

# SAVITHA NARAYANAN NAMBISAN

## Technical Management, Solutions, R&D – Aerospace Structures

Bangalore, Karnataka, India | savithapraveen@gmail.com | +91-9972330464

Technical Specialist/Manager with a progressive career over 12 years in Engineering Services (Aerospace Structures Domain), bringing Technical R&D, Solutions, Business Development, Core Engineering and Project Management skills, experience and aspirations. Currently with Tech Mahindra, Bangalore.

### ACHIEVEMENTS SUMMARY

As a Hands-on Technical Specialist, delivered more than six projects worth US \$3m on Stress, Fatigue and Damage Tolerance Analysis of Business & Commercial Aircrafts over six years for Airbus and Bombardier customers.

- Over **95% on-time, on-quality, on-budget**, CSAT and Employee Satisfaction track record
- **Converted 30%** of 15+ RFPs, single-handedly
- Managed induction, work allocation, career advancement, attrition and MSI cycles for **25 team members**
- Encountering **Project Quality Audits** for last 20 Quarters

Performed more than 15 proposal defense sessions addressing Customer Engineering Directors

Led Automation initiatives across Offshore Development Center (ODC), automating 35% of project tasks using AI & Machine Learning (ML) tools, templates and macros, saving 15% on project costs

### CAREER EXPERIENCE

#### Tech Mahindra, Bangalore

11 Years 5 Months [Aug 2008 – Present]

- Technical Specialist – 5 years 5 months
- Project Lead – 3 years
- Stress and F&DT Engineer – 3 years

#### Aeronautical Development Agency (ADA), Bangalore, Research Fellow-B

1 Year 2 Months [Feb 2006 – April 2007]

#### Toc H Institute of Science & Technology, Arakkunnam, Kerala, Lecturer in Civil Engineering

4 Months [Sept 2003 – Jan 2004]

### KEY RFPs/QAPs/PROACTIVE PROPOSALS WORKED

Automation proposal using AI for Airbus concessions (PAG, Spirit Aerosystems)

MRSA Planning Automation proposal for Boeing Manufacturing Non-Conformance (Spirit Aerosystems)

QAP for Development and continuous engineering support of the A350XWB including versions A350-900 & A350-1000 (PAG)

QAP for Airframe Customer Services: Daily repair, Major repair, SRM (Airbus, PAG)

QAP for Airbus concessions (PAG)

Technical proposal for CSALP SOW A220 MTOW AFT and 160 PAX Rev--

Innovation proposal for Airbus PET

Proposal for weight optimization for Boeing 737 Floor board beams (Spirit Aerosystems)

Proposal for transition plan and concepts for additional Aero structures package (PAG)

Proposal for FTI design packages (Collins Aerospace)

QAP for Procurement Costing and ME Support for price, product and process optimization (PAG)

### DIGITAL/AUTOMATION INITIATIVES

Led and managed the following automation processes

- C-Series assembly methods – FAI Support [Python and R]
- Design Mid-fuse-Counting of balloons on BoM[Python]
- Challenger & Global REOs – REO report generation[VBA]
- Download and upload of drawing files [CATIA automation]
- Challenger Flammability – Automation of review process [CATIA automation]

- RNC report generation[VBA]
- PVR creation and linking PVR to drawings[CATIA automation]
- Creating PLM action/Extracting data from PLM action to Excel sheet[Excel]
- Creation of seat SDD DWG[CATIA automation]
- DWG template creation in ENOVIA[CATIA automation]
- Frame analysis tool [CATIA automation, VBA]
- PAX seat rail support structure analysis [VBA]
- GFEM property update [ CATIA automation, VBA]
- Lug and Pin Analysis tool [VBA]
- T100 design dispositions automation for Airbus concessions [AI]

#### SKILLS AND CERTIFICATIONS

Technical Skills	Delivery Skills
<p>Creating SOW, Quality assurance plans (QAP) and Proposals</p> <p>Airframe Stress Analysis, Fatigue and Damage tolerant analysis (Metallic and composite structures)</p> <p>Authoring calculation templates and Performing hand calculations in MS Excel</p> <p>Finite Element Analysis using NASTRAN, PATRAN, HYPERMESH</p> <p>Fluent on Airbus and Bombardier manuals/processes and tools (ISAMI, Golihat, Nasgro)</p> <p>Skilled in Engineering Automation projects</p> <p>Execution of Proof of concepts and Pilot Projects</p>	<p>Requirements and Input analysis, Project Execution &amp; monitoring, Standards &amp; Compliance Validation, Customer satisfaction Drives</p> <p>Create and route Work packages, Drive collaboration of Engineering groups across locations (onsite, offshore, nearshore)</p> <p>Review deliverables, Provide on-job trainings and Coach teams</p> <p>Managing project KPIs, Project Planning, Resource Management, Delivery Management, Scope Management, Change Management, Risk Management</p> <p>Proficient in Microsoft project planner</p> <p>PMP Trained (Internal Tech Mahindra)</p>

#### Certifications

- Certified Scrum master – Scrum Alliance
- Tech Mahindra Quality Management System Certified
- Tech Mahindra Agile SCRUM Master Certified
- Sun Certified Java Programmer

#### KEY PROJECTS EXECUTED

##### As Technical Specialist:

BizJet FTI design program 1&2 for Collins Aerospace (Project Management) – 5 FTE, 35+ Weeks

Design and Analysis of Ammunition Mating Tray – BAE Aerosystems (Project Management and Stress Analysis) – 2FTE, 13+ Weeks

Stress Analysis of Rear Pressure Bulkhead (RPB) for MSN453 (-900) in section 16-18 of A350 XWB – 900 / 1000 using composite NCF materials for Step 7 modification – 4FTE, 20 Weeks

Step 7 Modification of PAX Door Surround Structures (PDS2) for MSN453 (-900), MSN456 and MSN600 (-1000) in section 13-14 of A350 XWB – 900 / 1000 using composite NCF materials for weight optimization- 8FTE, 34+Weeks

Step 7 Modification of Bulk Cargo Door Surround Structures (BCDS) in section 16-18 of A350 XWB – 900 / 1000 using composite NCF materials for weight optimization- 8 FTE, 34+Weeks

Stress and F&DT analysis and reports preparation of BCDS for MSN321 for STEP 6 modifications, Justification phase-4FTE, 16 Weeks

Static and Damage Tolerance Analysis (DTA) substantiations of Global Express REOs, GREOs and Reviews-5 FTE, 52+Weeks

Delivery of multiple Q400 static stress analysis projects-14 FTE, 52+ Weeks

Multiple projects in CS100: Rear spar splice, ADL for composite upper and lower skin, FE books for wing, stringer run out analysis, composite methodology validation, ribs certification report-10FTE, 52+ Weeks

**As Project Lead:**

DTA of C-Series cockpit PSEs including methodology development, FEA with integration of DFEM with GFEM, convergence studies and certification reports

DTA of C series doors PSEs, Detailed finite element analysis, Static and durability analysis of C series door end pads

**As Stress Engineer:**

Static Stress analysis of door frames, fittings and other mechanisms for interface loads (C-Series) using FEA and Hand calculations

Seat rail analysis for Q400 A/C (DHC-8-400)

Allowable Damage Limits (ADL) for Global Express variant A/C

Authored CL-415 Main Landing gear FEM report

Analysis of bird strike barrier (C-Series)

Finite element analysis of composite doors (Lear 85) and CRJ1000 winglet composite fairing, Stress analysis of CRJ1000 winglet skin, spars and ribs

Authored Stress Certification reports of CRJ1000 Rear spar, wing fixed leading edge(RAS-CC698-201) and winglet (RAS-CC698-211), Developed custom tool for Lug analysis

**As Research fellow:**

Maneuver load computations on selected configurations of Tejas PV2

Authored User's Guide for calculation of loads using Elfini

#### AWARDS / RECOGNITIONS

Certificate of Appreciation for contribution for Bombardier C-Series program, 2015 & 2016

Technical Excellence – Q400 Stress, 2016

Consistent STAR performer Award for 2014-15, 2015-16, 2016-17

Grand salute- The Livewire Award, 2017

#### EDUCATION

- Pursuing PhD in Aerospace Engineering ,Jain University, Bangalore
- M Tech [Structural Engineering and Construction Management], T.K.M College of Engineering, Kollam, 2003  
[Kerala University, Thiruvananthapuram, Kerala] 83.8% aggregate marks.
- 88.58 Percentile in GATE 2001
- B Tech [Civil Engineering] Govt. Engineering College, Thrissur, 2001  
[Calicut University, Calicut] 78.8% aggregate marks.
- Pre-Matriculation XII, 1997  
[Central Board of Secondary Education] 79.2%
- X, 1995  
[Central Board of Secondary Education] 83.6%