Dallas, Texas, Systems Analyst, 1984–1988

- Set up isotope tracking system.
- Designed and implemented database and computer programs for academic applications.

AWARDS:

- Listing in Who's Who in Engineering Education, 2002 – present.
- Nortel Network President's Gold Award for outstanding level of innovation and technical excellence, 1999
- UT Southwestern Award for excellence in programming, 1985

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:

- IEEE – Institute of Electrical and Electronics Engineers
- SPIE – The International Society for Optical Engineering
- PTCB – Pharmacy Technician Certification Board
- AAPM– American Association of Physicists in Medicine

SELECTED PUBLICATIONS AND REPORTS TO CONFERENCES:

- C. Rostamzadeh, F. Canavero, F. Kashefi, M. Darbandi, "Automotive AM-Band Radiated Emission Mitigation Techniques, a Practical Approach", 2012 IEEE EMC International Symposium on Electromagnetic Compatibility, Pittsburgh, Pennsylvania (USA), August 5-10, 2012
- J. Beiza, M. Salaynaderi, N. Taghizadegan, A. Dadjouyan, F. Kashefi, "Power System Modeling for Instantaneous Voltage State Estimation", (I.RE.MO.S.), Vol. 4, N. 4, August 2011
- C. Rostamzadeh, F. Grassi, F. Kashefi, "Modeling SMT Ferrite Beads for SPICE Simulation", 2011 IEEE Symposium on Electromagnetic Compatibility, Long Beach, California (USA), August 15, 2011
- R.Aminzadeh, F.Kashefi, "Energy-efficient cooperative communication in clustered wireless sensor networks", 13th International conference on Information Fusion 2010, Edinburgh
- R.Aminzadeh, F.Kashefi, "Hydraulic Pressure Distribution for Pipeline Networks By Wireless Sensors Network", IEEE Sensors 2010, Hawaii, USA.
- C. Rostamzadeh, F.G. Canavero, F. Kashefi, Noise Mitigation Analysis of a Pi-Filter for an Automotive Control Module, 2010 IEEE Symposium on Electromagnetic Compatibility, Fort Lauderdale, Florida (USA), July 25-30, 2010
- Participated in, "THE 2008 NSF-CBMS CONFERENCE ON INVERSE SCATTERING FOR RADAR IMAGING", May 27-May 31, 2008, Arlington, Texas, USA.
- Administrator of review system, "Vehicle Power and Propulsion Conference (VPPC)", IEEE, September 9-12, 2007, Arlington, Texas, USA.

- Feraydune Kashefi, Donald E. Watenpaugh, Hanli Liu, “Obstructive sleep apnea screening by NIRS imaging”, SPIE, March 23, 2007, Vol. 6424
- Geometry of Post’s correspondence problem, co-author M. Ghandehari, Proceedings of Golf Southwest ASEE conference at University of Texas Pan American 2007
- F. Kashefi, “Partial Differential Equation of a Three Dimensional Convex Body”, 29th Annual Texas Partial Differential Equations Conference, March 25-26, 2006.
- Oral presentation in annual meeting of ACES, University of Texas at Arlington, March 2006.
- F. Kashefi, M. Ghandehari, An application of parallel-axis theorem to geometric inequalities. Joint Mathematics Meetings, San Antonio, Texas, 2006. Meeting #1014
- F. Kashefi, M. Ghandehari, Parallel Systems are More Reliable, INFORMS, San Francisco, California, 2005.
- F. Kashefi, Geometric problems in engineering mechanics, Technical Report #352, Department of Mathematics , University of Texas at Arlington, November 2005, co-author M. Ghandehari.
- F. Kashefi, "Rapidly Training Device for Fiber Optic Neural Network", UTD Electrical Engineering Department, 1998.