

## Professional Profile

**Senior Level Executive with extensive experience in leadership at Consulting/Fortune 500 firms, tier 1 Universities and Startups.**

- Large P&L responsibility; successful delivery of large-scale transactions and programs in technology/organizational change.
- Solid global experience with significant network throughout the Americas and Europe; fluent in the Spanish language.
- Commercial development in leading edge technologies (Blockchain, Cloud, Mobile, Internet of Things, Cyber Security).
- Lead strategic startups from angel level funding to exit as CTO, CFO or Member of Board of Directors.

## Recent Experience and Initiatives

**TruDecision, November 2018 – Present:** CFO and CTO. TDI delivers **Machine Learning and Analytics** to Financial Institutions. Portfolio of products includes Credit Analysis, CECL compliance and highly scalable transaction processing in cloud environments. Engineered the financial and technical aspects of the startup towards a first-round exit projected in 2026.

**Southern Methodist University, March 2017 – December 2019:** Full-time faculty at the Lyle School of Engineering/Darwin Deason Cyber Security Institute. Teach Cloud Computing (Course 7346 at MS/PhD level) and research in Cyber Security. Obtain, manage and deliver cyber security research programs for private and public sponsors. Constructed various **Cloud** environments and used **his own proprietary/published** instruction material to supplement the Cloud Computing course including creation of 3 cloud architectures.

**Integra/Vericlave Technologies, Inc., Feb 2016 – Jan 2017:** Interim President of the startup. ETI/Vericlave focuses on delivering cyber security for Internet of Things (IoT) through **hiding of attack surfaces** in proprietary technology and highly secure/ruggedized tablet computers to the military. Collaborated with major players at three-letter agencies and major process control manufacturers.

**University of Mary Hardin-Baylor, Aug 2015 – Dec 2017:** Full-time faculty in the School of Business. Taught Applied Programming (with mobile & compiler optimizations), Project Management, ERP Systems, System Analysis & Design (with SPECjbb2015 performance analysis), System Development & Implementation, Cloud Computing (Hadoop and MS Hyper-V). Developed curriculum for Cloud/SPEC research, **supervised five Research Assistants**, published 3 conference papers, worked with major institution donors in Cyber Security.

**Medellin Applied Research Concepts, Jan 2014 – Present:** Consult with clients in **advanced topics and special projects**. Client list has included assistance to CIO in F500 firm, venture capital investors in technology e-markets, cyber security firms, higher education and high end retail cloud/point of sale environments. **Blockchain** research, articles, peer reviewed Journal papers and 2 patent applications.

### **IBM Corporation, September 2002-Jan 2014.**

**Strategic Services Executive Latin America (2012-2014).** Development and delivery on very large outsourcing projects using business drivers and marketing strategy. Exceeded targets by obtaining **contract TCV over \$1.7BUSD in 2 years**. Delivered multi-cultural and multi-location teams to clients in support of sales efforts; managed transition to delivery teams, ensured Client satisfaction throughout engagement. Developed multiple C-level and Secretary post relationships in the region.

**Delivery Executive (2010-2011).** Very large-scale application system (25 Million Lines of Code). Project considered the most complex at that time in IBM development services. Scope included planning and design for Cyber Security, Privacy and Compliance with specific testing for US and Latin American Financial regulatory agencies. Served as lead Executive and Technical QA Executive. Supervised **568 IBM staff and over 180 Client staff**. Billed over \$90 Million USD in 2 years.

**Services Executive for Mexico & Central America (2008-2009).** Delivered **SEI CMMi Level 5 privacy** certification for near-shore software factory (Guadalajara, Mexico DF and Monterrey). Responsible for P&L results of multi program practice with 1,000+ employees and 2,500+ sub-contractors. Successful results for 7 operational and compliance audits of various aspects of the practice. Implemented major customer focus culture with radical turnaround in client satisfaction surveys). Solved major Human Resources issues and delivered on targets for the practice (**exceeded 100% growth in 3 years to \$250M in billings**).

**Global Leader of Services Oriented Architectures Center of Excellence (2007).** Drove creation of intellectual capital and competencies for technical quality in implementation of **SOA design patterns including Cyber Security**. Developed Global SOA capabilities in major data centers around the world. Led strategic sales efforts in automotive (Toyota) and financial services (BoFA).

**Executive Partner (2002-2006).** Managed portfolio of projects in custom development and ERP implementations at Global Fortune 500 Clients. Project portfolio ranged from 7 to 15 concurrent projects with an approximate average staffing of 200. Multiple P&L management & leadership of two practices areas: Travel & Transportation and Retail ERP. Exceeded targets in **all years**. Promoted to Executive **Band C (top 25% of executive rank at IBM)** in July 2003.

### **Education, Certification and Affiliations**

Bachelor of Business Administration (BBA)	Computer Systems Management & Accounting	St. Mary's University
Master of Business Administration (MBA)	Computer Systems Management	St. Mary's University
Doctor of Philosophy (PhD)	Computer Science / Software Engineering	Southern Methodist University
Certified Public Accountant (CPA)	License Number 044224	Texas State Board of Accountancy
IBM Hispanic Engineers Association	IEEE co-editor Journal of Computers in Society	PwC Client Service Award
Association for Computing Machinery	Golden Key Engineering Association	NESA (Eagle Scout) Lifetime Member

### **Employment History**

<u>TruDecision, Inc.:</u> CTO and CFO	2018 – Present
<u>Medellin Applied Research Concepts, LLC:</u> CTO and CEO	2014 – Present
<u>Southern Methodist University:</u> Research Associate Professor – School of Engineering	2017 – 2019
<u>Entegra/Vericlave Technologies, Inc.:</u> President	2016 - 2017
<u>University of Mary Hardin-Baylor:</u> Associate Professor – School of Business	2015 - 2017
<u>IBM Corporation</u>	
Director Strategic Services IBM Mexico, Caribbean & Central America	2012 – 2014
GBS Executive	2003 – 2011
<u>PricewaterhouseCoopers LLP:</u> Manager, Senior Manager, Partner	1989 – 2002
<u>Bank of America/San Antonio Savings</u> Vice President	1985 – 1988

### **Technical Skills**

Methodologies: ATAM, OOAD/UML, Agile, ASAP, COCOMO II  
Mobile: iOS 7 & 8, Objective-C, Apple Xcode IDE, SWIFT, Android Mobile Studio  
Web/Hyper-V: HTML, PHP, XML, ASP, WordPress, OpenStack, Microsoft Hyper-V, ESXi 5.0 (VMWare), KVD  
IoT/ICS: Modbus, Foundation Fieldbus, Formal Circuit Verification (CUDD, SAT)  
Cloud: OpenStack, MS Hyper-V (2012/2016), Citrix Xen, SPECvirt2013, VMWare, Virtual Box, Docker, AWS  
Data: Oracle RDBMS, MySQL, Hadoop 2.0, MongoDB, DB2, R, MQ, AWS Cloud Architecture (extensive)  
Languages: COBOL, Java, C, POSIX, GO, C#, Assembly (MIPS, INTEL & MACRO), ABAP (SAP), SQL, Z(ed)  
Computer Aided Design (CAD): MARS, Simvision, Verilog HDL  
WebServer/IDE: IBM Websphere, LAMP, Rational, Eclipse, Apple Toolbox  
Cryptography/Network Protection: Diffie-Hellman, RSA and Blue-ridge, SHA 512, Signature Distribution  
ERP: SAP R/3 (through ECC 6.0), Oracle NetSuite  
Operating Systems: Linux, Z-OS (MVS), MS Windows Server 2012/2018, iOS, Android, RTOS  
Blockchain: IBM Fabric, AWS

### **Intellectual Contributions**

#### **Dissertation**

[1] "Applying Specialized Heuristics to Software Configuration Audits" Lyle School of Engineering, Southern Methodist University (S. Szygenda PhD, P.E.; CE Green Endowed Chair in Engineering; Advisor). URL: [https://books.google.com/books/about/Applying\\_Specialized\\_Heuristics\\_to\\_Softw.html?id=qmKxswEACAAJ&hl=en&output=html\\_text](https://books.google.com/books/about/Applying_Specialized_Heuristics_to_Softw.html?id=qmKxswEACAAJ&hl=en&output=html_text)

#### **Patents**

[10] Patent of Letters (Application granted in US; 2018): "Device for Implementing Ubiquitous Connectivity and Protection Software for IoT Devices" scalable, field-upgradable device for cyber security protection of ICS/SCADA devices.

[11] Patent of Letters (Application granted in US, EU, Singapore and Taiwan; 2005): "System and Method for Airline Variable Capacity Management", 2005; received prize from IBM CEO (Sam Palmisano) for this invention.  
URL: <https://patents.google.com/patent/US20050216317A1/en>

[17] Patent of Letters (Application granted in US: 2021& 2022): "DEVICE FOR IMPLEMENTING GATED ARRAY BLOCKCHAIN PROTECTION CODES FOR IOT DEVICES". Defines placement of blockchain on computer chips.

#### **Conferences/Journals**

[2] Medellin, John M. "A Model for Estimating SCM Audit Effort with Key Characteristic Sensitivity Analysis" IEEE SSCI 2014, Orlando, p. 153. URL: <https://ieeexplore.ieee.org/abstract/document/7011741/>

[3] Medellin, John M. "Determining the Cost Impact of SCM System Errors" IEEE SSCI 2014 Orlando, p. 199.  
URL: <https://ieeexplore.ieee.org/document/7007173/>

- [ 4 ] Medellin, John M.; Barack, Osama; Zhang, Qiao; Huang, LiGuo "Enabling Migration Decisions through Policy Services in SOA Mobile Cloud Computing Systems" 2015 International Conference on Grid & Cloud Computing and Applications "GCA '15", Las Vegas, p. 23. URL: <https://search.proquest.com/openview/70ffb9b17717f32d374c36407f4900e5/1?pq-origsite=gscholar&cbl=1976351>
- [ 5 ] Medellin, John M.; Fischer, Kirk; King, James "Driving Strategic Advantage into Information Systems Programs at a Small Texas University" "FECS '16" Frontiers in Education: Computer Science & Computer Engineering 2016; Las Vegas, p. 167. URL: [http://www.worldcomp-proceedings.com/proc/proc2016/FECS16\\_Final\\_Edition/FECS16\\_Contents.pdf](http://www.worldcomp-proceedings.com/proc/proc2016/FECS16_Final_Edition/FECS16_Contents.pdf)
- [ 6 ] Medellin, John M.; Lee, Frank C.; Budhi, Lokesh; Gennepally, Spandanna "Measuring SPECjbb2015 Virtualization Overhead & Application Workloads in a Microsoft Hyper-V Cloud" "GCC'17" International Conference on Grid, Cloud & Cluster; Las Vegas, p. 3. URL: <https://csce.ucmss.com/cr/books/2017/LFS/CSREA2017/GCC3070.pdf>
- [ 7 ] Medellin, John M.; Budhi, Lokesh "Simulating Virtual Memory Allocations using SPEC Tools in Microsoft Hyper-V Clouds" "MSV '17" International Conference on Modeling, Simulation & Visualization Methods; Las Vegas, p. 7. URL: <https://csce.ucmss.com/cr/books/2017/LFS/CSREA2017/MSV3460.pdf>
- [ 8 ] Medellin, John M.; Thornton, Mitchell A. "Simulating Resource Consumption in Three Blockchain Consensus Algorithms" "MSV '18" International Conference on Modeling, Simulation & Visualization Methods; Las Vegas, p. 21. URL: <https://csce.ucmss.com/cr/books/2018/LFS/CSREA2018/MSV3113.pdf>
- [ 9 ] Medellin, John M.; Thornton, Mitchell A. "Performance Characteristics of Two Blockchain Consensus Algorithms in a VMWare Hypervisor" 2018 International Conference on Grid & Cloud Computing and Applications "GCA '18", Las Vegas, p. 10. URL: <https://csce.ucmss.com/cr/books/2018/LFS/CSREA2018/GCC3446.pdf>
- [12] Parry, Daniel A.; Medellin, John M. "Data Augmentation for CECL Compliance in Automobile Finance" "MSV '19" International Conference on Modeling, Simulation & Visualization Methods; Las Vegas. URL: <https://csce.ucmss.com/cr/books/2019/LFS/CSREA2019/MSV4003.pdf>
- [13] Medellin, John M.; Thornton, Mitchell A. "A Discussion on Blockchain Software Quality Attribute Design and Tradeoffs" IEEE International Conference on Emerging Technologies in Computing 2019 "ICETiC '19", London Metropolitan University. URL: [https://www.researchgate.net/publication/334782698\\_A\\_Discussion\\_on\\_Blockchain\\_Software\\_Quality\\_Attribute\\_Design\\_and\\_Tradeoffs](https://www.researchgate.net/publication/334782698_A_Discussion_on_Blockchain_Software_Quality_Attribute_Design_and_Tradeoffs)
- [14] Medellin, John M.; Thornton, Mitchell A. "Consideration of Quality Attribute Tradeoffs of the Blockchain Pattern in the Software Development Process" IEEE Annals of Emerging Technologies in Computing (AETiC) Vol 3, No 4, 2019. URL: <http://aetic.theiaer.org/archive/v3/v3n4/p2.html>
- [15] Medellin, John M. "Generation, Regeneration and Validation of Binary Secret Keys through Blockchain in IoT Devices" 17<sup>th</sup> Int. Conf. on Information Technology & Computer Science, University of Athens, Greece. <https://www.atiner.gr/2021educom-pro>
- [16] Medellin, John M. "Generation, Regeneration and Validation of Binary Secret Keys through Blockchain in IoT Devices" Athens Journal of Sciences Vol. 9, No.1, 2022. <https://www.athensjournals.gr/sciences/2022-9-1-2-Medellin.pdf>

Theme/Article	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Adaptive Partitioning	✓	✓	✓							✓		✓					
AWS/Apple Cloud				✓											✓	✓	
Blockchain								✓	✓				✓	✓	✓	✓	✓
Cloud Performance				✓		✓			✓					✓	✓	✓	✓
Data Analytics	✓	✓										✓					
Encryption								✓		✓			✓	✓	✓	✓	✓
IoT Security				✓				✓	✓	✓			✓	✓	✓	✓	✓
Errors in Software	✓	✓	✓										✓	✓			
Mobile Computing				✓	✓					✓	✓				✓	✓	✓
MS: Hyper-V					✓	✓	✓										
Process Models	✓		✓		✓		✓				✓	✓	✓	✓	✓		
SPEC Modeling					✓	✓	✓										
Virtualization				✓	✓	✓	✓		✓		✓			✓	✓	✓	✓
VMWare									✓					✓			

#### Recent Academic Leadership and Awards

2014 IEEE SSCI 2014, Orlando, Best Paper Award.  
 2015 International Conference on Grid & Cloud Computing and Applications "GCA '15": Session Chair, Cloud & Mobile Computing.  
 2016 Frontiers in Education: Computer Science & Computer Engineering "FECS '16": Session Chair, Novel Instruction Methods.  
 2017 International Conference on Grid, Cloud & Cluster Computing "GCC '17": Session Chair, Cloud Computing.  
 2017 International Conference on Modeling, Simulation & Visualization Methods "MSV '17": Session Chair, Innovative Methods.  
 2018 International Conference on Grid & Cloud Computing and Applications "GCA '18": Session Chair, Cloud Computing.  
 2018 International Conference on Modeling, Simulation & Visualization Methods "MSV '18": Session Chair, Innovative Methods.  
 2019 IEEE International Conference on Emerging Technologies in Computing 2019, London, Best Paper Award.  
 2019 Institutional Audit Committee External Member, The University of Texas at Austin, term expires August 2025.

### Organizations Served

These are some of the major organizations Dr. Medellin has had the privilege of serving and collaborating with during his career (note: dashes around the logo are meant to denote close collaboration/involvement, years are the ones where first engaged).

