



# Request for Proposals

## Kansas NASA EPSCoR Program Partnership Development Grant (PDG)



Proposal Due: **Noon October 3, 2017**  
Anticipated Award Date: **October 17, 2017**  
Anticipated Grant End Date: **October 16, 2017**

With support from NASA and the Kansas Board of Regents - the Kansas NASA EPSCoR Program (KNEP) is preparing to award Partnership Development Grants (PDG) to Kansas investigators, under the KNEP Research Infrastructure Development (RID) program.

These grants are intended to facilitate the development of beneficial and promising NASA collaborations.

The PDG recipient is expected to initiate, develop, and formalize a meaningful professional relationship with a NASA researcher. Given this expectation, it is vital investigators and students travel to a NASA center if selected for an award.

Ideally the faculty member, student, and research host become co-participants in a promising research effort. Indeed, the PDG award should lead to sustained collaboration, joint publications, and, most importantly, future grant proposals.

### Award Criteria

PDG awards are competitive, with a strong emphasis on:

- Addressing NASA and Kansas interests (required)
- Developing new, sustained, and meaningful NASA contacts (required)
- Involving US-students, especially underrepresented and underserved Kansas undergraduate and graduate students, in the research (required)
- Strengthening collaboration among academia, government agencies, business, and industry
- Exploring new and unique R&D opportunities
- Shared publications and future EPSCoR and non-EPSCoR grant submissions

Additional information on NASA and Kansas strategic objectives and other resources can be found in the appendices of this document.

Proposals must detail other important infrastructure development related components, including:

- Investigator experience and long-term research plans
- Investigator specific goals, objectives, and priorities
- Measurable, award related, deliverables or metrics
- Detailed budget information; including all costs, matching funds, and any indirect cost waivers

The KNEP PDG program cannot support proposals augmenting existing funded or well-established research projects. NASA specifically states: “*NASA EPSCoR RID elements should not augment existing funded research projects. RID activities should target unique activities that increase jurisdiction competitiveness.*” Clearly, new and unique activities increasing Kansas’ research infrastructure and competitiveness are essential and required.

### Funding, Required Match, and Restrictions

KNEP expects to award two (2) PDG grants, of approximately \$15,200 each.

The following KNEP PDG program restrictions apply:

- NASA specifically states: “*it is strongly urged that indirect costs be waived or reduced by the university; the waived indirect costs can be used as matching funds.*”

- Proposers are required to provide matching funds (cash or in-kind) that total to at least \$0.20 for each KNEP dollar requested
- Any funds requested for student support must be matched dollar-for-dollar (cash or in-kind)
- Funds cannot be used for equipment (items under \$5,000 are “supplies”)
- Funds cannot be used for foreign travel
- Funds cannot be used for civil-service personnel labor or travel
- Proposals augmenting existing funded or well-established research projects cannot be supported - new and unique activities are essential and required (as noted in a previous section)
- All NASA funds must be expended within the award period (no-cost extensions are extremely unlikely)

### Grant Reporting

Grant recipients must submit a final report (and potentially a progress report), addressing KNEP Research Infrastructure Development (RID) program objectives, including:

- Grant related publications, presentations, and theses and dissertations
- Additional proposals, submitted or accepted, owing directly to the KNEP award
- Additional funding secured from industry or other sources
- Detailed information on the faculty and students supported (e.g., number of people involved, demographics, funding amounts, activities, performance, student future plans, etc.)
- New collaborations formed with NASA and industry
- Impact on Kansas’ economic development
- Other quantifiable items, as defined by individual investigators (in their original proposals)
- An update on short- and long-term research plans
- Patent applications or awards or technical transfer activities
- Other products (courses developed, websites, software and hardware, models, etc.)

PDG target outcomes, per award, include:

- One or more publications, with NASA or relevant industry co-authors
- One or more EPSCoR or non-EPSCoR grant proposals, as a product of the PDG award
- Significant project involvement by one or more students

### Special Note:

It is critical that investigators assure the proposed work is accurately planned and completed by the noted KNEP grant end date. NASA is under notable budget pressure. Indeed, they recently indicated, “*requests for no-cost extensions (NCEs) will be reviewed with increased scrutiny. It is possible that future NCE requests will be denied, and remaining funds will be returned to the Federal Government.*”

### Proposal Submission:

There is an 8-page limit for all PDG proposal content (no exceptions). Use one-inch margins, a 12-pt times new roman font, and single-spaced text. A specific proposal format or style (e.g., NSF) is not expected or required. Proposers simply need to effectively address expectations outlined in this RFP.

The proposal budget must clearly identify the distribution of available KNEP and university matching funds.

Proposals must include a signature of the submitting Organization’s Authorizing Official.

Submit a single proposal document in PDF-format (less than 2-MB in size) to the KNEP director, [scott.miller@wichita.edu](mailto:scott.miller@wichita.edu), by noon on the noted date (see the page one header).

Contact the KNEP Director ([scott.miller@wichita.edu](mailto:scott.miller@wichita.edu) or 316-978-6334) with any RFP related questions.

## **Appendices**

PDG awards are designed to help researchers develop relationships with NASA Mission Directorates and Field Centers, and possibly industry, as appropriate. The efforts must, obviously, also address areas of Kansas and NASA interest.

The following material outlines Kansas and NASA strategic interests. Additional NASA specific resources and contact information is also included.

## Appendix A

### Kansas Strategic Interests

State science and technology strategic interests are outlined in a strategic planning document entitled *Kansas Building an Environment for Science and Technology for Innovation* or “*Kansas B.E.S.T. for Innovation.*”

An approach to meeting Kansas’ strategic objectives is outlined in this document using four goals, listed as follows:

- *“Stimulate discovery and innovation through partnerships by building on current areas of strength in agriculture, transportation, health, and education, and nurturing emerging areas of opportunity in bioscience, energy, and the environment”*
- *“Translate the results of research into meaningful solutions to societal challenges by fabricating new and patentable devices and methodologies, and providing invaluable information for better-informed policies and partnerships with stakeholders”*
- *“Grow the economy by applying new technologies and expanding access to information technology, resulting in vibrant and diverse economic development that brings tangible benefits to the citizens of Kansas and attracts new business to the state”*
- *“Educate a diverse workforce and the next generation of science, technology, and business leaders”*

Kansas’ relevant areas of strength and focus include:

- Health and well-being
- Aviation and transportation
- Bioscience
- Materials
- Energy and environment

The creation of new multidisciplinary groups, industrial collaborations, partnerships, and an appropriately educated workforce leading to new products, jobs, and industry in Kansas is highly desirable.

## Appendix B

### NASA Strategic Goals

KNEP focuses its program and project elements on NASA's interests. From the Kansas perspective, as outlined in previous sections, the following specific "NASA Strategic Plan 2014" goals and objectives are significant:

- Strategic Goal 1 - *"Expand the frontiers of knowledge, capability, and opportunity in space."*
  - Objective 1.2: *"Conduct research on the International Space Station (ISS) to enable future space exploration, facilitate a commercial space economy, and advance the fundamental biological and physical sciences for the benefit of humanity."*
  - Objective 1.4: *"Understand the Sun and its interactions with Earth and the solar system, including space weather."*
- Strategic Goal 2 - *"Advance understanding of Earth and develop technologies to improve the quality of life on our home planet."*
  - Objective 2.1: *"Enable a revolutionary transformation for safe and sustainable U.S. and global aviation by advancing aeronautics research."*
  - Objective 2.2: *"Advance knowledge of Earth as a system to meet the challenges of environmental change, and to improve life on our planet."*
  - Objective 2.3: *"Optimize Agency technology investments, foster open innovation, and facilitate technology infusion, ensuring the greatest national benefit."*
  - Objective 2.4: *"Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets."*

The underlined portions of NASA's strategic objectives are particularly important to Kansas. Specific state interests intersect strongly with NASA's in the science and aeronautics related areas. Kansas has notable expertise in aviation, advanced materials, biotechnology, energy, and earth sciences. Logically, it's within these common areas Kansas is positioned to do well. KNEP is eager to grow and diversify related research infrastructure to assist NASA and Kansas in meeting its goals.

The 2014 NASA Strategic Plan is accessible at:

[http://www.nasa.gov/sites/default/files/files/FY2014\\_NASA\\_SP\\_508c.pdf](http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf).

## Appendix C

### NASA Mission Directorates

NASA's Mission *to pioneer the future in space exploration, scientific discovery, and aeronautics research*, draws support from four Mission Directorates, each with a specific responsibility.

**Aeronautics Research Mission Directorate (ARMD)** works to solve the challenges that still exist in our nation's air transportation system: air traffic congestion, safety and environmental impacts. Solutions to these problems require innovative technical concepts, and dedicated research and development. NASA's ARMD pursues the development of new flight operation concepts, and new tools and technologies that can transition smoothly to industry to become products. Through green aviation, NASA is helping create safer, greener and more effective travel for everyone. Our green aviation goals are to enable fuel-efficient flight planning, and reduce aircraft fuel consumption, emissions and noise. NASA aeronautics' four research programs conduct fundamental, cutting-edge research into new aircraft technologies, as well as systems-level research into the integration of new operations concepts and technologies into the Next Generation Air Transportation System (NextGen). A fifth program manages a portfolio of wind tunnels and other testing facilities (icing, propulsion), flight research and support aircraft, and the evolution of test technologies at NASA centers around the country. Additional information on the Aeronautics Research Mission Directorate (ARMD) can be found at: (<http://www.aeronautics.nasa.gov>)

**Human Exploration & Operations Mission Directorate (HEOMD)** provides the Agency with leadership and management of NASA space operations related to human exploration in and beyond low-Earth orbit. HEO also oversees low-level requirements development, policy, and programmatic oversight. The International Space Station, currently orbiting the Earth with a crew of six, represents the NASA exploration activities in low-Earth orbit. Exploration activities beyond low Earth orbit include the management of Commercial Space Transportation, Exploration Systems Development, Human Space Flight Capabilities, Advanced Exploration Systems, and Space Life Sciences Research & Applications. The directorate is similarly responsible for Agency leadership and management of NASA space operations related to Launch Services, Space Transportation, and Space Communications in support of both human and robotic exploration programs. Additional information on the Human Exploration & Operations Mission Directorate (HEOMD) can be found at: (<http://www.nasa.gov/directorates/heo/home/index.html>)

**Science Mission Directorate (SMD)** leads the Agency in four areas of research: Earth Science, Heliophysics, Planetary Science, and Astrophysics. SMD, using the vantage point of space to achieve with the science community and our partners a deep scientific understanding of our planet, other planets and solar system bodies, the interplanetary environment, the Sun and its effects on the solar system, and the universe beyond. In so doing, we lay the intellectual foundation for the robotic and human expeditions of the future while meeting today's needs for scientific information to address national concerns, such as climate change and space weather. At every step we share the journey of scientific exploration with the public and partner with others to substantially improve science, technology, engineering and mathematics (STEM) education nationwide. Additional information on the Science Mission Directorate (SMD) can be found at: (<http://nasascience.nasa.gov>)

**The Space Technology Mission Directorate (STMD)** is responsible for developing the crosscutting, pioneering, new technologies and capabilities needed by the agency to achieve its current and future missions. STMD rapidly develops, demonstrates, and infuses revolutionary, high-payoff technologies through transparent, collaborative partnerships, expanding the boundaries of the aerospace enterprise. STMD employs a merit-based competition model with a portfolio approach, spanning a range of discipline areas and technology readiness levels. By investing in bold, broadly applicable, disruptive technology that

industry cannot tackle today, STMD seeks to mature the technology required for NASA's future missions in science and exploration while proving the capabilities and lowering the cost for other government agencies and commercial space activities. Research and technology development takes place within NASA Centers, in academia and industry, and leverages partnerships with other government agencies and international partners. STMD engages and inspires thousands of technologists and innovators creating a community of our best and brightest working on the nation's toughest challenges. By pushing the boundaries of technology and innovation, STMD allows NASA and our nation to remain at the cutting edge. Additional information on the Space Technology Mission Directorate (STMD) can be found at: ([http://www.nasa.gov/directorates/spacetech/about\\_us/index.html](http://www.nasa.gov/directorates/spacetech/about_us/index.html))



## Appendix D

### NASA Points of Contact

There is a NASA EPSCoR Research Liaison within each Mission Directorate and at each Center. These liaisons can assist with activities ranging from site visits for establishing collaborations to resolving issues after the award. Technical and scientific questions about research opportunities in this announcement may be directed to the appropriate contact below. Discussions of research with the appropriate NASA EPSCoR Research Liaison (MD, Center, or JPL) personnel are strongly encouraged.

Aeronautics Research Mission Directorate  
Tony Springer  
Lead, Communications and Education NASA Headquarters  
Phone: (202) 358-0848  
[Tony.Springer@nasa.gov](mailto:Tony.Springer@nasa.gov)

Science Mission Directorate  
Stephanie Stockman  
Education/Public Outreach Lead NASA Headquarters  
Phone: (202) 358-0039  
[Stephanie.A.Stockman@nasa.gov](mailto:Stephanie.A.Stockman@nasa.gov)

Human Exploration & Operations Mission Directorate  
Bradley Carpenter  
Space Life and Physical Sciences Research and Applications Division NASA Headquarters Phone:  
(202) 358-0826  
[bcarpenter@nasa.gov](mailto:bcarpenter@nasa.gov)

Space Technology Mission Directorate  
Joseph Grant  
Education Lead NASA Headquarters Phone: (202) 358-0070  
[Joseph.Grant@nasa.gov](mailto:Joseph.Grant@nasa.gov)

Ames Research Center  
Elizabeth Cartier  
Space Grant Coordinator, Office of Education and Public Outreach Phone: 650-604-6958  
[Elizabeth.A.Cartier@nasa.gov](mailto:Elizabeth.A.Cartier@nasa.gov)

Kennedy Space Center  
Benita DeSuza  
NASA Internships, Fellowships and Scholarships (NIFS) Lead Phone: (321) 867-3671  
[Benita.W.Desuza@nasa.gov](mailto:Benita.W.Desuza@nasa.gov)

Armstrong Flight Research Center  
Oscar Murillo  
MIRO Project Manager Phone: (661) 276-6110  
[Oscar.J.Murillo@nasa.gov](mailto:Oscar.J.Murillo@nasa.gov)

Langley Research Center

Gamaliel (Dan) Cherry  
University Affairs Officer Phone: (757) 864-6113  
[Gamaliel.R.Cherry@nasa.gov](mailto:Gamaliel.R.Cherry@nasa.gov)

Goddard Space Flight Center  
David J. Rosage  
Education Specialist  
Phone: (301) 286-0904  
[david.j.rosage@nasa.gov](mailto:david.j.rosage@nasa.gov)

Glenn Research Center  
Mark David Kankam, Ph.D.  
University Affairs Officer  
Dir. of NASA Space & Aeronautics Academy at Glenn  
Phone: (216) 433-6143  
[Mark.D.Kankam@nasa.gov](mailto:Mark.D.Kankam@nasa.gov)

Jet Propulsion Laboratory  
Linda Rodgers  
University Programs Administrator  
Phone: (818) 354-3274  
[Linda.Rodgers@jpl.nasa.gov](mailto:Linda.Rodgers@jpl.nasa.gov)

Marshall Space Flight Center  
Frank Six  
University Affairs Officer  
Office of Academic Affairs (HS30)  
Phone: (256) 961-0678  
[Norman.F.Six@nasa.gov](mailto:Norman.F.Six@nasa.gov)

Johnson Space Center  
Kamlesh Lulla  
Director, University Research Collaborations and Partnership Office  
Phone: (281) 483-3065  
[Kamlesh.P.Lulla@nasa.gov](mailto:Kamlesh.P.Lulla@nasa.gov)

Stennis Space Center  
Nathan Sovik  
University Affairs Officer  
Phone: (228) 688-7355  
[Nathan.A.Sovik@nasa.gov](mailto:Nathan.A.Sovik@nasa.gov)

## Appendix E

### Useful Reference Web Sites

NASA:

<http://www.nasa.gov>

NASA Office of Education:

<http://education.nasa.gov>

NASA Education Strategic Coordination Framework:

[http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Strategic\\_Coordination\\_Framework.html](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Strategic_Coordination_Framework.html)

NASA Strategic Plan:

[http://www.nasa.gov/sites/default/files/files/FY2014\\_NASA\\_SP\\_508c.pdf](http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf)

Vision for Space Exploration:

[http://www.nasa.gov/missions/solarsystem/explore\\_main.html](http://www.nasa.gov/missions/solarsystem/explore_main.html)

14 CFR Part 1260, NASA Grant and Cooperative Agreement Handbook:

[http://prod.nais.nasa.gov/pub/pub\\_library/grcover.htm](http://prod.nais.nasa.gov/pub/pub_library/grcover.htm)

NASA Centers & Facilities:

<http://www.nasa.gov/offices/education/centers/index.html>

Guidebook for Proposers Responding to a NASA Research Announcement:

<http://www.hq.nasa.gov/office/procurement/nraguidebook>

Proposed Budget Format:

[http://code210.gsfc.nasa.gov/grants/grants.htm#Grant\\_Forms](http://code210.gsfc.nasa.gov/grants/grants.htm#Grant_Forms)