**NASA INTERNATIONAL INTERNSHIP PROJECT (NASA I2)**

***Summer 2020 Term***

**APPLICATION FORM**

**INSTRUCTIONS**

1. Please complete all requested information in this **Microsoft Word file.**
2. Application deadline: **January 17th, 2020, 12:00noon.**
3. The following must be submitted electronically (scanned and emailed) by the application deadline to NASAinternship@niherst.gov.tt using a standard document naming convention, e.g. *John\_Doe\_Birth\_Certificate***.**
4. **Completed Application Form** with no modifications to the original text and format;
5. **Proof of citizenship** (i.e. a scanned copy of your birth certificate or passport biodata page);
6. **Two (2) written and signed/stamped recommendations** with the contact information of the referees, and including at least one (1) academic recommendation;
7. **Unofficial academic transcript**; and
8. **Copy of your CSEC and CAPE certificates.**
9. The following must also be submitted in hard-copy/original to address: **Ms. Darielle Rampersad**, **NIHERST, Level 13 Ministry of Education Towers, No 5 St. Vincent Street, Port of Spain, Trinidad and Tobago.**
10. Original recommendations as detailed above;
11. **Official** academic transcript.

**APPLICATION GUIDELINES:**

* Applicant **will be** penalised for not adhering to section guidelines (i.e. please abide to the word limits stipulated and only provide the number and types of supporting documents requested).
* Any learning disabilities should be stated upfront, to allow for the necessary provisions.

**1. Entrant Data**

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| --- |
| **PERSONAL DETAILS** |
| First Name: |  |
| Middle Name *(optional)*:  |  |
| Last Name: |  |
| Date of Birth: |  |
| Age:  |  |
| Citizenship: |  |
| **CONTACT INFORMATION** |
| Permanent Address: |  |
| Present Address *(If different from above)*: |  |
| Tel Contact 1*(Mobile):* |  |
| Tel Contact 2 *(Home):* |  |
| E-mail Contact 1: |  |
| E-mail Contact 2 *(Alternate email if school email was used above):* |  |
| **CURRENT ACADEMIC ENROLLMENT**  |
| Tertiary Institution: |  |
| Faculty/Department: |  |
| Programme: |  |
| Current Academic Year Enrolled *(If final year, please state):* |  |
| Graduating Year: |  |

**2. In order of priority, select two (2) research areas that best suit your interest. Please refer to the 2018-2019 NASA I^2 Project List for more details.**

**1 - First choice 2 - Second choice**

|  |  |
| --- | --- |
| Advanced Life Support |  |
| Closed-Loop Life Support |  |
| Control Internship Position |  |
| Design a Pump Control System with Flow Feedback for the Cell Science Project |  |
| Evaluation of a Variable Density Approach to Modeling Cryogenic Jets |  |
| Evaluation of Biomedical Devices for Exploration Missions |  |
| Experimental Aero-Physics Engineering Intern |  |
| Intelligence for Choosing Icy Landing and Exploration Sites (ICICLES) |  |
| Lunar Topographic Products from Orbital Images |  |
| MADCAT Project |  |
| Metabolic Control for Adaptation to Spaceflight Environment |  |
| Microbial Factories for Solar System Exploration |  |
| Monitoring Changes in ASRS Reports using Python and Text Mining |  |
| Nanotechnology in electronics and sensor development |  |
| NASA Ames SPHERES/Astrobee Facility |  |
| Orbit Analysis for LEO CubeSats and Low Lunar Orbits |  |
| Robotic Sample Transfer Automation |  |
| Rotorcraft Aeromechanics |  |
| Small Satellite Swarm Interactions |  |
| Synthetic Biomaterials: A Multi-Scale Approach |  |
| The Influence of Mechanical Unloading on Biological Function |  |
| Unmanned Aircraft System |  |
| Worldwind Application Development |  |
| Robotic 3D Mapping for Exploration of Planetary Caves |  |
| Software for Autonomous Robotic Landing on Icy Moons |  |
| Novel Planetary Robotic Sensor Development |  |
| SUPERball 2.0 Tensegrity Robot |  |
| Small Satellite Swarm Mission Design and Implementation |  |
| Astrobee Robot Software |  |
| Experimental Visualization of Shock Structure in a Miniature Arc Jet |  |
| Space Structure Assembly Robotics - The Automated Reconfigurable Mission Adaptive Digital Assembly System (ARMADAS) Project |  |
| Machine Learning classification of transit-like signals |  |
| Deep Learning Binarization of Vascular images |  |
| Modelling Moderate-to-High Ionization in Hypersonic Flows  |  |
| Shockwave Radiation Testing |  |
| Aerothermodynamics Modeling |  |
| Validating Non-Equilibrium Chemistry Models for Entry Flows |  |
| Mobile Robot for Education and Outreach |  |
| Slip Estimation for Planetary Rovers |  |
| Rover-Instrument Automation and Data Integration |  |
| Image analysis software based on neural nets and “deep learning” |  |
| Visualizing the flow field around the SLS and MPCV vehicles in a low-speed water tunnel |  |
| VESsel GENeration Analysis (VESGEN) |  |
| Analyzing satellite and drone imagery from the Atacama Desert, a Mars analog environment in Chile |  |
| Exploration of piloting for eVTOL urban operations |  |
| Analysis and Modeling of Meteoroid Ablation |  |
| Nanotechnology based sensors for chemical and biological detection – wearable sensors and medical diagnostic sensor |  |
| Genomics of Single Cell Mechanostransduction in Mouse Embryonic Stem Cells |  |
| Prognostics and Health Management for Aeronautics Applications |  |
| Geological Context for the Search for Life on Mars in Polar Ground Ice: Support for the Icebreaker mission |  |
| Next Generation Animal Tracking Project |  |
| Hybrid Rocket Modeling and Experiments |  |
| Erosional Studies of Mars and Earth Using Digital Terrain Models |  |

1. **List your association to present/past research projects explaining what research methods you used and how you utilised your research skills. (200 words or less)**
2. **How was your creativity exhibited in the above-mentioned projects? (100 words or less)**
3. **Give examples how you demonstrated your leadership skills. (100 words or less)**
4. **Write in 200 words or less how you have demonstrated interest in space programme.**
5. **Write in 1000 words or less, why you are interested in this programme and how it will be of benefit to you, your university, and Trinidad and Tobago.**
6. **Do you plan to pursue any research from September, 2019 onward, within Trinidad and Tobago (through your degree programme or otherwise) and if so, please elaborate? (50 words or less)**
7. **How did you hear about this internship?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*I hereby certify that the information provided in this Application Form is true, accurate and complete.*

Applicant Name Date