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Opportunity Title: Sensor Technology
Opportunity Reference Code: 0010-NPP-MAR25-GRC-TechDev

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0010-NPP-MAR25-GRC-TechDev

How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 3/1/2025 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

Opportunity Restricted to US Citizens Only

The objective of the sensor research is to develop minimally intrusive, multifunctional, miniaturized smart sensors including microelectromechanical systems (MEMS) and MEMS type structures for use in harsh environments. Research focuses on measurement of such parameters as surface temperature, strain, pressure, chemical species, gas temperature, gas flow, turbulence, and heat flux on propulsion system materials and components. Clean room processing and device test facilities are used in the fabrication and testing of the thin-film based micro- and nano-devices to improve the sensor performance. Surface-science and electron microscopy techniques are used to characterize the chemistry and structure of thin-film devices.

In the control sensor work, the objective is to develop long-life sensors to measure temperature, strain, pressure, cracking, and chemical species in order to provide information on engine conditions. This information can be used to continuously monitor engine health, control emissions, and to provide early warning for serious breakdowns in engine structural integrity. These sensors must be reliable for long-term operation in harsh environments.

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Location:
Glenn Research Center
Cleveland, Ohio

Field of Science: Technology Development

Advisors:
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216-433-6459

Questions about this opportunity? Please email npp@orau.org

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.