Ananth Ramesh

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| **SUMMARY** | | Current Designation: Senior Structural Engineer, Team Indus | Spacecraft Structures  Total years of Experience: 5+ years. |
| **EDUCATION** | | Master’s in aerospace Vehicle Design, Cranfield University UK |
| **CORE COMPETENCIES** | | * Structural design (Solidworks, Catia V5, Catia V6). * Structural analysis (Nastran/Patran, Abaqus). * Meshing (Hypermesh). * design for manufacture (Catia/ Solidworks). * Composite design (Nastran). * Structural optimisation (Nastran/ Opti struct). * Assembly and Structural testing (Vibration). * UAV design (Catia V5/ Catia V6). * Satellite design and optimisation (Nastran/Patran). * Landing gear System Explicit analysis (Radioss). |
| **CORE AREA OF WORK @ Teamindus**  **(2014-2018 & 2018 to current)** | * Spacecraft Launch Condition (Started in 2014 & 2016: constant support for 3 years)   + Meshing of the Complete Lander in Hypermesh   + Static, modal, buckling analysis in Nastran/AbaQus   + Postprocessing and optimization in Patran to meet frequency requirements with use of composites. * Fluid Structure Interaction (2016, 6 months)   + Study of effect of fuel’s interaction with the Tank structure during launch with the launch fill condition and It’s effect on Structure stiffness. * Landing Subsystem design (June 2016, 2 years)   + Conducted various configuration viability design and analysis   + Static strength requirements were checked   + Various Footpad locking mechanisms were fabricated and tested.   + Composite bracket attachment of the landing to the spacecraft were optimized. * Explicit analysis of Spacecraft Landing on Moon (2017 & 2018, 1.5 years)   + Made the complete mathematical model.   + validated the mathematical model with crush material coupon test   + integrated the mathematical model with the crushing entity with a flexible spacecraft.   + conducted analysis of the spacecraft with various test configurations for stability, energy absorption and stress. * Subsystem and Bracket: Complete design life cycle(2 years): Thruster brackets, Main engine brackets, Solar panel brackets, Integrated Avionics package, PCOC, Ruggedization of Laser range finder and decent camera.   + Conceptual design of brackets/ Subsystem meeting requirements in Catia/ Solidworks   + Analysis to meet strength and stiffness requirement (Nastran/Patran or Abaqus), design for manufacturing and vibration testing. * Payload Design: LUCI in collaboration with Indian Institute of astrophysics (2017, 6 months).   + Conceptual design for upgrading the aluminum chassis to a carbon fiber chassis with Analysis and optimization of the structure: mass was reduced more than 50% to <1kg.   + Shutter mechanism was conceptualized and designed to meet dust prevention requirements.   + Vibration testing was conducted after which the mechanism functional test conducted resulted in it being qualified for space, * UAV design Optimization (2016, 1 year)   + Composite design of 5m UAV.   + Structural optimization of the UAV to meet stiffness and weight criterions.   + Manufacturing support for the UAV.   + Successful Strength testing of the UAV with Sandbags on the wing. * Microsatellite Design (6months)   + 2 microsatellite designs completed meeting payload requirements   + Structural optimization on both the structure to ensure strength and stiffness requirements   + Designed a new attachment concept to ensure mass effectiveness.   + Reached PDR stage on both the Satellites. | | |
| **PREVIOUS EXPERIENCE**  **COMPANY DESIGNATION** | | AIRBUS (from Jan 2018 to July 2018)  Research and Technology Engineer |
| **NOTABLE ACTIVITIES** | | * Was part of the National Cadet Corps, Airforce, was the parade commander for the college squad, Led two camp as a Camp senior (directorate level: CATC and State Level: IGC), 2010 * Was a TEDx speaker representing Team Indus at IIT-Roorkee, Ideathesia, 2016 * Was a TIE Hubli speaker representing Team Indus, 2017 * Was an Indian Space Conclave Speaker of the SEDS India episode, 2017 |
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