

## **NEW FRONTIERS IN SPACE AND THE FUTURE WORKFORCE**

Virginia Tech and Aerospace Corp are sponsoring this conference to focus on the workforce needed to meet the changing directions of the space sector. We will explore the role that universities and community colleges play in advancing technology development while training the future workforce on the key knowledge and capability areas required for success. What steps need to be taken today to ensure that the future space workforce is representative of the United States, including diverse voices from multiple backgrounds? The conference will bring together leaders from industry, government, non-profit and academic institutions to chart a path for the future

**Date: April 23, 2024**

**Location: Virginia Tech Research Center in Arlington, 900 North Glebe Road, Arlington, VA 22203.**

### **CONTEXT**

Space exploration and utilization are in a period of rapid and spectacular growth. Space has become far more accessible and much less expensive. The reduction in size, weight, and power of space instrumentation has led to significantly more capabilities in space. In-space servicing of space assets is becoming a reality. NASA is returning to the moon for extended operations and considering habitation. Communications and internet delivery systems are increasingly operated from space, including from massive satellite constellations. Earth observation satellites used in many disciplines are now operated by more than 50 countries with an increasingly innovative private sector, including new types of “space companies” that are smaller, nimbler, and work at speeds unheard of in the past.

The tangible benefits of space-based innovation and development are numerous and motivate the emerging space economy. They extend the utilization of space to orbits stretching from typical low Earth orbit to that of the moon, leading to a new era for space and the so-called cislunar enterprise. Opportunities will eventually include mining and space manufacturing.

New skills are needed for this new age. Employees need to be able to both “build it and fly it”, to have able to work at the enterprise level, to have multi-disciplinary knowledge and digital fluency.

### **SESSIONS**

#### **SESSION 1: Panel Discussion on New Frontiers in Space**

This panel discussion will focus on changing dynamics in the industry, particularly the role of companies that have entered the space industry in recent years and how they are changing the field. Where are technologies going and what new activities are we doing in space? What capabilities are required to achieve plans for the future?

## **SESSION 2: Ensuring the Right Talent to Meet Workforce Needs**

This panel will address issues such as: 1) What are some best practices in workforce development; 2) What skills does industry need and what are current gaps? 3) What is the role of experiential learning in preparing the workforce; 4) How do we ensure Diversity, Equity, and inclusion? 4) What talent areas do we need to invest in for the future?

**BREAKOUT DISCUSSION 1:** Attendees and panelists break out into smaller groups to brainstorm ideas to address topics discussed in Session 1 or 2.

## **LUNCH BREAK**

## **SESSION 3: Building the Pipeline: K-12 Initiatives in STEM**

Many experts in the space industry believe that we cannot start too soon in developing both student interest and academic skills needed for careers in space. This panel will address initiatives taking place and ideas for the future.

**BREAKOUT DISCUSSION 2:** Attendees and panelists break out into smaller groups to brainstorm ideas to address Session 3 topics.