Melvin D. Robinson

Curriculum Vitæ

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Education

Doctor of Philosophy, *University of Texas at Arlington*, Arlington, Texas.
PhD in Electrical Engineering

Master of Science, *University of Texas at Arlington*, Arlington, Texas.
MS in Electrical Engineering

Bachelor of Science, *University of Houston-Downtown*, Houston, Texas.
BS in Applied Mathematics

Doctoral thesis

Title *Multistep Second Order Training of the Multilayer Perceptron*

Advisor Michael T. Manry, University of Texas, Arlington

Description Developed second order algorithms for faster training and improved computational burden of multilayer perceptrons.

Professional Experience

2014–Present **Assistant Professor**, *University of Texas at Tyler*, Houston, Texas.

2006–2013 **Test Management Specialist**, *Noble Drilling Services*, Sugar Land, Texas.
Served as a key resource for the operational excellence of the fleet

- Led project to inventory software for rig equipment
- Led investigations to identify possible software failures on rig equipment
- Led software testing effort for rig equipment factory acceptance tests
- Designed and managed the Software Change Management process for rig software
- Managed the entire software development lifecycle for rig software
- Managed procurement and licensing for nonstandard software purchases
- Managed portable electronic equipment procurement for rigs
- Managed vendor relationships for rig software service
- Managed installation, configuration, support and upgrade of non-standard engineering software on corporate computers.

2003–2006 **IT Security Analyst**, *Waste Management*, Houston, Texas.
Managed IT security architecture and infrastructure and worked to achieve key elements of corporate compliance

- Worked with internal and external audit teams and the business to ensure SOX compliance.
- Conducted investigations when warranted for violations of IT security policy.
- Worked as an active member of the Computer Incident Response Team.
- Ensured software license compliance.
- Conducted regular vulnerability scans to assess susceptibility to attacks and exploits.
- Worked with data from various sources and refined to produce reports to give management a good overview of the enterprise security posture.
- Assessed daily security threats such as latest viruses and spyware.

2000–2003 **IT Security Analyst**, *Duke Energy Trading and Marketing*, Houston, Texas.
Maintained all security infrastructure devices.
- Administered Checkpoint Firewall-1 and Raptor Firewall.
- Administered ISS RealSecure.
- Administered security awareness training.
- Provided technical guidance on internal network and systems design, deployment and support.
- Acted as a consultant to other IT groups for architecture pertaining to business sponsored projects.
- Acted as path of escalation for company communication problems.
- Employed SSL and LDAP technologies for portal projects.

1999–2000 **IT Security Analyst**, *Lyondell*, Houston, Texas.
Maintained and upgraded of all security infrastructure components within the enterprise.
- Installed and maintained Checkpoint and PIX firewalls.
- Administered and maintained Microsoft Proxy Server.
- Acted as an escalation path for the IT Security Administration group.
- Evaluated and deployed network intrusion detection products.
- Increased data security awareness and performed regular security audits.

1997–1999 **Network Analyst**, *Koch Industries*, Houston, Texas.
Setup and maintainance of infrastructure
- Administered a Windows NT 4.0 network including Exchange Server 5.5 and SQL Server 6.5.
- Implemented and designed network infrastructure and architecture including routers, switches and hubs and Raptor Firewall.
- Evaluated new technologies geared toward feasibility and security.

Skills

Operating Systems	Linux, Windows, Mac OS X, Solaris
Databases	Oracle, Microsoft SQL Server
Programming languages	C/C++, FORTRAN, MATLAB/Octave, Python, LaTeX, SVN and various flavors of assembly language, OPENMP, MPI
Numerical Computing	BLAS, ATLAS, MKL, LAPACK, BOOST, PetSC, numerical analysis, numerical optimization
Signal Processing	digital and analog signal processing, statistical signal processing, estimation theory, neural networks and pattern recognition, image processing, two-dimensional signal processing
Engineering	instrumentation and measurement, induction, synchronous and DC motors; worked with the most common types of laboratory equipment such as oscilloscopes, frequency counters, power supplies and function generators; acquired excellent design and troubleshooting skills.
Electronics	PIC microcontrollers, TI DSPs, 8051 based microcontrollers, glue logic; fixed and floating point processors, analysis and design using all electronic components; comfortable reading schematic diagrams; comfortable in designing and analysis of analog circuitry.

Publications

[1] M. D. Robinson and M.T. Manry. Two-stage second order training in feedforward neural networks. In *Proceedings of the TwentySixth International Conference of the Florida Artificial Intelligence Research Society*, 2013.

[2] M.D. Robinson and M.T. Manry. Introduction of partial affine invariance to neural network training. *In Progress*, 2013.

[3] M.D. Robinson and M.T. Manry. Newton training in feedforward neural networks. *In Progress*, 2013.

[4] M.D. Robinson and M.T. Manry. Partially Affine Invariant Training Using Dense Transform Matrices. In *International Joint Conference on Neural Networks*, 2013.

[5] M.D. Robinson and M.T. Manry. Properties of a batch training algorithm for feedforward neural networks. *Submitted to Neural Processing Letters*, 2013.