

**Program Contact:**

Bala Poduval, 720-412-8502  
Affiliate Research Scientist  
bpoduval@spacescience.org

**Media Contact:**

Karly Pitman, 720-974-5874  
Executive Director  
pitman@spacescience.org

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## APPLICATIONS OF STATISTICAL METHODS AND MACHINE LEARNING IN THE SPACE SCIENCES

Virtual Conference Announcement

Boulder, Co. May 14, 2021

Over 200 scientists and students from around the world will be participating in the virtual science conference titled "Applications of Statistical Methods and Machine Learning in the Space Sciences" to be held during May 17 -20, 2021 (<http://spacescience.org/workshops/mlconference2021.php>).

The week long meeting, hosted by Space Science Institute, SSI, headquartered in Boulder, Colorado, will consist of invited keynote talks and contributed oral talks as well as poster presentations, and informal scientific discussions.

The virtual conference will focus on bringing together researchers from 19 different countries and all areas of space science to leverage the advancements in statistics, data science, and methods of artificial intelligence (AI) such as machine learning and deep learning, and information theory.

Conceived as a multidisciplinary gathering, the event aims to improve analytic models and their predictive capabilities in making use of the enormous datasets available in the field of space sciences. "It will also offer a unique opportunity for students and young researchers to enhance their knowledge in the emerging techniques of AI and statistical studies in addition to being a platform for future collaborations," says Dr. Karly Pitman, Executive Director of SSI in Boulder.

"The sheer variety of presentations at the event will give participants an overview of significant works in disciplines related to space sciences (such as solar physics and aeronomy, planetary sciences, geology, exoplanet and astrobiology, galaxies), artificial intelligence, statistics and data science," says Dr. Bala Poduval, Chair of the conference's Scientific Organizing Committee.

Contributions on a wide range of topics including, but not limited to, advanced statistical methods, deep learning, and neural networks, times series analysis,



Bayesian methods, feature identification, and feature extraction, physics-based models combined with machine learning techniques and surrogate models, space weather prediction and other domain topics where AI is applied are among the highlights of the conference.

### **About SPACE SCIENCE INSTITUTE**

Space Science Institute (SSI) is a nonprofit, public benefit research and education 501(c)(3) corporation founded in 1992 with a vision to expand humankind's understanding and appreciation of planet Earth, our Solar System, and the universe beyond. SSI's mission is to (a) enable scientists to make new discoveries, (b) increase science and technology literacy for people of all ages and backgrounds, and (c) inspire youth to pursue science-technology education and career opportunities. It is headquartered in Boulder, Colorado, with locations distributed across the U.S. and internationally.

[www.space-science.org](http://www.space-science.org)

SSI scientists work on many prestigious space missions, including but not limited to the Mars Exploration Rovers, Rosetta, Mars and Lunar Reconnaissance Orbiters, Mars Science Lander, Juno, ExoMars, OSIRIS-REx, and Mars 2020. Areas of research also include heliophysics, observational astronomy (with such facilities as Hubble Space Telescope, SOFIA), and exoplanets (Kepler). SSI's National Center for Interactive Learning (NCIL) fosters collaboration between scientists and educators to create nationally touring exhibits for museums and libraries, provide professional development and webinar training for science educators, and build popular digital games and apps with over a million hits.

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