europass

Yagnam Mahesh Babu Routhu

Nationality: Indian (+39) 3881150040 **Date of birth:** 23/08/1996

Email address: maheshrouthu66@gmail.com

Address: 00157 Rome (Italy)

WORK EXPERIENCE

Internship

Sapienza Laboratory [14/11/2021 – 13/06/2022]

City: Rome
Country: Italy

TITLE: Omega Stability Analysis of Single Spin and Dual-spin Spacecraft

- Worked on review of results on omega stability of single-spin and dual-spin spacecraft.
- The stability analysis is carried out by using Lyapunov's stability theorem and Lyapunov's indirect method.
- Done Numerical simulation to validate the stability results by using MATLAB
- For a single-spin spacecraft without energy dissipation the spin about major axis of inertia and minor axis of inertia are omega-stable and the spin about intermediate axis of inertia is omega-unstable.
- For the dual-spin spacecraft, if the angular momentum of the wheel is sufficiently large then spin about the axis of the wheel is stable.

EDUCATION AND TRAINING

Special Master of Aerospace Engineering

Sapienza university of Rome [28/09/2018 – 13/06/2022]

Address: rome (Italy)
https://www.uniroma1.it/it/pagina-strutturale/home
Field(s) of study: Aerospace Engineering
Final grade : 89/110
Thesis: Omega stability analysis of single- and dual-spin spacecraft

Bachleor of Mechanical Engineering

k L University [15/06/2014 – 05/06/2018]

Address: (India)
https://www.kluniversity.in/

LANGUAGE SKILLS

Mother tongue(s): **Telugu**

Other language(s):

English

LISTENING C1 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Italian

LISTENING B1 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B1

DIGITAL SKILLS

My Digital Skills

SOLID WORKS / AutoDESK AutoCAD (Optimal Knowledge) / Pro-E / ANSYS design modeler / Internet user

ORGANISATIONAL SKILLS

Having great communication

Punctuality

Decision making

Leadership

Lateral thinking

PROJECTS

Autentication of Acoustic noise from supersonic jet nozzle

[15/01/2018 – 10/06/2018]

- This project focuses on acoustic noise suppression at the aft of the jet nozzle.
- This is due to turbulence structures and these turbulence structures are generated by the flow instability due to pressure fluctuation that is created at the nozzle exit.
- Some techniques have been employed in the past decade to weakening the acoustic noise which includes chevrons at the nozzle aft.
- The acoustic study reveals that addition of chevrons to the nozzle reduces the sound pressure level reasonably with an adequate reduction in performance.
- The numerical study has been carried out using a valid 2D pressure based, k-Ɛ turbulence model.
- The supersonic nozzle is designed for Mach number of 2.8. The analysis technique involved is SPL.
- We compare the nozzle base model with the chevron nozzle and with modified chevron nozzle.
- Results shows the amount of sound got reduced in db.
- Work includes the modification in the design of chevrons.