Octavio Araujo Mori *Mechanical & Structural Engineer*

Contact | Education | Mechanical & Structural Engineering | Other Engineering | Leadership & Volunteering | Skills+

For more details, the above links are interactive when viewed on Acrobat PDF Reader, otherwise the same content is shared on my website

Aerospace structural engineer, skilled both in stress analysis and design of composite and metallic structures. Experienced in fast-paced product development environments with a focus in low-cost, production-centric, high quality products via accelerated prototyping, testing, and programming. I like to build stuff, try new things, and ask why.

Engineering Experience

Structures Engineer
The Boeing Company

- Structural Damage Technology - Composites March 2021 - Present

- Developed composite radius detail analysis method guidance for non-linear loads sources, performed comparison of linear and non-linear VCCT FEMs using Abaqus and Python scripting to determine correction factors, evaluated correlations b/w freebodies, displacements, and boundary conditions
- Developed test plans, supported testing, & reduced test data for composite allowables testing campaigns

- VC-25B / 747 Presidential Aircraft March 2020 - February 2021

- Performed and documented structural analysis of Empennage & Aft-body Antennae Systems hardware modifications to support drawing release schedules [details not available]

- NMA / Product Development Aug 2018 - March 2020

- MidBody Structures configuration development, including Aft Wheel Well Bulkhead & Front Spar component & detail trade studies of load paths and systems integration
- Responsible engineer for thermoplastics Technology Development & Integration, including high-level leadership reporting of budget, research, and technical risk status (test requirements)
- Supported preliminary design reviews (PDR), technical review board (TRB), and technical independent reviews (TIR) for Aft Wheel Well Bulkhead and thermoplastics technology integration
- Developed freebody diagrams and accompanying analysis templates for strength analysis of Aft Wheel Well Bulkhead primary structural elements (using classical methods, Bruhn & Kollar)
- Performed material & loads sensitivity trade studies of stability critical structure (analyzing local, distortional, and global stability modes using finite strip methods)

- 777X Wing Center Section June 2018 - Aug 2018

- Over-Wing Beams & hardware drawings revisions, verification, and release support through CAD/ programming

- Early Career Production Experience Rotation January 2018 - June 2018

- Investigated and dispositioned non-conformances of structures, payloads, and systems; recommended improvements
- 787 Final Assembly & Delivery (Factory & Flightline) and Composite Manufacturing Center rotations

- Structures Core - Design Methods & Concept Center July 2016 - December 2017

- Structures Concept Center Hands-on Low-cost product development. Designed, built, and tested composite parts to quickly determine potential advantages. Vast experience in hands on composites manufacturing, additive manufacturing, machinning, & production mock-ups development.
- Developed knowledge sharing & Lessons Learned wikis, contributed certification methods for 777x regulations

Education

Bachelor of Science in Mechanical Engineering May 2016
University of Vermont, Burlington, VT *GPA: 3.74 / 4.0*

Certificates

Composite Design and Analysis January 2019
Stanford University

Additive Manufacturing for Innovative Design & Production May 2018
Massachusetts Institute of Technology

Composite Aircraft Structures Oct 2017 - May 2018
Modern Aircraft Structures Oct 2016 - May 2017
University of Washington & The Boeing Company

Skills

Hands-On Composites Prototyping	Python/MATLAB/VBA HTML/PHP/JS/LaTeX	ABAQUS/NASTRAN CAD:CATIA/SolidWorks	Spanish/French/English ...Always learning