

Good day

Across the sciences, individuals, groups, and institutions are grappling with how to more effectively use data science. Indeed the need to understand how to utilize data science for scientific discovery is only becoming more important as the questions we are asking require more intelligent and efficient use of data. The rapidly changing landscape of data science makes it more difficult to navigate the tools and trends, societal demands on physical science grow with growing planetary challenges, and pockets of successful collaboration between physical and data scientists remain limited.

Join us for a frontier session at this year's [Fall American Geophysical Union meeting](#): "[Scientific Understanding from Data Science: Scientific discovery from data science-science collaborations.](#)"

This session defines data science capaciously: "Scalable architectural approaches, techniques, software and algorithms which alter the paradigm by which data are collected, managed, analyzed, and communicated."

Physical science across domains and at all institutions can greatly benefit from data science to overcome a variety of real challenges that are with us today. Data science isn't new, but large, complex data understanding has propelled it to the forefront of physical science.

We believe three key data science technologies are vital:

- Through physical model-based inference, we transform observation into understanding.
- Through Uncertainty Quantification, we provide the rigor to draw valid conclusions.
- Through Machine Learning, we gain computational efficiency, rapid discovery, and insight-building identification of key drivers.

Our conveners represent key strategic initiatives across the nation to create new, vibrant communities of practice where physical and data scientists work together to increase the speed, depth, and rigor of scientific return by revealing new connections. This uncommon AGU session is an invitation to join the nascent strategic network that seeks to bring these three key data science technologies together with physical scientists in a collaborative community that co-owns science inquiry.

This session will be a frontier forum to showcase the latest demonstrations of scientific progress through the use of data science and will be a meeting place of the communities exploring the changes that are needed to continue asking and exploring high-impact science questions, the ones that push the boundaries of what we know.

Join an uncommon network of people, groups, places pioneering interconnections between physical science and data science.

Kind regards,

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