Summer Internship Areas - May 1, 2020 to July 31, 2020

S. No.	Name of Faculty Advisor	Area of Internship	Laboratory Charges (Rs) per month	Remarks
	Discipline Of Astronomy, Astrophysics And Space Engineering (DAASE)			
1	Dr. Abhirup Datta	1) Astronomy, Astrophysics and Space Sciences 2) Cosmology 3) Radio Astronomy - Observations and Instrumentation 4) Statistics and Machine Learning Applications in Space 5) Square KIlometre Array - related simulations 6) Space Weather and Ionosphere 7) NaVIC and GPS applications 8) X-ray Astronomy	5000/-	
2	Dr. Siddharth Malu	*Please visit faculty webpage*	Nil	
3	Dr. Bhargav Vaidya	*Please visit faculty webpage*	Nil	
4	Dr. Suman Majumdar	*Please visit faculty webpage*	Nil	
5	Dr. Saurabh Das	*Please visit faculty webpage*	Nil	
6	Dr. Manoneeta Chakraborty	*Please visit faculty webpage*	Nil	
7	Dr. Amit Shukla	*Please visit faculty webpage*	Nil	
8	Dr. Rajkumar Hajra	1) Space weather 2) Cometary plasma and solar wind interaction 3) Earth's outer radiation belt relativistic electrons 4) Geomagnetic storms and substorms 5) Solar wind-Magnetosphere-Ionosphere coupling 6) Auroral activity 7) Ionospheric modeling 8) Ionospheric F-region irregularities	Nil	

	Discipline of Biosciences and Biomedical Engineering (BSBE)			
1	Dr. Sharad Gupta	*Please visit faculty webpage*	Nil	
2	Dr. Hem Chandra Jha	1) Pathogens derived cancer progression 2) Virus induced neurodegeneration 3) Role of Herbs to control chronic infection and subsequent disease progression	Nil	
3	Dr. Amit Kumar	*Please visit faculty webpage*	Nil	
4	Professor Avinash Sonawane	*Please visit faculty webpage*	Nil	
5	Dr. Debasis Nayak	*Please visit faculty webpage*	Nil	
6	Dr. Kiran Bala	*Please visit faculty webpage*	Nil	
7	Dr. Parimal Kar	*Please visit faculty webpage*	Nil	
8	Dr. Prashant Kodgire	*Please visit faculty webpage*	Nil	
9	Dr. Abhijeet Joshi	1) Biosensors 2) Device development	Nil	
10	Professor G. S. Murthy	*Please visit faculty webpage*	Nil	
	Discipline of Chemistry			
1	Professor Rajneesh Misra	1) Synthesis of Organic conjugated materials, and its Optoelectronic applications 2) Organic Solar Cells and OLEDS 3) Ferrocene Chemistry 4) Ultrafast Chemistry	Nil	
2	Dr. Apurba K. Das	1) Supramolecular, Bioorganic Chemistry	10,000/-	
3	Dr. Anjan Chakraborty	*Please visit faculty webpage*	Nil	
4	Dr. Sampak Samanta	*Please visit faculty webpage*	Nil	

5	Dr. Tushar Kanti Mukherjee	*Please visit faculty webpage*	Nil	
6	Dr. Biswarup Pathak	*Please visit faculty webpage*	Nil	
7	Dr. Shaikh M. Mobin	1) Design and Synthesis of Inorganic Complexes and Metal Organic Frameworks (MOFs) and Covalent Organic Frameworks (COFs) for energy storage, energy conversion and energy generations, bio-medical and catalysis. 2) Applications in Catalysis via Single Source Molecular Precursors and Nanomaterials and Crystal Engineering (Structural reactivity). 3) Employing small molecule (organic ligands and complexes) for bioimaging, cellular targets and sensing. 4) Generation of C-dots/ graphene via green source and its applications in wound healing and other bio-medical applications.	Nil	
8	Dr. Tridib K. Sarma	1) Self-assembled soft materials 2) Carbon nanomaterial based photocatalysis in organic transformation	Nil	
9	Dr. Satya S. Bulusu	*Please visit faculty webpage*	Nil	
10	Dr. Sanjay Kumar Singh	*Please visit faculty webpage*	Nil	
11	Dr. Chelvam Vekatesh	1) Drug delivery Systems, NIR and Nuclear Imaging & Bio-conjugate Technology 2) Immunotherapy and Targeting Ligands for Cancer and Inflammation 3) Total Synthesis of Biologically Important Natural Products 4) Design and Synthesis of Heterocycles and Carbocycles of Biological importance 5) Small Molecule Inhibitors for Infective Diseases and Drug Targets	Nil	

12	Dr. Amrendra Kumar Singh	*Please visit faculty webpage*	Nil	
13	Dr. Abhinav Raghuvanshi	*Please visit faculty webpage*	Nil	
	Discipline of Civil Engineering			
1	Dr. Neelima Satyam D	1) Soil structure interaction 2) Environmental geotechnics 3) Transportation geotechnics 4) Soil dynamics 5) Rock mechanics and underground structures	Nil	
2	Professor Sandeep Chaudhary	1) High Rise and Special Structures 2) Concrete Technolgy and Sustainable Building Materials 3) Precast and Prefabricated Structures 4) Finite Element Analysis	1) Nil 2) 5000/- 3) Nil 4) Nil	
3	Dr. Munir Ahmad Nayak	*Please visit faculty webpage*	Nil	
4	Dr. Lalit Borana	*Please visit faculty webpage*	Nil	
5	Dr. Manish Kumar Goyal	*Please visit faculty webpage*	Nil	
6	Dr. Mohd Farooq Azam	*Please visit faculty webpage*	Nil	
7	Dr. Saikat Sarkar	*Please visit faculty webpage*	Nil	
8	Dr. Kaustav Bakshi	*Please visit faculty webpage*	Nil	
9	Dr. Abhishek Rajput	*Please visit faculty webpage*	Nil	
10	Dr. Guru Prakash	1) Structural health monitoring of bridges 2) Degradation modeling and remaining useful life prediction 3) Damage detection in bridge components using static measurements 4) Damage detection in bridge components using dynamic measurements	Nil	MTech students preferred

		5) Use of machine learning for structural health monitoring 6) Damage assessment under impact loading 7) Strength enhancement of concrete for impact loading 8) Development of stochastic degradation model		
	Discipline of Computer Science and Engineering			
1	Professor Narendra S. Chaudhari	*Please visit faculty webpage*	Nil	On deputation to UTU, Dehradun
2	Dr. Abhishek Srivastava	*Please visit faculty webpage*	Nil	
3	Dr. Aruna Tiwari	1) Soft-computing learning algorithms 2) Learning algorithms for Big Data Handling 3) Data Mining 4) Artificial Intelligence	5000/-	
4	Dr. Anirban Sengupta	*Please visit faculty webpage*	Nil	
5	Dr. Surya Prakash	1) Machine Learning 2) Deep Learning 3) Pattern Recognition 4) Computer Vision 5) Image Processing and Big Data	5000/-	
6	Dr. Somnath Dey	1) Biometrics 2) Image Processing 3) Computer Vision 4) Machine Learning	5000/-	
7	Dr. Kapil Ahuja	*Please visit faculty webpage*	Nil	
8	Dr. Gourinath Banda	*Please visit faculty webpage*	Nil	

9	Dr. Neminath Hubballi	*Please visit faculty webpage*	Nil	
10	Dr. Bodhisatwa Mazumdar	*Please visit faculty webpage*	Nil	
11	Dr. Puneet Gupta	1) Deep learning 2) Machine learning	5000/-	
	Discipline of Electrical Engineering			
1	Dr. Amod C. Umarikar	*Please visit faculty webpage*	Nil	
2	Professor Ram Bilas Pachori	1) Signal Processing 2) Machine Learning 3) Speech Signal Processing 4) Biomedical Signal Processing	5000/-	
3	Dr. Santosh Kumar Vishvakarma	*Please visit faculty webpage*	Nil	
4	Dr. Shaibal Mukherjee	1) Solar cell 2) RF transistor 3) Next-generation memory device 4) 2D material growth 5) Bio-chemical sensor	10000/-	
5	Dr. Vipul Singh	1) Semiconductor devices, Organic electronics, LSPR effect, nanostructure growth, modeling and simulation, gas/bio sensors	Nil	
6	Professor Abhinav Kranti	*Please visit faculty webpage*	Nil	
7	Dr. Srivathsan Vasudevan	*Please visit faculty webpage*	Nil	
8	Dr. Prabhat Kumar Upadhyay	*Please visit faculty webpage*	Nil	
9	Dr. Vivek Kanhangad	1) Image analysis, computer vision, and machine learning with a focus on biometric security and	3000/-	

		biomedical applications		
10	Professor Vimal Bhatia	1) Optical Signal Processing 2) Wireless Communications 3) Applications of ML/DL/AI	1) 5000/- 2) Nil 3) Nil	
11	Dr. Mukesh Kumar	1) Optoelectronics; Integrated Photonics; Device Fabrication	10000/-	
12	Dr. Abhinoy Kumar Singh	1) Drone designing and geolocalization from drone based images 2) Kalman filtering and its nonlinear extensions	Nil	
13	Dr. Saptarshi Ghosh	*Please visit faculty webpage*	Nil	
14	Dr. Swaminathan R	1) Space-Air-Ground Integrated Networks (SAGIN) 2) Hybrid Optical-RF Communication 3) Blind Channel Code and Interleaver Reconstruction Techniques 4) Index Modulation Techniques for Next-generation Wireless Communication 5) Energy Harvesting Schemes for Integrated Optical-RF Networks 6) Non-Orthogonal Multiple Access (NOMA) Techniques 7) Intelligent Reflecting Surface-based Wireless Communications 8) TeraHertz Wireless Communication	Nil	
	School of Humanities and Social Sciences			
1	Dr. Nirmala Menon	1) Digital Humanities, Translations and machine	Nil	

		language, NLP for Humanities, Open Science/open scholarship.		
2	Dr. C. Upendra	*Please visit faculty webpage*	Nil	
3	Dr. Sanjram Premjit	*Please visit faculty webpage*	Nil	
4	Dr. Pritee Sharma	*Please visit faculty webpage*	Nil	
5	Dr. Ruchi Sharma	1) International economics 2) Industrial organization 3) Economics of innovation	Nil	
6	Dr. Akshaya Kumar	*Please visit faculty webpage*	Nil	
7	Dr. Shomik Dasgupta	*Please visit faculty webpage*	Nil	
8	Dr. Ananya Ghoshal	*Please visit faculty webpage*	Nil	
9	Dr. Neeraj Mishra	*Please visit faculty webpage*	Nil	
10	Dr. Ashok Kumar Mocherla	*Please visit faculty webpage*	Nil	
	Discipline of Mathematics			
1	Dr. Md. Aquil Khan	*Please visit faculty webpage*	Nil	
2	Dr. Sk. Safique Ahmad	*Please visit faculty webpage*	Nil	
3	Dr. Antony Vijesh	*Please visit faculty webpage*	Nil	
4	Dr. Anand Parkash	1) Commutative algebra	Nil	
5	Dr. Niraj Kumar Shukla	*Please visit faculty webpage*	Nil	
6	Dr. Ashisha Kumar	*Please visit faculty webpage*	Nil	
7	Dr. Vijay Kumar Sohani	*Please visit faculty webpage*	Nil	
8	Dr. M. Tanveer	*Please visit faculty webpage*	Nil	
9	Dr. Sanjeev Singh	*Please visit faculty webpage*	Nil	
10	Dr. Bapan Ghosh	1) Differential Equation Models in Ecology	Nil	
11	Dr. Santanu Manna	1) Wave propagation in deep underground oil pipelines. (This work is highly applicable to oil &	Nil	

		natural gas Industry) 2) Seismic intensity analysis and earthquake statistics in the central Himalayan region. (This project will help to give some prediction of the future big earthquake)		
12	Dr. Vinay Kumar Gupta	*Please visit faculty webpage*	Nil	
13	Dr. Bibekananda Maji	1) Number Theory	Nil	
	Discipline of Mechanical Engineering			
1	Professor Anand Parey	1) Noise and vibration monitoring and control of home appliances 2) Noise and vibration monitoring and control of UAV 3) Vibration measurement of sports equipment and its effect on injury of sportsperson 4) Condition monitoring of rotating machines	10000/-	
2	Professor Neelesh Kumar Jain	*Please visit faculty webpage*	Nil	
3	Dr. Bhupesh Kumar Lad	*Please visit faculty webpage*	Nil	
4	Dr. Devendra Deshmukh	*Please visit faculty webpage*	Nil	
5	Dr. I. A. Palani	1) Mechatronics system design 2) Soft robotics 3) Laser based surface processing 4) Additive manufacturing	Nil	
6	Dr. Kazi Sabiruddin	1) Thermally sprayed ceramics 2) Electroless plating of composites 3) Machining	5000/-	July 1-31, 2020

7	Dr. Ritunesh Kumar	1) Study on vapor bubble growth in microchannel heat sink 2) Study on two phase flow boiling in microchannel heat sink	Nil	
8	Dr. Santosh K. Sahu	1) Phase change materials 2) Jet Impingement 3) Synthetic jets 4) Heat transfer 5) Energy conversion 6) Numerical Modelling	2000/-	
9	Dr. Satyajit Chatterjee	*Please visit faculty webpage*	Nil	
10	Dr. Shanmugam Dhinakaran	1) Computational Fluid Dynamics (CFD); Bluff body Aerodynamics; Heat and Mass transfer in Porous Media 2) Biotechnology; Biomedical Engineering; Biofluid Mechanics; Bio-heat Transfer; Computational Fluid Dynamics	5000/-	
11	Dr. Shailesh I. Kundalwal	*Please visit faculty webpage*	Nil	
12	Dr. Indrasen Singh	*Please visit faculty webpage*	Nil	
13	Dr. Yuvraj Kumar Madhukar	*Please visit faculty webpage*	Nil	
14	Dr. Pavan Kumar Kankar	1) Design 2) Vibrations 3) Finite Element Analysis 4) Condition monitoring 5) Bio-medical signal processing 6) Machine learning/ artificial Intelligence	5000/-	
15	Dr. Girish Chandra Verma	*Please visit faculty webpage*	Nil	
16	Dr. Harekrishna Yadav	*Please visit faculty webpage*	Nil	
17	Dr. Satyanarayan Patel	*Please visit faculty webpage*	Nil	

18	Dr. Dan Sathiaraj	*Please visit faculty webpage*	Nil	
19	Dr. Ankur Miglani	1) Combustion of next-generation fuels: Nanoparticle laden fuels and gel fuels (Applications: Gas turbine, Rocket and missile Combustor) 2) Flow boiling in microchannels for removal of high heat flux (Applications: Thermal management of radars, computing clusters, servers and HV's using microchannel heat sinks) 3) Microfluidic flow control using phase change valves (Applications: flow control in lab-on-a-chip microfluidic devices) 4) Vaporization of nanofluid droplets (Applications: Spray drying to produce milk nanopowders, coatings and pharmaceutical drug delivery)	Nil	
	Discipline of Metallurgy Engineering and Materials Science			
1	Dr. Vinod Kumar	*Please visit faculty webpage*	Nil	
2	Dr. Parasharam M. Shirage	*Please visit faculty webpage*	Nil	
3	Dr. Rupesh Devan	*Please visit faculty webpage*	Nil	
4	Dr. Santosh Hosmani	*Please visit faculty webpage*	Nil	
5	Dr. Mrigendra Dubey	*Please visit faculty webpage*	Nil	
6	Dr. Eswara Prasad Korimilli	*Please visit faculty webpage*	Nil	
7	Dr. Jayaprakash Murugesan	*Please visit faculty webpage*	Nil	
8	Dr. Sumanta Samal	*Please visit faculty webpage*	Nil	
9	Dr. Ajay Kumar Kushwaha	*Please visit faculty webpage*	Nil	
10	Dr. Dhirendra Kumar Rai	1) CO2 capture and Conversion 2) Energy Storage materials 3) Environmental remediation (Dye removal, heavy metal ion sensing)	Nil	

		4) Water splitting (OER and HER)		
11	Dr. Abhijit Ghosh	*Please visit faculty webpage*	Nil	
112	Dr. Hemant Borkar	1) Development of lightweight metals (Al and Mg alloys) for automotive applications	3000/-	
13	Dr. Sunil Kumar	*Please visit faculty webpage*	Nil	
14	Dr. Ram Sajeevan Maurya	*Please visit faculty webpage*	Nil	
15	Dr. Dudekula Althaf Basha	*Please visit faculty webpage*	Nil	
	Discipline of Physics			
1	Professor Krushna R. Mavani	*Please visit faculty webpage*	Nil	
2	Professor Sarika Jalan	*Please visit faculty webpage*	Nil	On sabbatical leave
3	Dr. Ankhi Roy	1) Detector Simulation using GEANT3/4 2) High Energy Physics Simulation using different event generators - Pythia, AMPT, UrQMD 3) Implementation of Machine Learning in Physics and Biological problems	4000/-	
4	Dr. Raghunath Sahoo	High Energy Physics Experiment: QCD Phase Diagram, Quark Gluon Plasma (Big Bang Experiment), Phenomenology of Quark Gluon Plasma	Nil	
5	Dr. Preeti A. Bhobe	1) Thermoelectric Materials (chalcogenides and transition metal oxides 2) Half- Heusler Intermetallics for Spintronics 3) Quaternary Heuslers for crystal and micro-structural studies	Nil	

5	Dr. Rajesh Kumar	*Please visit faculty webpage*	Nil	
6	Dr. Somaditya Sen	1) Nanomaterials synthesis of semiconducting, multiferroic and magnetic oxides 2) Structural and Physical properties (Electrical, Opto-electronic, Magnetoelectric properties) determination of semiconducting, multiferroic and magnetic oxides 3) Structurally correlated physical properties (Electrical, Opto-electronic, Magnetoelectric properties) studies of semiconducting, multiferroic and magnetic oxides 4) Light and Gas Sensing Properties of semiconducting, multiferroic and magnetic oxides	1000/-	
7	Dr. Pankaj R. Sagdeo	*Please visit faculty webpage*	Nil	
8	Dr. Sudeshna Chattopadhyay	1) Electrical Energy Storage: Lithium and Aluminium ion batteries 2) Spectroscopy for interdisciplinary research (for Physicist, Materials scientist and Biologist) 3) Nanotechnology in Biomedical applications and Environmental remediation	Nil	
9	Dr. Manavendra N Mahato	1) Black hole thermodynamics 2) Quantum spin fields	1000/-	
10	Dr. Sudip Chakraborty	*Please visit faculty webpage*	Nil	
11	Dr. Srimanta Pakhira	1) Computational Materials Science and Engineering 2) Computational Materials Physics 3) Condensed Matter Physics	5000/-	
12	Dr. Dipankar Das	*Please visit faculty webpage*	Nil	
13	Dr. Debajyoti Sarkar	*Please visit faculty webpage*	Nil	

Note: Students are requested to contact concerned faculty advisor for any query/clarification.