

**List of Project for BE/BTech/MSc dissrtation training (No financial support and no accommodation facilities) -  
Project duration January -May/June 2020 [full time]**

Sr. No.	Project Supervisor	Email	Number of Students required for project	Division	Tentative title(s) of Project(s)	Preferred Discipline
1	Arvind Singh Rajpurohit	arvindr@prl.res.in	01	Astronomy and Astrophysics	Exploring the atmospheric properties of hot Jupiters using phase light curve	Computer Engineering, The person should be good in programming with python
2	Kapil Kumar	kapilb@prl.res.in	01	Astronomy and Astrophysics	Aeroelastic modeling of folding wing	Mechanical Engineering
3	Manash Ranjan Samal	manash@prl.res.in	02	Astronomy and Astrophysics	(1) Unveiling sites of star formation in our Galaxy using data form Herschel Space Observatory. 2) Understanding the dynamical status of the star clusters using Gaia kinematics measurements.	Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
4	Manash Samal	manash@prl.res.in	01	Astronomy and Astrophysics	Proving Sequential Star Formation in the Shells of Expanding Bubbles	Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
5	Vaibhav Dixit	vaibhavd@prl.res.in	02	Astronomy and Astrophysics	Machine Learning Application in Stellar Field Identification/Astronomy	Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Mathematics
6	Vishal Joshi	vjoshi@prl.res.in	1	Astronomy and Astrophysics	Automation in astronomical data reduction procedure	Computer/ IT students having good experience of Python
7	B. Sivaraman	bhala@prl.res.in	4	Atomic, Molecular and Optical Physics	1. Astrobiology - Survival of microbes in extreme conditions. 2. Astromaterial science - Effect of high temperature and pressure on bioinspired materials. 3. Astrochemistry - Shock processing of biomolecules. 4. Astrochemistry - Impact induced chemistry leading to chemical evolution in meteorites.	Physics/Chemistry
8	Manan Shah & Prashant Kumar	manans@prl.res.in	1	Atomic, Molecular and Optical Physics	FPGA based Time to Digital Converter for TOF mass spectrometer	Electronics and Communications, Instrumentation and Control, Electronics Engineering
9	Rajesh Kushawaha	kushawaha@prl.res.in	2	Atomic, Molecular and Optical Physics	1. Interaction of intense femtosecond laser pulses with polyatomic molecules 2. Molecular alignment using femtosecond pump-probe spectroscopy	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
10	Ravindra Pratap Singh	rpsingh@prl.res.in	01	Atomic, Molecular and Optical Physics	Quantum Communication	Electronics and Communications, Computer Engineering, Instrumentation and Control, Electronics Engineering
11	DINESH MEHTA & Bhushit Vaishnav	dinesh@prl.res.in	4	Computer Center	PRL Outreach Visit Management system and Online Registration system for Post-Doctoral Fellowship Program  Student Information System  AstroChemical Ices Database Management system	Computer Engineering
12	Girish Padia	padia@prl.res.in	2	Computer Center	1. Android app for Employee Information 2. Online Leave Management System (Web technology: JSP)	Computer Engineering
13	Tejas Sarvaiya	tejas@prl.res.in	2	Computer Center	PRL WiFi Usage Analytics & Reporting	Computer Engineering
14	Manan Shah	manans@prl.res.in	2	Geosciences	1. Automated Rain Water Sampler 2. Spectral Luminescence Scanner -	Electronics and Communications, Instrumentation and Control, Electronics Engineering, Mechanical Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
15	Ravi Bhushan	bhushan@prl.res.in	2	Geosciences	Application of Cosmogenic Radioisotopes and Stable isotopes in Earth Sciences	Geology/Geosciences/Marine Sciences/ and allied disciplines, Chemistry, Oceanography, Climate Science
16	Virendra R Padhya	virendra@prl.res.in	1	Geosciences	Long and Short-term variability of water vapour isotopes in response to Meteorological parameters	Instrumentation and Control, Space Sciences/Meteorology/Climate Science and allied disciplines
17	Amit Basu Sarbadhikari	amitbs@prl.res.in	3	Planetary Sciences and Exploration	1. Sample preparation for analysis in Mass Spectrometer of Martian and asteroid Vestan meteorites 2. Planetary analogue Sample analysis by XRF and APXS 3. Understanding and simulating ion trajectories in a quadrupole mass spectrometer	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Geology/Geosciences/Marine Sciences/ and allied disciplines Electronics Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
18	Arpit Patel	arpitp@prl.res.in	2	Planetary Sciences and Exploration	PID based Temperature controlling using FPGA, Peak height Analysis technique development	Electronics and Communications, Computer Engineering, Instrumentation and Control, Electronics Engineering

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19	Chandan Kumar	chandankr@prl.res.in	01	Planetary Sciences and Exploration	Design of Front-End electronics for solar radiation monitor for future planetary mission	Electronics and Communications, Instrumentation and Control, Electronics Engineering

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20	Janmejey Kumar	janmejey@prl.res.in	01	Planetary Sciences and Exploration	Design and Analysis for deployment mechanism of boom for future Mars mission	Mechanical Engineering
21	Jayesh P. Pabari	jayesh@prl.res.in	3	Planetary Sciences and Exploration	1. FPGA/microcontroller based processing electronics for dust detector 2. Study/effect of micrometeorites around a planet 3. Instrumentation/data analysis of planetary lightning	Electronics and Communications, Electronics Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Geology/Geosciences/Marine Sciences/ and allied disciplines
22	Jayesh P. Pabari	jayesh@prl.res.in	2 (1 B.E./B.Tech. + 1 M.Sc./M.Sc. integrated)	Planetary Sciences and Exploration	1. Comparative analysis of various transformations on transient signals 2. Study of active matching network for a receiving antenna (Exact details will be given at the time of joining.)	Electronics and Communications, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Space Sciences/Meteorology/Climate Science and allied disciplines
23	K. Durga Prasad	durgaprasad@prl.res.in	03	Planetary Sciences and Exploration	1. Lab based microprobe development for space and planetary exploration (Electronics) 2. Design and development of water-ice prospecting device for Moon (Electronics) 3. Lab and Remote Sensing based Geophysical Studies of the Moon (Geology)	Electronics and Communications, Instrumentation and Control, Electronics Engineering, Geology/Geosciences/Marine Sciences/ and allied disciplines
24	Kalyan reddy	kalyanreddy@prl.res.in	1	Planetary Sciences and Exploration	Development of a Thermal Conductivity sensor for future missions of Moon	Electronics and Communications
25	Kinsuk Acharyya	acharyya@prl.res.in	02	Planetary Sciences and Exploration	1. Study of star-forming regions 2. Study of planetary atmospheres	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
26	Kuljeet K Marhas	kkmarhas@prl.res.in	04	Planetary Sciences and Exploration	(1) Organics in Meteorites (MSc-physics/chemistry) (2) Presolar SiC grains and Nucleosynthesis(MSc-physics/chemistry) (3) Simulation program for Gas-grain condensation (Computer programming) (4) Meteorite analyses and early evolution of the early solar system(M.Sc Physics/GeoSciences)	Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, chemistry
27	Megha U. Bhatt	megha@prl.res.in	02	Planetary Sciences and Exploration	Development of a framework for complete characterization of OH/H <sub>2</sub> O of Lunar surface using hyperspectral data	Computer Engineering
28	NEERAJ SRIVASTAVA	sneeraj@prl.res.in	02	Planetary Sciences and Exploration	Imaging Spectroscopy of Moon and Vesta	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Geology/Geosciences/Marine Sciences/ and allied disciplines
29	Rishitosh K. Sinha	rishitosh@prl.res.in	01	Planetary Sciences and Exploration	Geological study of the landing sites on the Moon and Mars	Geology/Geosciences/Marine Sciences/ and allied disciplines, Student must have some basic idea of Remote Sensing and GIS
30	Sanjay K. Mishra	sanjaym@prl.res.in	01	Planetary Sciences and Exploration	Electrostatics of fine dust over Lunar surface	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
31	Sanjeev Kumar Mishra	sanjeevm@prl.res.in	02	Planetary Sciences and Exploration	1. "Design and implementation of signal conditioning unit for front end electronics of electric field measurement system in ionospheric plasma." 2. " Development of laboratory setup for measurement of dielectric properties for future planetary missions."	Instrumentation and Control, Electronics Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Geology/Geosciences/Marine Sciences/ and allied disciplines
32	Vijayan S	vijayan@prl.res.in	2	Planetary Sciences and Exploration	1. Feature extraction and analysis in Lunar images 2.Martian impact crater and it association to fluvial activities	Computer Engineering, Geology/Geosciences/Marine Sciences/ and allied disciplines
33	A Raja Bayanna	bayanna@prl.res.in	2	Solar Physics	Active optics system for MAST:	Electronics and Communications, Instrumentation and Control, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics

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34	Nandita Srivastava	<a href="mailto:nandita@prl.res.in">nandita@prl.res.in</a>	1	Solar Physics	Observational studies on initiation of solar eruptions	Physics, Astronomy, Engineering Physics, Computer Engineering, Electronics and Communication Engineering

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35	Rohan Eugene Louis	<a href="mailto:rlouis@prl.res.in">rlouis@prl.res.in</a>	1	Solar Physics	1. Tracking evolution of sunspots	Computer engineering, Electronics and Communications, Physics, Astronomy, Engineering Physics
36	Amitava Guharay	<a href="mailto:guharay@prl.res.in">guharay@prl.res.in</a>	01	Space and Atmospheric Sciences	Characteristics of atmospheric waves	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Space Sciences/Meteorology/Climate Science and allied disciplines
37	D. Pallamraju	<a href="mailto:raju@prl.res.in">raju@prl.res.in</a>	1	Space and Atmospheric Sciences	Development of algorithms for optical tomography	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
38	Dibyendu Chakrabarty	<a href="mailto:dipu@prl.res.in">dipu@prl.res.in</a>	1	Space and Atmospheric Sciences	Modeling various parameters of space payloads	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
39	Harish Gadhavi	<a href="mailto:hgadhavi@prl.res.in">hgadhavi@prl.res.in</a>	1	Space and Atmospheric Sciences	Sun-tracking system for balloon payload	Electronics and Communications, Electronics Engineering, Mechanical Engineering
40	Lokesh Sahu	<a href="mailto:lokesh@prl.res.in">lokesh@prl.res.in</a>	01	Space and Atmospheric Sciences	Measurements of reactive trace gases in the earth's atmosphere	Instrumentation and Control, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Space Sciences/Meteorology/Climate Science and allied disciplines
41	Narendra Ojha	<a href="mailto:ojha@prl.res.in">ojha@prl.res.in</a>	1	Space and Atmospheric Sciences	Evaluation of climate simulations over the Indian region	Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Geology/Geosciences/Marine Sciences/ and allied disciplines
42	Ravindra Pratap Singh	<a href="mailto:ravindra@prl.res.in">ravindra@prl.res.in</a>	2	Space and Atmospheric Sciences	Spectral image processing and analysis of satellite based datasets	Computer Engineering
43	S Ramachandran	<a href="mailto:ram@prl.res.in">ram@prl.res.in</a>	01	Space and Atmospheric Sciences	Aerosol Characteristics Over Urban Regions	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
44	Som Kumar Sharma	<a href="mailto:somkumar@prl.res.in">somkumar@prl.res.in</a>	02	Space and Atmospheric Sciences	1. Study of Clouds using Ground based and Satellites based Observations over Indian Region 2. A Comprehensive Study of the Characteristics of Atmospheric Boundary Layer (ABL) and other Atmospheric Constituents over Ahmedabad and Mt. Abu.	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics, Space Sciences/Meteorology/Climate Science and allied disciplines, Atmospheric Sciences/Environmental Sciences
45	Navinder Singh	<a href="mailto:navinder@prl.res.in">navinder@prl.res.in</a>	2	Theoretical Physics	1. Fabrication of amplifiers for the Barkhausen effect. 2. Fabrication of Lock-in set up for NMR spectrometer.	Electronics and Communications, Instrumentation and Control, Electronics Engineering
46	Partha Konar	<a href="mailto:konar@prl.res.in">konar@prl.res.in</a>	2	Theoretical Physics	Neural Network And Machine Learning for Theoretical High Energy Physics research (Prerequisite: exposure in DNN, CNN, Python etc for machine learning applications).	Electronics and Communications, Computer Engineering, Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics
47	Srubabati Goswami	<a href="mailto:srubaba@prl.res.in">srubaba@prl.res.in</a>	1	Theoretical Physics	Simulation programs for neutrino detectors	Physics/Physical Sciences/Astronomy/Optics/Photonics/Engineering Physics