LaSPACE

Louisiana RockOn! 2022 Teams

Offered by the Louisiana Space Grant Consortium

Under the authority of the
NASA Space Grant College and Fellowship Program

Louisiana Space Grant Consortium (LaSPACE)
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Summer 2022
All previous versions of this program's guidelines are null and void.

RockOn Teams Program Summary Page

About the RockOn Program

Organized by the Colorado and Virginia Space Grant Consortia in partnership with NASA Wallops Flight Facility RockOn is a hands-on workshop, which leads teams through the process of building, testing, and flying a sounding rocket payload to an altitude in excess of 70 miles. Due to continued COVID-19 pandemic impacts, the RockOn! 2022 workshop details are still being finalized. Please note the workshop schedule (*all final dates still TBD*), requirements, and other details listed in these guidelines are subject to change.

At the moment, the RockOn! 2022 workshop will be conducted virtually and in-person. LaSPACE will support in-person participation only. If your team is selected, you are committed to going to Wallops Flight Facility. If Wallops is cancelled, you are still committed to completing your payload virtually and mailing it in as instructed for flight.

- Please note that in-person participants will be selected by Colorado Space Grant on a first come, first serve model. All in-person attendees will be required to wear masks and provide proof of COVID-19 vaccination or negative test results. These teams will do no prior hands-on work. The in-person workshop is estimated to take place from June 17-23, 2022 (plus travel time), at Wallops Flight Facility.
- In the case that Wallops is cancelled, participants will be sent kit hardware and any equipment needed to complete their experiment with their team. Teams and individuals will complete most of this workshop at their own pace, but there will be live aspects to the experience. The virtual workshop is expected to take place during April – May 2022. All experiments selected for flight must be in Colorado by the end of May, and launch is estimated for June 23.

LaSPACE is prepared to support up to five teams of three to attend RockOn this year. The workshop registration (including cost for all materials, equipment, and shipping to/from Colorado), lodging, and other travel expenses for the selected teams will be directly supported by LaSPACE; no subaward will be issued.

Program Summary

- Applications are limited to a team of three, consisting of one permanent employee (i.e. faculty or staff) and two students who will not graduate before the workshop ends. The permanent employee is intended to serve as mentor plus assist in institutionalizing the program following the workshop. Teams consisting of all faculty / staff or all students may be considered with adequate justification.
- Applications can include more than three participants, but a rank ordering must be provided. Not all extra participants are guaranteed a spot. You would identify the permanent employee and two students proposed for your core team and identify additional potential participants as “Additional 1, Additional 2” and so on.
- Applications containing “to be determined (TBD)” participants will be returned without review.
- Applications MUST include a completed set of all forms (attached to these guidelines) for each participant identified in the application. Participants may be required to complete additional forms for LaSPACE and/or RockOn management.
- Applications must be signed off on by the lead mentor.
- Multiple applications per institution may be submitted, but LaSPACE reserves the option to select only one application per institution.
- Each participant must be a U.S. citizen or U.S. permanent resident.
- Each participant mentioned in the application MUST commit to completing the entire workshop.

- All proposed participants must know how to solder and at least one team member should be familiar with Arduino programming.
- If the in-person workshop transitions to virtual, lead mentors must commit to receiving and distributing all kit hardware and equipment to the team. With safety as the priority, teams must work together either physically or virtually. It is up to the team to determine how best to accomplish this, following all campus and CDC guidelines.
- In-person participants will be expected to conform to state travel regulations and expenses will be reimbursed by LaSPACE at current standard state rates.
- In-person participants will be expected to complete travel authorizations and any other forms or registrations required by LSU Accounts Payable and Travel. Failure to comply may result in a loss of reimbursement for costs.
- All travel expense reports must be submitted to the LaSPACE office within 30 days of the workshop end date.
- A final report must be submitted to the LaSPACE office within 30 days of the workshop end date. Photographs and copies of all papers, presentations, and posters generated should be shared with LaSPACE as they occur and collected/referenced in the final report. Teams may be asked to present at the annual LaSPACE Council meeting.

Application Submissions

- **Submit all properly executed applications via email as fully searchable pdf documents (converted from Word, not scanned, other than the cover page which requires signatures) to laspace@lsu.edu by 11:59 pm on Wednesday, January 26, 2022.**
- Important Dates:
  - Application Release Date: Friday, November 19, 2021
  - Zoom Open House for Proposal Questions: Wednesday, January 12, 2022, 11:00-12:00pm CDT https://lsu.zoom.us/j/97657264820?pwd=eHBNVFdiUjg4bkcyMEcwUU1DaWFvUT09
  - Application Due Date: Wednesday, January 26, 2022
  - Anticipated Award Confirmations: February/March 2022

LaSPACE General Guidelines

Introduction to the Space Grant Program

The Louisiana Space Grant Consortium (LaSPACE) is a jurisdiction in the NASA National Space Grant and Fellowship Program network, which was designed to network colleges, universities, and state education boards with partners in business, industry, and the non-profit sector in order to promote, develop, and strengthen aerospace science, research, technology, education, and awareness. Our mission is “To enhance Space and Aerospace related research, education, and public awareness throughout the State of Louisiana and thereby promote math/science education, training of professionals, and economic development.” LaSPACE promotes scientific research, workforce development, and public outreach to develop and strengthen long-term research capabilities within Louisiana that will make significant contributions to the research and technology Mission Directorates of NASA while supporting the goals of the state.

Basis of Authority

The Louisiana Space Grant Consortium (LaSPACE) currently comprises Louisiana public and private colleges and universities in addition to business/industry partners and other organizations. The consortium is funded jointly by the National Aeronautics and Space Administration (NASA) and by the Louisiana Board of Regents Support Fund (BORSF). The consortium is administered by the LaSPACE Council, under the aegis of NASA and the Board of Regents. The basis of authority for this and other programs of LaSPACE rests in part on the above funding. It is important, therefore, to note that the implementation of LaSPACE-supported projects must conform to applicable Federal and State regulations, in general, and to the NASA stipulations, in particular.

NASA Agency Information

NASA 2018 Strategic Plan

NASA's 2018 strategic plan aligns the Agency's future activities along three strategic themes of Discover, Explore, and Develop, as well as a fourth theme focused on the activities that will enable the Agency's mission.

- DISCOVER references NASA's enduring purpose of scientific discovery.
- EXPLORE references NASA's push to expand the boundaries of human presence in space.
- DEVELOP references NASA's broad mandate to promote the technologies of tomorrow.
- ENABLE references the capabilities, workforce, and facilities that allow NASA to achieve its Mission.

The complete plan can be downloaded here.

NASA Vision

To discover and expand knowledge for the benefit of humanity.

NASA Mission

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and bring new knowledge and opportunities back to Earth. Support the growth of the Nation's economy in space and aeronautics, increase understanding of the universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.

NASA Office of STEM Engagement *(formerly Office of Education)*

NASA's journeys have propelled technological breakthroughs, pushed the frontiers of scientific research, and expanded our understanding of the universe. These accomplishments, and those to come, share a common genesis: education in science, technology, engineering, and math. NASA's Office of STEM Engagement (OSTEM) delivers tools for young Americans and educators to learn and succeed. OSTEM seeks to:

- Create unique opportunities for students and the public to contribute to NASA's work in exploration and discovery.
- Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA people, content, and facilities.
- Strengthen public understanding by enabling powerful connections to NASA's mission and work.

To achieve these goals, NASA's Office of STEM Engagement strives to increase K-12 involvement in NASA projects, enhance higher education, support underrepresented communities, strengthen online education, and

boost NASA's contribution to informal education. The intended outcome is a generation prepared to code, calculate, design, and discover its way to a new era of American innovation.

The National Space Grant College and Fellowship Program, from which LaSPACE is derived, is a component of the NASA Office of STEM Engagement's larger portfolio, managed at NASA Headquarters in Washington D.C., in alignment with the NASA Mission Directorates, and engagement with all NASA centers and facilities.

NASA Office of STEM Engagement, and by extension LaSPACE, supports the four strategic goals detailed in the 2018 plan. Research and design work supported by Space Grant or NASA EPSCoR must align with one or more of these strategic goals and corresponding objectives.

NASA Mission Directorates (MD)

Research and technology priorities are aligned with one or more of NASA's Mission Directorates:

The **Science Mission Directorate (SMD)** expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth.

The **Aeronautics Research Mission Directorate (ARMD)** transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community.

The **Space Technology Mission Directorate (STMD)** pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit-based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer.

The **Human Exploration and Operations Mission Directorate (HEOMD)** leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners.

All NASA subprograms must relate to and support one or more of these directorates. Likewise, all programs supported by LaSPACE must support the NASA organization, align with the NASA Strategic Plan, and support the goals of the Office of STEM Engagement.

NASA MD Contacts for University Researchers

Science Mission Directorate (SMD)

POC: Kristen Erickson, Director, Science Engagement Partnerships, Phone: (202) 358-1017, Kristen.Erickson@nasa.gov

The Aeronautics Research Mission Directorate (ARMD)

POC: Dave Berger, OSTEM Embed for Aeronautics, Phone: (661) 276-5712, Dave.E.Berger@nasa.gov

Space Technology Mission Directorate (STMD)

POC: Damian Taylor, SBIR and STTR Mission Directorate Liaison, Phone: (202) 358-1432, Damian.Taylor@nasa.gov

Human Exploration and Operations Mission Directorate (HEOMD)

POC: Francis P. Chiaramonte, HEOMD Science Program Management, Phone: (202) 358-0693, Francis.P.Chiaramonte@nasa.gov

NASA Center Liaisons

Ames Research Center, *Harry Partridge* Office of Chief Technologist P: (650) 604-5236 E: harry.partridge@nasa.gov	Kennedy Space Center, *Delvin van Norman* Technology Transfer Program P: (321) 867-6927 E: delvin.vannorman@nasa.gov or *Jose Nunez* Engineering Project Management Office P: (321) 867-5922 E: jose.l.nunez@nasa.gov
Armstrong Flight Research Center, *Timothy Risch* Associate Director for Research P: (661) 276-6720 E: timothy.k.risch@nasa.gov	Langley Research Center, *Neyda Abreu* Science Technology Utilization & Communication (LARC-A) P: (757) 864-4319 E: neyda.m.abreu@nasa.gov
Goddard Space Flight Center, *Heather B* Office of Chief Technologist P: (301) 286-4913 E: gsfc-chief-technologist@mail.nasa.gov or *James Harrington* Computer Research & Development P: (301) 286-4063 E: james.l.harrington@nasa.gov	Glenn Research Center, *Kurt Sacksteder* Office of Chief Technologist P: (216) 849-8549 E: kurt.sacksteder@nasa.gov or *Mark David Kankam* Technical Resources Management Office P: (216) 433-6143 E: mark.d.kankam@nasa.gov
Jet Propulsion Laboratory, *Fred Y. Hadaegh* Office of Chief Technologist Senior Research Scientist and Technical Fellow P: (818) 354-8777 E: fred.y.hadaegh@jpl.nasa.gov	Marshall Space Flight Center, *John Dankanich* Office of Chief Technologist In-Space Transportation Capability Lead (SCLT) P: (256) 544-3441 E: john.dankanich@nasa.gov
Johnson Space Center, *Nick Skytland* Office of Chief Technologist P: (281) 792-7792 E: nicholas.g.skytland@nasa.gov	Stennis Space Center, *Ramona Pelletier Travis* Office of Chief Technologist P: (228) 688-3832 E: ramona.e.travis@nasa.gov

LaSPACE Program

The Louisiana Space Grant Consortium, part of the National Space Grant College and Fellowship Program and in partnership with the Louisiana Board of Regents, supports programs at affiliated academic institutions and other Louisiana organizations that address the NASA mission, federal CoSTEM goals, and state education and economic priorities. LaSPACE programs for Research, Higher Education, Workforce Development, K-12 Teacher Development, and Public Outreach, strengthen the Science, Technology, Engineering, and Math (STEM) education needed for a diverse technical workforce, and develops the research and economic infrastructure to boost Louisiana's contribution to the aerospace frontier.

The fundamental premise underlying our programming is involvement in research at all levels (undergraduate, graduate, and faculty) that aligns with NASA research priorities and mission goals, and then leveraging that infrastructure to increase NASA-relevant science literacy around the state. Building transdisciplinary teams that perform research and provide educational opportunities is the key to developing the 21st century workforce desired by both NASA and the State of Louisiana.

LaSPACE programs emphasize student involvement in research, through which students gain technical skills, exposure to critical thinking, experience with project management, and communication skills, all of which are applicable to the student's future career. We fund projects led by Faculty PIs to provide real-world professional development activities from authentic research and design work all the way through to opportunities to share this work by presenting at conferences and meetings, as well as offering high performing students the opportunity to co-author journal articles. This combination of workforce development and faculty research helps establish new technical industries that are critical to Louisiana's economic future.

For nearly three decades, LaSPACE has provided a customized state-based program that addresses the evolving priorities of NASA and state of Louisiana objectives. We will continue to be responsive to Agency needs, national aerospace and space science goals, and industry workforce demands with an emphasis on those priorities most relevant to Louisiana.

LaSPACE Program Administration & Institutional Coordinators

General administration and management is the responsibility of the LaSPACE Staff headquartered at Louisiana State University (LSU). Questions about applications to any LaSPACE programs should be directed to the Director or Assistant Director. Unless otherwise directed, all proposals should be submitted via email to the program email address (laspace@lsu.edu). Contact info for the program management team is included below.

LaSPACE Program Office, laspace@lsu.edu, 225-578-8697
LSU Department of Physics & Astronomy |364 Nicholson Hall, Baton Rouge, LA 70803
T. Gregory Guzik, Director, tgguzik@lsu.edu | Colleen H. Fava, Assistant Director, colleenf@lsu.edu | Meaghin Woolie, Program Manager, mwooli2@lsu.edu | Doug Granger, Student Flight Program Manager, dgrang2@lsu.edu | Aaron Ryan, Outreach and Student Flight Program Coordinator, aryan21@lsu.edu

Additionally, all member institutions have appointed an institutional coordinator who sits on the LaSPACE Advisory Council and is available to discuss opportunities and processes related to LaSPACE programs. Contact information for all advisors is provided below. For institutions with a vacancy, contact the program manager listed above.

Please refer to the LaSPACE FAQs before contacting LaSPACE management and/or institutional coordinators.

LaSPACE Affiliate Institutional Coordinators

Baton Rouge Community College (BRCC)	Sandra Guzman	guzmans@mybrcc.edu	225-216-8213
BREC / Highland Road Park Observatory (HRPO)	Christopher Kersey	o@brec.org	225-768-9948
Cain Center for STEM Literacy (Cain Center)	Frank Neubrander	fneubr1@lsu.edu	225-578-4082
Delgado Community College (DCC)	Raymond Duplessis	rduple@dcc.edu	504-671-6419
Dillard University (Dillard)	Abdalla Darwish	adarwish@dillard.edu	504-816-4840
East Baton Rouge Parish Library (EBRPL)	Mary Stein	mstein@ebrpl.com	225-231-3710
Grambling State University (GSU)	Matthew F. Ware	waremf@gram.edu	318-274-2391
LaSTEM at LA BOR (LaSTEM)	Clint Coleman	Clint.coleman@laregents.edu	504-352-4891
Louisiana Arts and Science Museum (LASM)	vacant	vacant	vacant
La Board of Elementary & Secondary Education (BESE)	Ann Wilson	Ann.wilson@la.gov	225-342-0140
Louisiana Board of Regents (BOR)	Jessica Patton	jessica.domingue@la.gov	225-342-4253
Louisiana Business and Technology Center (LBTC)	Roy Keller	rkeller@lsu.edu	225-578-3985
Louisiana Economic Development (LED) FastStart	Susana Schowen	susana.schowen@la.gov	225-342-5729
Louisiana Public Broadcasting (LPB)	Christina Melton	cmelton@lpb.org	225-757-4215
Louisiana State University and A&M College (LSU)	Stephen D. Beck	sdbeck@lsu.edu	225-578-5833
Louisiana State University at Alexandria	Gerard Dumancas	gdumancas@lsua.edu	318-427-4436
Louisiana State University Agricultural Center (LSU-Ag)	Wade Baumgartner	wbaumgartner@agcenter.lsu.edu	225-578-7742
Louisiana State University Health Sciences (LSUHSC)	Lynn Harrison	lynn.clary@lsuhs.edu	318-675-4213
Louisiana State University of Shreveport (LSUS)	Urska Cvek	urska.cvek@lsus.edu	318-795-4266
Louisiana Tech University (LaTech)	Mary Caldorera-Moore	mcmoore@latech.edu	318-257-2207
Loyola University (Loyola)	Martin McHugh	mmchugh@loyno.edu	504-865-2451
McNeese State University (McNeese)	Ning Zhang	nzhang@mcneese.edu	337-475-5873
National Center for Biomedical Research & Training (LSU-NCBRT)	Jason Krause	jkrause@ncbrt.lsu.edu	225-578-0285
Nicholls State University (Nicholls)	Matt Marlow	matthew.marlow@nicholls.edu	985-448-4576
Northshore Technical Community College (NTTC)	Chuck Crabtree	charlescrabtree@northshorecollege.edu	985-545-1231
Northwestern State University of Louisiana (NSULA)	Anna Dugas	dugasa@nsula.edu	318-357-5519
Nunez Community College (NCC)	Andreas Pashos	apashos@nunez.edu	504-278-6287
River Parishes Community College (RPCC)	Esperanza Zenon	ezenon@rpcc.edu	225-743-8713
SciPort Louisiana's Science Center	vacant	vacant	vacant
Southeastern Louisiana University (SELU)	Gerard Blanchard	gerard.blanchard@selu.edu	985-549-2159
Southern University and A & M College (SUBR)	Michael Stubblefield	michael_stubblefield@subr.edu	225-771-5231
Southern University of New Orleans (SUNO)	Illya Tietzel	itietzel@suno.edu	504-286-5111
Tulane University (Tulane)	Mark J. Fink	fink@tulane.edu	504-862-3568
University of Louisiana at Lafayette (ULL)	Afef Fekih	afef.fekih@louisiana.edu	337-482-5333
University of Louisiana at Monroe (ULM)	Ken Leppert	leppert@ulm.edu	318-342-1918
University of New Orleans (UNO)	Matthew Tarr	mtarr@uno.edu	504-280-1038
Xavier University of Louisiana (Xavier)	Ashwith K. Chilvery	achilver@xula.edu	504-520-5149

LaSPACE Requirements and Restrictions

In this section, requirements and restrictions applied to all LaSPACE programs are summarized. Additional requirements and restrictions pertaining to individual programs offered by LaSPACE are detailed later in these guidelines.

Public Nature of Applications to LaSPACE

Once an application is received in the LaSPACE office, it becomes public record. Although the staff will not disseminate applications to individuals other than to reviewers, applicants should be aware that, if a request for information is made by the public (e.g., the news media), a copy of the application, by law, must be provided.

Disclosure of Information

All LaSPACE programs must conform to applicable Federal, State and NASA regulations and stipulations. This includes annual reporting of award participant information to both the Louisiana Board of Regents and NASA. Part of this information will include both directory information such as name, address, telephone number, date of birth, and demographic information such as gender, ethnicity, and race for all award participants including faculty, staff, and students. Further, LaSPACE outreach includes public dissemination of its supported programs through *The LaSPACE Newsletter*, the LaSPACE website (https://laspace.lsu.edu/), as well as papers and/or presentations at Space Grant or related Education & Public Outreach conferences. The contents of award reports, including participant names, titles, institution, project summaries, results or conclusions, and images, might be included in such public outreach articles. It is not intended that these public articles will disclose directory or demographic information except as aggregated statistical data.

Diversity

It is a national priority to increase diversity in Science, Technology, Engineering, and Mathematics (STEM), from university students, faculty, and staff to industry employees. Traditionally, minority groups and women have been under-represented in the STEM disciplines as students and faculty as well as in the workplace after graduation. LaSPACE is committed to addressing this priority and utilizing its programs, to the degree possible, to increase the diversity among its awardees. **All proposers are encouraged to help recruit diverse participants to their proposed projects.**

Animal Use

Any project proposing the use of an animal model for validation must include a local IACUC approval letter, fully signed, which specifies a validity period longer than the proposed project period. Failure to obtain the Institutional Animal Care and Use Committee's approval in advance, is grounds for returning the proposal unreviewed. Attach the IACUC material as an additional appendix.

Human Subjects

Projects that involve human subjects are not acceptable for this program.

Budgeting Restrictions, Cost-Share, Disbursement of Funds

There will be no costs associated with this award. Thus, no budget or cost-share is required for this application.

Period of Performance

The period of performance (PoP) for this particular program covers only the time period of the RockOn workshop plus travel for in-person attendees. This is estimated to be from Thursday, June 16, 2022, through Friday, June 24, 2022. Participants are required to arrive at the workshop location on June 17th and remain until June 24th, the estimated backup launch date. If the in-person workshop transitions to virtual, the PoP is estimated to be from April through June 2022. No-cost extensions are not relevant and a technical final report will be due no later than 30 days following the launch. The launch date could slip a day or two.

Louisiana RockOn! 2022 Teams

Application Guidelines

About the RockOn Program

During the RockOn workshop, teams will work on-site at NASA Wallops Flight Facility from Friday, June 17 to Thursday, June 23, and learn how to build a sounding rocket payload or RocketSat through in-person, hands-on activities. If the workshop goes virtual, participants will work through mostly self-paced, hands-on activities via a mixture of live and recorded content from April – May 2022. Teams of three will build their rocket payload from a kit and have the opportunity to launch it on a Terrier-Improved Orion sounding rocket to ~73 miles. The hardware in the kit could be used on future RocketSat, HASP, and possibly CubeSat flights. There is limited room on the rocket, so not all payloads can be flown. Teams may be required to select which single completed experiment will be flown. All experiments that fly on the rocket will be returned to the team after launch. All payloads remain the participants' property. Wallops will be providing the rocket and launch operations for the workshop. Experiments not flown on the rocket may have a chance to fly to the edge of space on a NASA high altitude balloon as part of the 2022 HASP flight in September 2022.

Figure 1: RockOn teams working on their payload

Figure 2: Integrating the sounding rocket payload.

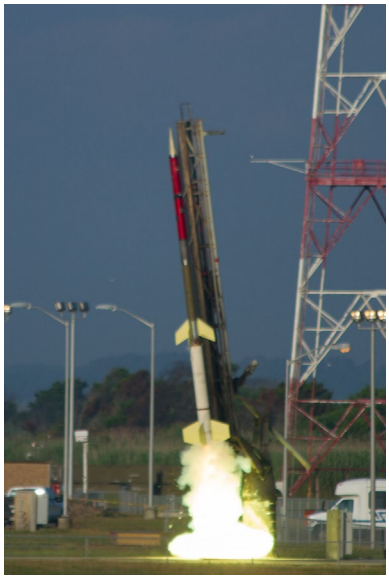


Figure 3: Sounding rocket launch

Wallops will also provide a tour and briefings on sounding rocket environments for future flights as restrictions allow at that time.

Presentations on standardized flight opportunities for future experiments called RockSat-C and RockSat-X will be given.

The workshop is not about building rockets. Rather, it is about learning to build sounding rocket payloads. Since the first workshop in 2008 to 2021, approximately 802 faculty and students from 43 states plus Washington, DC and Puerto Rico have attended and formed 290 teams. All payloads were completed in the time allotted. 266 of the 281 total launched and recovered payloads worked. Louisiana has sent teams to RockOn since 2018, comprised of students, staff, and faculty members from Delgado Community College, LaTech, LSU, McNeese, Northwestern, Southeastern, and ULL. LaSPACE has supported a RockSat C team from Delgado (2019), McNeese (2021), and Southeastern (2022). The purpose of this solicitation is to expand the experience with sounding rocket payloads to other teams across the LaSPACE consortium providing the core of expertise necessary to support new experiential student flight opportunities.

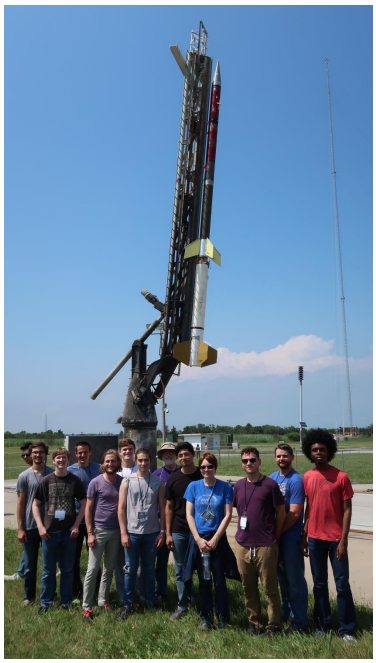


Figure 4: Louisiana at RockOn 2018

This workshop is organized by the Colorado and Virginia Space Grant Consortium with significant funding provided by NASA Wallops Flight Facility, NASA Education, and workshop participants. Further details about the RockOn workshop can be found at

https://spacegrant.colorado.edu/national-programs/rockon-home

Background and Objectives

The State of Louisiana's prime goal is to develop a well-trained, technical workforce capable of moving the state forward in R & D, attracting high tech industries, and promoting economic development. This is precisely what NASA desires and what LaSPACE is working to achieve. The core focus of the LaSPACE program continues to be student involvement in genuine scientific research and engineering projects. The goals of the RockOn Teams program are similar to those of the established LaSPACE student ballooning program LaACES and, in particular, include 1) a method to attract new students to aerospace related science and engineering programs, 2) an opportunity to give students practical experience with sensors, electronics, and "spacecraft" systems, 3) assistance in retaining these students by exciting their imagination and fostering their innate curiosity, and 4) new hands-on, experiential activities for students at LaSPACE affiliates.

PI Eligibility

Applications in response to these guidelines may be submitted only by a qualified permanent employee (e.g. faculty or staff) at a LaSPACE affiliate academic institution. This person becomes the project's Principal Investigator (PI) and is responsible for organizing and mentoring the RockOn team students at the institution, leading the team during the workshop, assuring that forms are submitted on time, ensuring that equipment is returned on time, providing additional information about team members to NASA or LaSPACE as required, and developing / submitting the final technical report.

Participant Eligibility

All participants on a RockOn team must be U.S. citizens or U.S. permanent residents and must commit to attending the entire workshop at the time the application is submitted. Student participants must not be

graduating before the end of the workshop. Each participant must know how to solder and at least one participant on the team should be familiar with Arduino programming. Each participant must complete all required forms including the 1) LA Team Registration Information Sheet, 2) LA Team Required Agreements (requires signature), 3) RockOn Memento Agreement, 4) RockOn Equipment Request (all participants must complete this in case the workshop goes fully virtual), 5) GSFC Visitor Responsibility Form, 6) LaSPACE/NASA media release form, and 7) an online LaSPACE Student Information Form (for student participants only). Forms for all participants within a given team must be included with the application. Applications that list participants as "to be determined (TBD) at a later time" will be returned without review.

Team Requirements

Louisiana RockOn Teams are targeted to consist of a team of three including the PI plus two students.

Proposal Due Date

RockOn Teams applications must be completed with all approvals / forms and submitted via email as a **fully searchable PDF document to laspace@lsu.edu by 11:59 pm on Wednesday, January 26, 2022.**

Award Funds

All costs associated with this award will be treated as reimbursable travel expenses for in-person participants. These participants will be expected to conform to state travel regulations and expenses will be reimbursed by LaSPACE only at standard state rates. Covered costs, restrictions, and requirements will be discussed well in advance of the workshop trip. No budget or cost-share is required for this application.

Final Deliverables

A Final Report for all teams is due within 30 days following the end of the RockOn workshop.

The Final Report will be a multi-page write-up that is suitable for transmission to NASA and BOR. This report should describe the activities undertaken, the participants, and your assessment, as Principal Investigator(s), of the success of the venture, the impact that it had (or will have), any follow-on proposals in preparation / submitted and any further plans for a continuation of this or similar projects on your campus. Photographs of and testimonials from student participants should be incorporated. An updated Student Participant List must be included.

Travel Expenditure Reports from all in-person participants are also due within 30 days following the end of the RockOn workshop. Travel Expenditure Reports, including receipts as necessary, will be required from these participants. Details on these expenditure reports will be provided after team selection.

All reports shall be submitted to the LaSPACE office (laspace@lsu.edu) via email.

RockOn Team Application Requirements & Format

RockOn applications should be submitted as a single, fully searchable pdf document via email to laspace@lsu.edu. Proposals must include the following completed sections in the order presented:

- LaSPACE Cover Page
- Proposal Narrative (not to exceed 5 pages)
  - Experience of PI relevant to leading / mentoring the student team plus discussion of similar types of hands-on projects (e.g. LaACES, Rocket Competitions, CubeSat, Senior Design, etc.) that have previously taken place at the institution. Please include a detailed explanation of all steps you took to recruit a diverse team of student participants.
  - Brief biography for each participant describing experience relevant to attending the RockOn workshop. Specific experience in soldering and Arduino programming should be described.
  - Anticipated outcomes for student learning and development and benefits to your department and institution.
- Forms included in the attachments to these guidelines
  - LA Team Registration Information (one per participant)
  - LA Team Required Agreements (one per participant)
  - RockOn Memento Agreement (one per participant)
  - RockOn Equipment Request (one per participant; all participants must complete this in case the workshop goes fully virtual)
  - GSFC Visitor Responsibility Form (fill out items highlighted yellow and sign)
  - LaSPACE / NASA Media Release Form (one per participant)
  - Student Participant List (online form completion certification)
- Principal Investigator Short CV (1-2 pages)

Attachments
Required Proposal Forms

Required Forms for Proposal

All proposals submitted to LaSPACE must use the forms included following this page. Proposals not using these forms may be rejected without review.

- Cover Sheet (one per application)
- LA Team Registration Information (one per participant)
- LA Team Required Agreements (one per participant)
- RockOn Memento Agreement (one per participant)
- RockOn Equipment Request (one per participant; all participants must complete this in case the workshop goes fully virtual)
- GSFC Visitor Responsibility Form (one per participant)
- LaSPACE / NASA Media Release Form (one per participant)
- Student Participant List (online form completion certification)

LaSPACE RockOn Team Application Cover Sheet

1. Title of Proposed Project: RockOn! 2022 Team – *Replace with affiliate institution name*

2. Principal Investigator: _____
(Name) (Highest Degree Earned) (Citizenship)

_____
(Department)

3. Institution of Higher Education: _____

4. Address: _____
(Street Address/P.O. Box Number)

_____
(City, State) (Zip Code)

5. Telephone: _____ FAX: _____

E-mail: _____

6. Date of Submission: _____

7. Total Funds Requested: $ Not applicable Institutional Match: $ Not applicable

****

Certification of Compliance with Applicable Executive Orders and U.S. Code: By signing and submitting this proposal, the signatories certify that the statements made in this proposal are true and complete to the best of their knowledge; they agree to comply with LaSPACE award terms and conditions if an award is made as a result of this proposal; and the institution and proposed project are in compliance with all applicable Federal and State laws and regulations including, but not limited to, Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participant's responsibilities; Non-Discrimination; Certification against Lobbying imposed by section 1352, title 31, U.S. Code; Compliance with China Funding Restriction as detailed in Public Laws 112-10 Section 1340(a) and 112-55, Section 539; ACORN Compliance in accordance with 534 of the Consolidated and Further Continuing Appropriations Act of 2012 (Pub. L.112-55); and does not have a federal tax liability or federal felony conviction (sections 544 and 543 of Public Law 112-55).

8. Signature of Principal Investigator: _____

9. Name of Authorized Institutional Rep: Not applicable

10. Signature of Authorized Institutional Rep: Not applicable

11. Date Signed: _____

RockOn! 2022 Workshop
LA Team Registration Information

Please type (do not hand-write) all answers on this form.

Legal Name (As it appears on your driver's license):

_____

Organization Name (Your institution):

_____

Space Grant Affiliation: Louisiana Space Grant Consortium (LaSPACE)

Mailing Address:

_____

_____

_____

_____

Cell Phone Number: _____

Email Address: _____

T-Shirt Size: _____

Have you attended a previous RockOn Workshop (Yes / No)? _____

Do you know how to solder (Yes / No)? _____

Are you familiar with the Arduino programming language (Yes / No)? _____

Are you a student, faculty, professional staff, or other? _____

LA Team Required Agreements

I acknowledge that additional forms may be requested at short notice from RockOn management and I commit to a quick turnaround to provide such forms. (Yes / No) Click or tap here to enter text.

I acknowledge that if the in-person workshop must convert to virtual, I commit to providing all requested information to LaSPACE and/or RockOn management. (Yes / No) Click or tap here to enter text.

I agree that I will be at the NASA / Wallops Visitor Center at 1:00 pm for the start of the workshop on Friday, June 17, 2021 in order to participate in the weeklong workshop. (Yes / No) Click or tap here to enter text.

If the workshop goes virtual, I agree that I will commence work with my team after receipt of all kit hardware and equipment, and utilize the live and recorded videos provided by RockOn in order to participate in the workshop from April – May 2022. (Yes / No) Click or tap here to enter text.

If the workshop goes virtual, I acknowledge that I may be required to return all borrowed equipment (not the actual payload) to Colorado after the workshop ends (Yes / No) Click or tap here to enter text.

I acknowledge that the workshop launch on a Terrier-Orion 2 stage sounding rocket out of NASA's Wallops Flight Facility is weather dependent. (Yes / No) Click or tap here to enter text.

I acknowledge that the workshop participants will be working all day Sunday (June 19, 2022). (Yes / No). Click or tap here to enter text.

I acknowledge that the workshop launch could be on Friday, June 24, 2022. (Yes / No). Click or tap here to enter text.

I acknowledge that the workshop launch could be moved to the week following the workshop if weather is a major factor. (Yes / No) Click or tap here to enter text.

I acknowledge that not all payloads can be flown, and my individual payload may not be selected for flight. (Yes / No) Click or tap here to enter text.

I acknowledge that while this workshop was very successful in 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, & 2021 there is a chance some things may not go as planned during the 2022 workshop. (Yes / No) Click or tap here to enter text.

Fine Print: You must be classified as a US Person (US Citizen or US Permanent Resident) in order to attend the RockOn workshop. There are no exceptions to this condition. If you are a high school student, you will need a mentor and/or chaperon to attend the workshop with you. The registration fee, hotel room & board, airline ticket, and other travel expenses associated with the RockOn workshop are being paid by the Louisiana Space Grant Consortium based upon your commitment to attend the workshop from April – May (virtually) or in June (in-person). Many of these expenses are non-refundable once receipts are issued. Therefore, once your application to attend the RockOn workshop is accepted you will need to promptly respond to all requests for information and verification of travel information. You will also be responsible for identifying a replacement in the event that serious and unforeseen circumstances preclude your attendance at the workshop. We apologize for the necessity of this FINE PRINT but we, and Colorado Space Grant, have many up-front expenses in order to put this workshop on. If you say you are coming, we are spending money before you get to the workshop. If you don't come, the money is already spent. If you have any questions about these conditions, please contact T. Gregory Guzik, Director Louisiana Space Grant Consortium.

I have read and agree with the conditions listed above in the Fine Print section.(Yes / No) Click or tap here to enter text.

I confirm that I am classified as a US Person (US Citizen or US Permanent Resident). (Yes / No) Click or tap here to enter text.

Legal Name: Click or tap here to enter text.
Date: Click or tap here to enter text.

RockOn/RockSat 2022

Memento Agreement

I _____ understand that flying a personal memento into space on the RockOn/RockSat 2022 launch is a privilege that is subject to the following restrictions:

_____ The memento shall not be powered in any way including but not limited to the use of batteries.
_____ The memento shall not contain or house liquids.
_____ The memento shall not be or contain any items that are explosive.
_____ The memento shall not be or contain any living** organisms.
_____ Volume for mementos is limited. Nothing taller than **3/16”** or the thickness of your deck plate.
_____ Mass shall not exceed **30 grams** for the entire team.
_____ All mementos are subject to available space on vehicle. Your memento may not be flown.

In addition to the said contents restriction, the undersigned agrees that:

_____ The memento will not be sold or traded for profit or gain of any kind.
_____ The memento will not be used to develop or establish commercial enterprise.

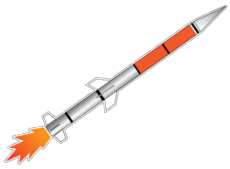
Brief description of memento:

The RockOn workshop and Wallops Flight Facility has provided this unique opportunity to fly a souvenir for as part of this workshop. Please respect this privilege and acknowledge your understanding of this agreement by initialing the above conditions and by signing your name below. In the case of a delayed launch or other unforeseen circumstance, please write the address in which you would like to ship your memento below.

_____	_____	_____
Participant Signature	Print Name	Street Address
_____	_____	_____
Date	Table Number	City, State Zip

Chris Koehler has ensured that the conditions of this agreement have been satisfied prior to flight.

_____
Approving Signature:
(Chris Koehler)



Can # _____ Picture Taken? _____

Final Weight _____ grams

** Living is a loose definition. If you are unsure, please ask Chris Koehler before flying any questionable items.

RockOn Equipment Request

Please indicate all of the items you would need to borrow to complete your RockOn hardware if the workshop must switch to a virtual environment. Please note all items are required to build your hardware. Items will be shipped to the lead mentor who will distribute them to each individual. **All of the items below may be required to be shipped back** at the end of the workshop, but the actual payload you build is yours to keep. Shipping to/from Colorado will be covered with your registration fee.

- ☐Soldering iron
- ☐Hot glue gun
- ☐Multimeter (1000V DC capability)
- ☐ESD mat
- ☐ESD wrist strap
- ☐Safety glasses
- ☐Needle nose pliers
- ☐Side cutters
- ☐Wire stripper
- ☐Solder sucker
- ☐Tweezer
- ☐3rd hand with magnifying glass
- ☐Probing stick
- ☐Phillips head screwdriver
- ☐Electrical tape
- ☐5.5mm wrench

Lead mentor ONLY, please provide the best mailing address to receive the equipment packages:

Click or tap here to enter text.

GSFC VISITOR RESPONSIBILITY FORM
Wallops Flight Facility

(TO BE COMPLETED BY THE VISITOR BEFORE BEING ISSUED A BADGE)

I hereby certify that the information contained hereon is true and complete. I agree to abide by the rules and regulations of the Goddard Space Flight Center's (GSFC) Wallops Flight Facility (WFF) and to follow the guidelines listed below as well as any additional guidelines briefed to me by my WFF sponsor/escort and to subject myself and any property under my control to an inspection deemed necessary to ensure the protection of personnel, property, and information. I agree to take no photographs unless authorized by WFF representatives. **I will complete a *GSFC Visitor Responsibility Form* for each person I am visiting.** If visiting more than one individual, I will go directly from his/her workplace to the additional sponsor's workplace without stopping in between. I understand that failure to comply with these guidelines may result in the immediate termination of my visit.

- I will wear my GSFC visitor badge above the waist at all times while on the Center.
- I will proceed directly from the Main Gate and/or Wallops Island Gate to my sponsor's workplace and, unless authorized by GSFC representatives, will not stop along the route to visit anyone other than my sponsor.
- I will comply with the directions/guidance of my sponsor at all times while on the Center.
- Upon completion of my visit I will proceed directly from my sponsor's office to the Center's exit gate, place my visitor badge in the drop box at the gatehouse, and immediately depart the Center.
- I am aware that the following items are prohibited on the WFF and, if found in my possession, constitute grounds for immediate termination of my visit: explosives, knives with more than 3-inch blades, firearms of any kind (to include BB rifles/pistols), and illegal drugs.
- By signing this form, I hereby give my consent to an inspection of my vehicle, person, and possessions to be inspected at any time while on the Center.

NAME (Last, First, MI): _____ DATE: _____

CITIZEN OF: SIGNATURE

VISITOR CARRYING (Circle all applicable Items)

Package Briefcase Camera

Recorder Other (Identify item)

REPRESENTING (Name/ and Phone No. of Company or Organization)

Keith Koehler Building F6, Room 106, 757-824-1579

GSFC SPONSOR'S NAME BUILDING/ROOM/PHONE

RockOn 2022 Workshop and Launch

PURPOSE OF VISIT

MAKE/MODEL/TAG NUMBER OF VEHICLE

NASA Media Release for Adults

(Do Not Use for Minors)

I _____ (please print your name) do hereby give permission to be interviewed, photographed, and/or videotaped by NASA or its representatives in connection with a NASA production.

I understand and agree that the text, photographs, and/or videotapes thereof containing my name, likeness, and voice, including transcripts thereof, may be used in the production of instructional, promotional materials, and for other purposes that NASA deems appropriate and that such materials may be distributed to the public and displayed publicly one or more times and in different formats, including but not limited to, websites, cablecasting, broadcasting, and other forms of transmission to the public. I also understand that this permission to use the text, photographs, videotapes, and name in such material is not limited in time and that I will not receive any compensation for granting this permission.

I understand that NASA has no obligation to use my name, likeness, or voice in the materials it produces, but if NASA so decides to use them, I acknowledge that it may edit such materials. I hereby waive the right to inspect or approve any such use, either in advance or following distribution or display.

I hereby unconditionally release NASA and its representatives from any and all claims and demands arising out of the activities authorized under the terms of this agreement.

By signing below, I represent that I am of legal age, have full legal capacity, and agree that I will not revoke or deny this agreement at any time.

I have read the foregoing and fully understand its contents.

Accepted by:

Signature: _____ Date: _____

Name and Location of Event: Media related to a NASA Space Grant / NASA EPSCoR 2021-22 Project

Address: _____

_____

Telephone: _____

Email Address: _____

Note: This release pertains to my likeness captured by LaSPACE / LA NASA EPSCoR program staff and/or funded participants, as well as media I submit to the LaSPACE Management office documenting experiences related to this Project. This release is valid for all documentation submitted or released for the duration of the project. This waiver gives LaSPACE/LaNASA EPSCoR team, LSU, the LA BoR, & NASA permission to share my likeness.

Student Participant List

Student Participant List must be completed and online demo forms filled out in advance of submitting this application.

Name	Classification	Major	Project Role
e.g. Jane Smith	*Undergraduate, Junior*	*Electrical Engineering*	*Electrical Design Lead; Technical Writing Co-Lead*

Link to Undergraduate Student Participation Form
Link to Graduate Student Participation Form

☐ Check this box to confirm that all students listed above have completed an online participant form.