

# Half-Yearly Progress Report for Jun-Dec 2021

## Data Sheet for Ph.D Scholars

**Name :** My name

**Registration no :** AEXXDXXX

**Department :** Aerospace Engineering

**Date of Joining :** Month year

**Date of Upgradation:** iDatej

**Specialization/Stream :** Aerodynamics

**Area of Research work :** Rotorcraft Aerodynamics

**Category of Admission:** HTRA

**Guide :** Dr. Ranjith Mohan

**Co-Guide :**

**DC Members :**

**Date of DC meetings:**

Description	Event	Date
1st DC meeting	Comprehensive Viva	Attempt 1: XX.XX.XXXX
2nd DC meeting	Research Proposal Seminar (1st Seminar)	XX.XX.XXXX
3rd DC meeting	Mid-Term Review DC meeting (3-3.5 years from the date of joining)	-
4th DC meeting	Research Colloquium (2nd Seminar)	XX.XX.XXXX
Six Monthly DC meeting	After five years from the date of registration, upto maximum period of the programme	SMD 1: SMD 2: SMD 3: SMD 4:
6th DC meeting	Synopsis at Dean AR Office	

**Details of course work :**

Sl.no.	Course No.	Course Title	Sem	Credit	Grade
		<b>Core Courses</b>			
1.	AS5010	Engg. Aerodyn. & Flt. Mech.	00	3	X
2.	AS5370	Helicopter Aerodynamics	00	3	X
3.	ME6000	Computational Methods in Engg.	00	3	X
4.	AS5470	Unsteady Aerodynamics of Moving Bodies	00	3	X
5.	AS6050	Dynamic Fluid Structure Interaction	00	3	X
		<b>Elective Courses</b>			
1.	AS5420	Introduction to CFD	00	3	X
2.	AS5012	Dynamics & Control of Rotorcraft	00	3	X
3.	AS5330	Computational Aerodynamics	00	3	X
		<b>Compulsory/Optional Courses</b>			
1.	AS6000	Basic Concepts in Aerospace Engg.	00	3	X
2.	ID6020	Introduction to Research	00	2	Pass
3.	AS6999	Special topics in Aero. Engg.: Literature review	00	2	X
4.	AS7999	Special topics in Aero. Engg.: Validation	00	2	X

Total CGPA: 0.00

Dr. Ranjith Mohan (Guide)

# 1 Research Work Progress

## 1.1 Title of Research work

## 1.2 Problem Definition / Research Objectives

Sample citation [1].

## 1.3 Summary of work done before review (From date of admission)

Sample reference to fig. 1.

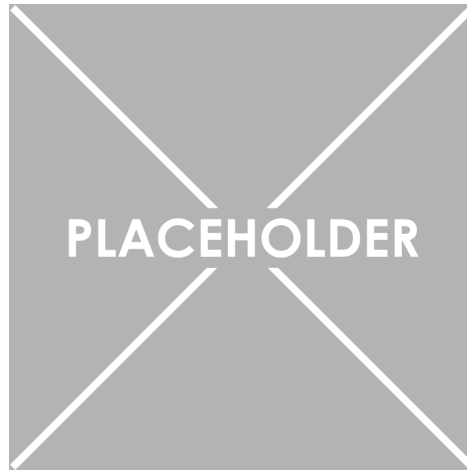


Figure 1: Sample image

## 1.4 Work done during review

## 1.5 Issues affecting research progress, if any

None

## 1.6 Future work

## 1.7 Visible research output

### 1.7.1 Paper(s) published in Journals

[1] Cibil Joseph and Ranjith Mohan. *A Parallel, Object-Oriented Framework for Unsteady Free-Wake Analysis of Multi-Rotor/Wing Systems*. Computers & Fluids, 215, 2020.

[2] Cibil Joseph and Ranjith Mohan. *Closed-form Expressions of Lift and Moment Coefficients for Generalized Camber using Thin-Airfoil Theory*. Technical Note, AIAA Journal, 2021.

### 1.7.2 Full papers published in conference proceedings

[1] Anand Bharadwaj, Cibil Joseph, Santanu Ghosh, *Interpolation Techniques for Data Reconstruction at Surface in Immersed Boundary Method*, 55th AIAA Aerospace Sciences Meeting, AIAA Science and Technology Forum and Exposition, January, 2017, <https://doi.org/10.2514/6.2017-1427>

### 1.7.3 Conferences attended and papers presented

[2] Cibil Joseph, Ranjith Mohan, *A Numerical Investigation of Ground Effect on Rotorcraft in the presence of Side walls*, 43rd European Rotorcraft Forum, September, 2017

## References

- [1] Ashish Bagai and J. G. Leishman. Rotor free-wake modeling using a pseudoimplicit relaxation algorithm. *Journal of Aircraft*, 32(6):1276–1285, 1995.