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INJURY AND CRASH ANALYSIS, LLC

ORLANDO SELLERS Jr., Ph.D.

COST REDUCTION, DESIGN ENGINEERING & MANUFACTURING

Process Optimization/Resource Management/Product Realization/Purchasing

Cross-functional expertise in operational cost reduction, strategic planning, development and operations of new products through concept development, applications engineering, design, research & development engineering, patenting, marketing and other essential functions leading to production, sales and distribution.

CORE COMPETENCIES:

Six Sigma Black Belt Techniques
Project Planning & Management
Product Cost & Production Scheduling
Materials Planning & Management
Production & Assembly Operations

Applications Engineering
Product Design & Mechanical Engineering
Reliability & Performance Analysis
Automated Design Technologies
Concurrent & Design Engineering

PROFESSIONAL EXPERIENCE:

Staff Engineer
United Airlines Inc.

2000-Present

As a Components Engineering Project Manager provided analysis of systems and procedures to support critical financial, operational and strategic planning decisions on the North American Seat Project. Reduced critical interior shop manufacturing process costs by \$750,000 utilizing Six Sigma Black Belt techniques, operations research and systems analysis. Collaborated with corporate marketing programs to identify and develop best practices. Provided technical expertise and guidance to others in the collection and analysis of key process metrics focused on improvement.

As a Liaison Engineer resolved issues for 9-12 aircraft per day at the Indianapolis Maintenance Center. Engineering contact for all aircraft on special route maintenance visits. Directed 20-30 personnel daily working on the repair of aircraft systems and structures. Improved production efficiency by generating robust repair instructions that decreased aircraft cycle times & labor costs. Arbitrated issues between Boeing Inc., Airbus Inc., UAL Fleet Engineering, UAL Operations, and vendors.

Assistant to the Dean (College of Engineering)
University of Illinois

1998-1999

Managed 58 organizations represented in the College of Engineering and inducted 5 new organizations. Supervised 1500 students and \$210K in student accounts. Presided as Faculty Advisor to the Engineering Student Council. Coordinated and scheduled student activities, approved purchases, met with corporate liaisons and managed the College of Engineering \$65K budget for external activities. Organized and monitored corporate fundraisers and negotiated \$50K in corporate sponsorships. Financial administration included general ledger accounts balancing, budget and expense management and procurement.

R&D Engineering Consultant
Johnson & Johnson Inc.

5/97-8/98

Assisted VP of Marketing with market research focus group to select product features. Coached and mentored employees. Implemented strategic initiatives to ensure consistency of organizational goals and objectives. Consulted for 5 R&D product design teams in various stages of product development. Analyzed project objectives, conceived methodologies to develop/optimize products. Invented 28 conceptual designs, evaluated technologies, established efficacy of existing products; created 7 unique tools reducing manufacturing costs 15% below expectations. Developed/wrote FDA clinical trial protocol. Guided a clinical research associate by planning a systematized approach to generate an FDA clinical protocol.

Investigated potential suppliers to ensure short-term supply JIT purchasing, improve cost competitiveness and evaluate their long-term commitment as contributors of product innovation competitiveness. Analyzed competitors' products for Failure Mode Effect Analysis; resulted in developing 8 benchtop experiments, documented in FACT books that optimized existing laparoscopic device by increasing its efficiency 20% and reducing manufacturing cost 15%; invented 12 laparoscopic instrumentation designs that are pending patent review. Conducted extensive patent review and developed a competitor patent product matrix scheme to find new niches for robust laparoscopic instrument concepts by evaluating patent matrix claims vs. product concept features.

Corporate Program Manager & Design Course Teaching Assistant
University of Illinois

1992-1997

Developed new products and basic research for commercial partners. Negotiated \$143,560 in contacts as a co-principle investigator. Directed preliminary market studies for all new product ventures. Patent searched for related competitor products that enabled the optimization to occur concurrently without patent infringement.

Led 16 corporate consulting projects of varying types: Strategic market evaluation and planning, Production Cost Reduction, SQC, Statistical Process Control, TQM, DFM&A, Product Logistics, and mechanical design. Managed 53 people by presiding as team leader over each project (budget for each ranged between \$5K and \$115K. Taught senior mechanical and industrial engineering students new product development techniques, product optimization, manufacturing process planning and optimization, QFD, DOE, DFM&A, Designing to Cost, and ProEngineer & Product Realization. Placed on list for "University of Illinois Teachers Ranked Excellent." Three of my project teams received the coveted Thiokol Award for project excellence. Performed many of the functions listed in the above positions.

Strategic Innovation Product Design Engineer
Pfizer Incorporated

5/94-8/94

Invented and designed 8 medical devices that resulted in a patent pending submission to the US Patent Office. Conducted patent searches on the new concepts. Developed new product business development plans with a projected return on investment and 30% market penetration. Plans were presented to Pfizer's president and senior executives and submitted to several subsidiaries for manufacturing. Determined viability and profitability conformance to corporate market size standard of each being greater than \$100,000,000.

Research Engineer
NASA Langley/NCATSU

1987-1991

Devised an assembly design and coordinated the acquisition of a microwave system to link NASA Langley with Dryden Space Flight Center. This was done with a \$1,000,000 procurement budget and required interfacing with industrial contacts and government agencies. Conceptually designed a Curved Truss Mobile Transporter to be used on the Mars Mission Aerobrake as a repair and utility vehicle. Utilized CAD to develop the design for the telerobotic assembly of the International Space Station's Solar Dynamic Power Module. It encompassed formulating an optimized workspace method and design for assembly. Fabricated and tested composite materials for structural application under various loading conditions with an MTS 445 Controller.

EDUCATION:

Ph.D.	Mechanical Engineering, University of Illinois Urbana-Champaign	1997
M.S.M.E.	Mechanical Engineering, University of Illinois Urbana-Champaign	1994
B.S.M.E.	Mechanical Engineering, North Carolina A&T State University	1992
Medical School Experience - 3 years MD/Ph.D. Medical Scholars Program, Univ. of Illinois/IUPUI		

French – 5 years of instruction

Japanese – Spanish – German- 1 year of instruction

Traveled and/or resided in: Germany, Japan, France, Italy, Switzerland, Cayman Islands

Scholarships & Fellowships

Namaskar Fellowship - #1 graduating senior in engineering for scholarship, leadership, & service
NSF SURGE Fellowship 1992 – 1998, ALCOA Scholarship 1992, Boeing Design Scholarship 1990,
NASA Langley Aerospace Scholar 1990, Exxon Scholarship 1991, General Motors Design Scholarship
1991

Publications

Sellers Jr. Orlando. Environmental Quality of Electric and Internal Combustion Vehicles.
Masters Thesis University of Illinois at Urbana-Champaign, May 1994

Sellers Jr. Orlando and Mike Philpott. "Experimental Study of Electrosurgical Tissue Necrosis."
Surgical Applications of Energy Sources Conference. May 17-19 1996. Estes Park, CO

Sellers Jr. Orlando and Mike Philpott. "Electrosurgical Necrosis of Tissue." *Medical Scholars Program Allerton Conference*. August 25-26 1996. Estes Park, CO

Sellers Jr. Orlando. A Study of Electrosurgical Necrosis of Leiomyomas and Porcine Liver & Development of a Laparoscopic Tissue Necrosis Device. Ph.D. Dissertation. University of Illinois at Urbana-Champaign, April 1997

Patents

Laparoscopic Electromechanical Device (pending) – details are proprietary

12 other Electromechanical Devices (in reviewal) – details are proprietary