

Enrico Nino Manes

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Current Level of Security Clearance: SECRET

Summary

Over 25 years of demonstrated innovation, leadership, business development, and delivery no matter the challenge. Trusted by Fortune 500 companies to lead CEO-level secret, sensitive, and strategic programs while delighting the customer on execution and impact. Successful in teaming with businesses, government entities, and universities to develop and secure funding for innovative ideas while growing and protecting intellectual property. Demonstrated ability to lead complex international programs with large teams comprised of a diversity of skill sets. Uniquely selected on numerous occasions to lead strategic, sensitive, and urgent programs by senior leadership from Optics1, L3Harris, United Technologies/Raytheon Technologies, Otis Elevator, Sikorsky, UTC Fire & Security, Stanley Tools, and on behalf of multiple businesses including vendors and suppliers.

Skills

Strong Innovator with ability to develop clear and compelling strategic vision while building collaborative relationships with startups, National Labs, large corporations, universities, and funding sources. Very strong analytical and problem solving skills with an ability to report out and distill key messages for senior leadership. Unique ability to identify root cause, rectify, and create support to sustain improvements. Strong Program Management skills including Earned Value Management System and Resource Management Planning. Unique ability to rapidly develop technologies, demonstrate feasibility, and deploy prototype solutions from TRL2-6 that meet product requirements with international teams comprised of junior staff, SMEs, and Fellows. Strong communication skills, relationship building, and networks within Collins Aerospace and Pratt & Whitney. High energy with a commitment to completion of tasks and an ability to work in high pressure environments. Technical expertise in manufacturing, design for manufacturing, physics-based system modeling, and mechatronics.

Education

Doctorate of Philosophy, Mechanical Engineering - Purdue University
Applied Management Principles – Executive Management mini-MBA Program – Purdue University
Master of Science in Mechanical Engineering – Purdue University
Bachelor of Science in Mechanical Engineering – University of Massachusetts, Amherst

Career Highlights

- Solved critical M10 Booker problems as well as CTAM Designator problems. Quickly went from limited experience to recognized system expert and returned both programs to production from being stalled.
- Solved critical problems on the L3Harris ENVG-B Night Vision Goggle manufacturing line that led to \$2M of realized annual savings through improved quality, quantity, and pricing. Created roadmap for additional \$500k of annual savings. Awarded and received 2022 Best Quality Improvement Program and nominated for corporate award as well as nominated for 2023 Best Leadership Award. Led Strategic Engagement for USMC \$365M SBNVG Program.
- Created compelling technology package for UTRC and Collins Aerospace to become industry leaders in thermoplastic forming of carbon fiber filled materials through inductive heating of carbon fiber leading to a DOE AMO low-TRL \$3M funding capture with Oak Ridge National Labs.
- Selected to lead the technical development, communications, and IP generation for Otis elevator with a 45 person global engineering team creating an industry-first ropeless elevator system with all subsystems (EM motor, comms, safety, HMI, passenger interface, value proposition, ride quality, controls, traffic flow, and certification path)
- Selected to lead the technical development, communications, and IP generation for Otis elevator with a global engineering team to develop an industry-first wireless power transfer and wireless safety critical

- communication for elevators with a key multi-national corporate partner as part of a global strategy as a Research Center employee culminating with offer to become Otis Global Technology Manager.
- Developed industry-first IoT and cloud-connected robotic wheel chair-to-elevator dispatching system
 - Selected to lead technical investigation of a business unit RRCA that affected the business by \$75M
 - Designing and deploying advanced automation that doubled production throughput at Stanley Tools
 - Developed strategic technical agendas with business unit leadership for roadmap developments including SMART mobility of autonomous systems and multimodal transportation
 - Developed concept of smart landing gear and runway friction mapping for Collins Wheels and Brakes
 - Developed complex kinematic models of active rotor and trailing edge mechanisms that accurately predicted loads and performance of novel concepts
 - Shaped external proposals that resulted in multi-\$M ERD campaigns
 - Delivered accurate vulnerability models for aircraft with specific threats
 - 1 Special Recognition Award and 2 Corporate Outstanding Achievement Awards
 - Modeled, designed, built, instrumented and created the DAQ for a novel electronically controlled CVT
 - Embedding of kinematic models into commercial WinGeo 3D software for race car tuning
 - IP generation - 60+ unique personal patents and over 200 for my teams across diverse portfolio
 - 9 technical publications
 - Multiple annual wins of Purdue University's Magoon Teaching awards for efficacy as rated by the students

Employment History

Chief Engineer to the VP of Engineering & Plant Mgr - Safran Optics 1 **2023-Present**
Safran Optics 1 – Bedford, NH

Developed laser solutions for CTAM, solved shutter performance issues for the M10 Booker, and developed unique solution for creating autofocusing of assemblies through automation.

Systems Engineer – Strategy Group **2021-2023**
L3Harris – Integrated Vision Solutions, Londonderry, NH

Leadership recognized and enrolled in L3Harris Corporate Leadership Program. Led key manufacturing improvements on ENVG-B fused goggles including root cause analyses, vendor engagement, process improvements, and process controls that lead to recognition within L3Harris Corporate Leadership as best-in-class with recommendation for Corporate Award with realized \$2M annual savings; activities votes site-level best in Quality and Continuous Improvement. Developed concepts with engineering teams and partnerships with DoD customers, National Labs, small businesses, and start ups to develop and market technologies moving towards product development. Created IP landscapes and defined areas where there was freedom to practice.

Associate Director, Collins Aerospace Program Office **2019-2020**
Raytheon Technologies Research Center (formerly United Technologies), East Hartford, CT

Project leader defining strategic technical direction and managing research portfolio for the Aerostructures Systems Group (legacy Rohr) and Mechanical Systems including Landing Systems, Wheels & Brakes Actuation, Cargo, Propellers, Hoist & Winch businesses while leading the areas of advanced manufacturing and materials. Drove ERD campaigns for an intelligent braking system, compliant structures, advanced composite manufacturing, high temperature CMCs, and autonomous cargo loading for commercial and DoD applications.

Associate Director, Otis Elevator Program Office **2013-2019**
United Technologies Research Center, East Hartford, CT

Project leader delivering a number of highly visible and strategically important business unit programs including an EM propelled elevator system (with supporting subsystems), wireless power transfer, wireless safety-critical communication systems, and a number of new product innovations. Selected to lead critical RRCA events and delivered a number of CEO reviews on behalf of the business, as a research center employee.

Research Scientist, Physical Sciences Department**2008-2013***United Technologies Research Center, East Hartford, CT*

Created an industry-first residential water misting fire suppression system from desire to TRL4 prototype in 12 months including performance modeling. Created accurate vulnerability analyses for DoD on specific aircraft to specific threats in LS-DYNA. Developed novel solutions for the business unit and also identified root causes of product performance issues. Delivered a number of novel concepts that led to patents and product integration that advanced DoD interests in rotorcraft performance.

Purdue University**1997-2008***Teaching Assistant, NSF GK-12 Instructor, ASME Instructor, and Research Assistant*

Created novel kinematic models of multi-link mechanisms and vehicle dynamics to model race car performance leading to the inclusion in commercial software. Developed a novel electronically controlled CVT.

Automation Process Engineer**1995-1997***Stanley Tools/Bostitch, New Britain, CT*

Developed and deployed solutions to optimize production throughput of synchronous and asynchronous automation manufacturing lines including system mechanical, electrical, pneumatic, and programming optimization. Served as SME to provide technical guidance during the design and deploy phases of new equipment. IT administrator for AutoCAD and served on the Safety and Ergonomic Committee

Systems Engineer**1994-1995***Proto-Power, Groton, CT*

Created analytical fluid dynamic models to optimize nuclear utility fluid handling and heat exchange systems.

Interests/Competencies/Skills

- Designing/Redesigning and building with own lathe, mill, MIG, TIG, or various other tools
- Electro-mechanical interfacing of hardware
- Programming experience in Matlab, Assembly, LabView, Python, C, C++, Fortran, Bash Shell, Perl, Sci-Lab, HTML, and Javascript
- Proficiency in the Windows, Unix, and Linux environments
- Troubleshooter and debugger of a variant of the Linux operating system named PCLinuxOS
- Proficiency with AutoCAD, Alibre, Pro-E, Working Model 2D, LabView, MS Office, LibreOffice, StarOffice, KOffice, Lyx, Photoshop, and Gimp to name a few
- Restoring classic automobiles. Owner of a personally restored 1966 Mustang
- Dissecting and repairing faulty equipment in hopes of better understanding the failure mode so as further improve future designs