सीएसआईआर–राष्ट्रीयवांतरिक्षप्रयोगशालाएं
CSIR- NATIONAL AEROSPACE LABORATORIES
P B No.1779, HAL Airport Road, बेंगलुरु Bengaluru – 560 017

ADVT. No.7/2021

ADVERTISEMENT FOR ENGAGEMENT OF PROJECT STAFF

APPLY THROUGH ONLINE BEFORE 18.07.2021
(Website: www.nal.res.in)

CSIR-NAL is a unit under the Council of Scientific and Industrial Research (CSIR), an autonomous body under the Ministry of Science and Technology, Govt. of India. Online Applications are invited from eligible candidates (Indian nationals) who meet the necessary educational and work requirements for engagement of **Project Staff** to work in HAP-TD project at CSIR-NAL. The engagement is purely on temporary and contract basis. The engagement shall be initially for a period of 2 years and **co-terminus** with the project. _The extension of tenure of any project staff beyond the initial engagement will be subject to review by a Review Committee._ The details of posts, qualification, experience, emoluments and age limit for engagement of Project Staff are as per CSIR guidelines is as under:

Project Staff	Educational Qualification	No. of positions
Project Assistant	Diploma in Mechanical Engineering	03*
Project Associate-I	BE/B.Tech in Aerospace / Aeronautical / Mechanical / Electrical / Electronics & Communication Engg. /Computer Science from a recognized University or equivalent.	03*
Project Associate-II	BE/B.Tech in Aerospace / Aeronautical / Mechanical / Electrical / Electronics & Communication Engg. /Computer Science from a recognized University or equivalent **and** 2 years' experience	15*

*Number of positions may vary as per the requirement of the Projects

The engagement as Project Staff at CSIR–NAL is for **HAP-TD** project at CSIR-NAL initially for a period of 2 years and **co-terminus** with the Project. The tenure may be extended by the Director, National Aerospace Laboratories, Bengaluru.

Details of Project Staff requirements

| | | Group I - Aerodynamics and Mechanical Systems | | | |

1. Task Team: Aerodynamics			
Area	**PA Level / No. of posts**	**Educational Qualification**	**Job requirements**
AERODYNAMICS	Project Associate-II 01 No.	**Essential Qualification:** BE/B.Tech. in Aerospace/Mechanical Engg. with 2 years' experience **Desirable:** 1) Structural analysis of rotating machinery, rotor dynamic analysis, CAD modelling and fabrication drawings 2) Machine design 3) 2 yrs experience preferred. 4) ME/MTech. or equivalent in above areas **Software Tools:** Catia/Solidworks	Propeller Development
	Project Associate -II 01 Nos.	**Essential Qualification:** BE/B.Tech. in Aerospace/Mechanical Engg. with 2 years' experience **Desirable:** 1) Part design, solid and surface modelling, preparing drawings/2D drafting, Machine design and Data analysis. 2) ME/MTech. or equivalent in above areas **Software Tools:** Unigraphics - NX 12, CATIA V5, SOLID WORKS, AUTOCAD, ProsigDat's lite v7, ANSYS ICEM.	Configuration Design and Modelling
	Project Associate –II 02 No.	**Essential Qualification:** BE/B.Tech. in Aerospace/Aeronautical Engg. with 2 years' experience **Desirable:** 1) Knowledge of low Reynolds number CFD computations 2) Knowledge of parametric CAD model and CAD cleaning for mesh generation 3) Knowledge of propeller/rotor CFD computations 4) Wind tunnel data analysis 5) ME/MTech. or equivalent in above areas **Software Tools:** Pointwise/ ICEM CFD and Fluent	CFD analysis for Configuration Aerodynamics
STRUCTURES	Project Assistant 03 Nos.	**Essential Qualification:** Diploma in Mechanical Engineering **Desirable:** Composite Part Manufacturing Experience	Composite Part Manufacturing
	Project Associate -I 02 Nos.	**Qualification:** BE/B. Tech. in Mechanical/Aeronautical Engineering **Desirable:** 1) 1-2 years of relevant experience 2) Knowledge in UAV's or Aircraft's Structure **Software Tools:** Engineering Drawing/Surface and 3D modelling using CATIA Software	Surface/ 3D modeling and drafting of parts/ components
	Project Associate - I 01 No.	**Essential Qualification:** BE/B.Tech. in Mechanical/Aeronautical Engineering **Desirable:** 1) 1-2 years of relevant experience 2) Knowledge in UAV's or Aircraft's Structure 3) ME/M.Tech. or equivalent in above areas **Software Tools:** Hypermesh and Nastran	To carryout Strength of Materials Calculations, Static, Buckling and Dynamic analysis (2 years' experience)
	Project Associate -II 02 Nos.	**Essential Qualification:** BE/B.Tech in Mechanical/ Aerospace/ Aeronautical/ Structural with 2 years' experience **Desirable:** 1) 1-2 years of relevant experience 2) ME/M.Tech. or equivalent in relevant areas **Software Tools:** Hypermesh and Nastran	To carryout Strength of Materials Calculations, Static, Buckling and Dynamic analysis.
	Project Associate- II 01 No.	**Essential Qualification:** BE/B.Tech. in Mechanical/ Aerospace/ Aeronautical/ Structural with 2 years' experience **Desirable:** 1) 1-2 years of relevant experience 2) ME/M.Tech. or equivalent in relevant areas **Software Tools:** Hypermesh and Nastran	To carryout Static, Buckling, Dynamic analysis
	Project Associate -II 01 No.	**Essential Qualification:** BE/B.Tech. in Mechanical/ Aerospace/ Aeronautical/ Structural with 2 years' experience **Desirable:** 1) 1-2 years of relevant experience 2) ME/M.Tech. or equivalent in relevant areas **Software Tools:** Hypermesh and Marc /Abaqus / Nastran	To carryout Nonlinear analysis
	Project Associate - II 01 No.	**Essential Qualification:** BE/B.Tech. in Mechanical/ Aerospace/ Aeronautical/ Structural with 2 years' experience. **Desirable:** 1) 1-2 years of relevant experience 2) ME/M.Tech. or equivalent in relevant areas **Software Tools:** Hypermesh/ ICEM CFD and Fluent/ Star CCM	Co-simulation of Fluid-Structure Interaction

	Group II – Electrical & Electronic Systems		
2. Task Team: Flight Mechanics, Autopilot and Avionics / Energy Management			
Post Code	**PA Level / No. of posts**	**Educational Qualification**	**Job requirements**
FLIGHT MECHANICS	Project Associate -II 01 No.	**Essential Qualification:** BE/B.Tech. in Computer Science with 2 years' experience **Desirable:** 1) GUI application development using Visual Studio based C#, C++ or QT (Cross Platform Development (Linux/Windows)) 2) Knowledge in standard UAV communication protocol like MAV link and GUI integration with communication protocols like UART/UDP/TCP 3) Integration of open source map APIs and Display streaming video using streaming libraries **Software Tools:** Visual Studio based C#, C++ , QT	GCS Development
	Project Associate -II 01 No.	**Essential Qualification:** BE/B.Tech. in Aeronautical / Aerospace Engg. with 2 years' experience **Desirable:** 1) Development of mathematical models of physical systems 2) Knowledge in 6 DoF Simulation of an aircraft 3) Integration of mathematical models of various subsystem **Software Tools:** Matlab, Simulink	Simulation Development
	Project Associate -II 01 No.	**Essential Qualification:** BE/B.Tech. in Electrical / Electronics & Comm Engg. with 2 years' experience **Desirable:** 1) Knowledge in Control laws development 2) Knowledge in Autopilot hardware testing, integration with sensors and actuators. 3) Working experience in control design software like Matlab **Software Tools:** Embeded C/C++, MATLAB, Simulink	Autopilot Development
ENERGY MANAGEMENT	Project Associate- II 01 No.	**Essential Qualification:** BE/B.Tech. in Electrical / Electronics & Commn. Engg. with 2 years' experience **Desirable** 1) Knowledge in battery system 2) Knowledge in battery system testing and integration with sensors. 3) Working experience in testing equipment like measuring instrument like Digital oscilloscope, multi meters and EIS instrument to measure internal impedance of battery.	Lithium battery system definition and testing
	Project Associate- II 01 No.	**Essential Qualification:** BE/B.Tech. in Electrical / Electronics & Comm Engg. with 2 years' experience **Desirable** 1) Knowledge in Control laws development 2) Knowledge in BLDC motor testing, integration with sensors and actuators. **Software tools:** MATLAB/SIMULINK and LabVIEW	BLDC Motor design, definition and modeling
	Project Associate - II 01 No.	**Essential Qualification:** BE/B.Tech. in Mechanical Engg with 2 years' experience **Desirable** 1) Knowledge of Heat transfer concepts 2) Familiarity with commercial / open source tools for heat transfer modelling 3) Project work/ working experience in Heat transfer problems **Software tools:** MATLAB and any CFD tool	Thermal Protection system – Modelling and simulation

Monthly emoluments:

1. Project Assistant : ₹20,000/- + HRA

2. Project Associate – I

(i) ₹31,000/- + HRA to scholars who are selected through (a) National Eligibility Tests – CSIR-UGC NET including lectureship (Assistant Professorship) or GATE or (b) A selection process through National level examinations conducted by Central Government Departments and their Agencies and Institutions

(ii) ₹25,000/- +HRA for others who do not fall under (i) above

3. Project Associate - II

(i) ₹35,000/- + HRA to scholars who are selected through (a) National Eligibility Tests – CSIR-UGC NET including lectureship (Assistant Professorship) or GATE or (b) A selection process through National level examinations conducted by Central Government Departments and their Agencies and Institutions

(ii) ₹28,000/- +HRA for others who do not fall under (i) above

General Conditions:

(a) The engagement of Project Staff which is on contract basis in respect of all above positions will confer no rights on the candidates, whatsoever, implicitly and / or explicitly for their continuation beyond tenure /absorption/ regularization in CSIR. Engagement of Project Staff may be terminated at any time by giving a notice of one month from either side or one-month stipend in lieu thereof.

(b) Project Staff would be governed by the CSIR Guidelines relating to engagement of project staff in CSIR Projects including NMITLI projects, OLP/MLP, Contract R&D and non-CSIR funded Projects issued by CSIR vide OM No. 4/CMG/2020-TMDII dated 13 August 2020 and OM No.4/CMG/2021-IMD dated 09.03.2021.

(c) Director, CSIR–NAL reserves the right to increase / decrease the number of positions and also cancel the recruitment process for the positions mentioned above at any stage of the recruitment process. The decision of the Director, CSIR-NAL will be final and binding on all candidates at any stage for engagement of Project Staff.

(d) The engagement of Project Staff will be subject to production of ORIGINAL documents viz. Educational Qualification certificates, Experience certificate, Caste Certificate etc.

(e) Students awaiting Final year results will NOT be considered.

(f) Candidature will be purely provisional subject to fulfilling the eligibility criteria.

(g) Canvassing in any form will render the candidate's disqualification.

Age Limit: 50 years for Project Assistant and 35 years for Project Associate-I & II as per CSIR guidelines.

Interview: Shortlisted candidates will be called for ONLINE Interview and the details of the Interview will be intimated through e-mail only.

Preference will be given to those with experience as per the desirable skills and ability to work as a part of a team.

Candidates who fulfil the above criteria may apply through ONLINE at
www.nal.res.in

Last date for submission of online application**: 18.07.2021**

For any query please contact
☎ **080-25086078, Email: recruitment@nal.res.in**

For any technical problems while submitting the online application, please contact**: Smt.Kowsalya Devi M B, Senior Technical Officer, ☎080-25086038**

Sd/-
Controller of Administration