Non-Deterministic Approaches at SciTech 2022

Call for Papers Supplemental Information

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Joint Session Topics

The following topics will be jointly hosted by Non-Deterministic Approaches (NDA) and corresponding technical disciplines:

Joint sessions between NDA and Multidisciplinary Design Optimization (MDO)

- Design Under Uncertainty
- Physics-informed Machine Learning: Methods & Applications

Joint session between NDA and Wind Energy (WE)

- Uncertainty Analysis Advancements for Wind Energy Applications

Joint session between NDA and Guidance, Navigation, and Control (GNC)

- Uncertainty Quantification and Analysis of Complex Aerospace Systems
- Note that submission to this joint track requires adherence to the GNC requirement of a full draft manuscript, which must include sufficient detail to allow informed evaluation by the assigned reviewers. Extended abstracts will be returned without review. Full draft manuscripts must not exceed a total length of 15 pages, formatted in accordance with the AIAA SciTech manuscript template.

Joint session between NDA and Materials (MAT)

- Realizing ICME, Including UQ and Experimental Validation (Contact: Pinar Acar, Virginia Tech, email: pacar@vt.edu)

Joint session between NDA and Fluid Dynamics (FD)

- CFD Verification and Validation

Joint session between NDA and Applied Aerodynamics (APA)

- Aerodynamic Design Under Uncertainty

Joint session between NDA and Digital Engineering (DE)

- Uncertainty Quantification for the Digital Twin/Thread
- Digital Engineering Best Practices using Uncertainty Quantification

Joint session between NDA and Ground Testing (GT)

- Flow Quality, Data Quality, and Uncertainty Quantification

Joint session between NDA and Structural Dynamics (SD)

- Model Uncertainties and Uncertainty Quantification in Structural Dynamics