



**Open Position: Postdoctoral Research Fellow**  
**University of Illinois *Aeroacoustics and Flow Physics* Group**

**Data-informed Model Reduction for Control of  
Fluid-Thermal-Structure Interaction**

The University of Illinois at Urbana-Champaign seeks outstanding candidates for a **postdoctoral research fellowship to perform aeroelastic instability detection and suppression in UAV propulsion systems**. The successful candidate will simulate and develop data-informed reduced-order models for the unsteady, turbulent flow interacting with the compliant blades of the compressor and turbine components of a turbomachine to understand, predict and control resonances caused by the fluid-thermal-structural interaction. The position is open immediately.

*Necessary Qualifications:*

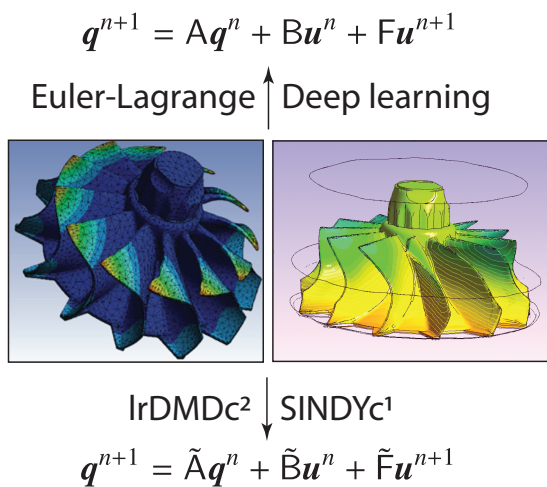
1. Ph.D. in Aerospace Engineering, Mechanical Engineering, Theoretical Mechanics, Physics, Applied Mathematics or a related science and engineering field.
2. Prior experience with computational fluid dynamics, computational structural dynamics, and/or conjugate heat transfer codes.

*Applications:*

Applicants should send a CV with a cover letter, the names of at least two references, and a summary of recent work and interests as a single PDF document to: Daniel J. Bodony, [bodony@illinois.edu](mailto:bodony@illinois.edu)

More information about the *Aeroacoustics and Flow Physics* Group and its associated research and people can be found at <http://acoustics.ae.illinois.edu>.

*The University of Illinois is an Equal Opportunity, Affirmative Action employer. Minorities, women, veterans and individuals with disabilities are encouraged to apply. For more information, visit <http://go.illinois.edu/EEO>.*



1. Fonzi, Brunton & Fasel (2020) Data-driven nonlinear aeroelastic models of morphing wings for control, *Proc. Roy. Soc. A*.
2. Sashittal & Bodony (2019) Reduced-order control using low-rank Dynamic Mode Decomposition, *TCCF*



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