NSF NHERI DESIGNSAFE

Cyberinfrastructure for Natural Hazards Research

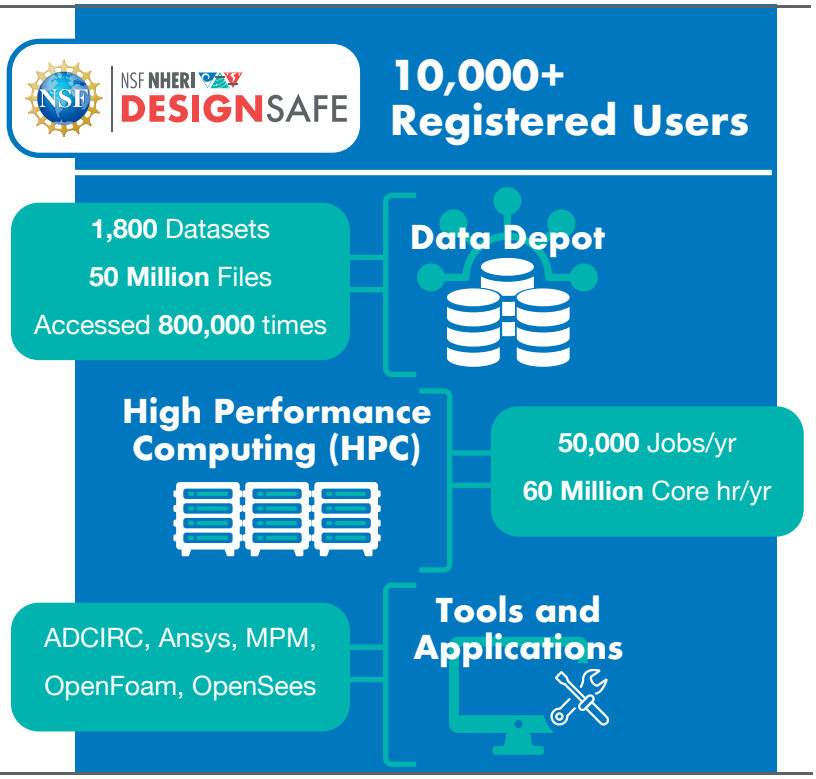
NSF Award CMMI-2022469

DesignSafe (www.designsafe-ci.org) is the leading cyberinfrastructure for engineering research and education related to natural hazards. It serves experimental, field, and simulation data, it provides computational resources, and it facilitates discoveries that are driven by Artificial Intelligence (AI) – all of which reduce the impacts of natural hazards on the built environment and communities.

Data You Can Trust.

The **DesignSafe** Data Depot is a Trustworthy Data Repository of the CoreTrustSeal Standards and Certification Board.

Fewer than 5% of data repositories worldwide have been certified by CoreTrustSeal.



Supporting Research Funded by 6 NSF Directorates and 25+ Federal and State Agencies

EDU GEO
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CISE TIP

US Army Corps of Engineers · USDA · National Academies Sciences Engineering Medicine · U.S. Department of Energy · NOAA · NIST National Institute of Standards and Technology U.S. Department of Commerce · NIH · USGS science for a changing world · NASA

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DesignSafe Impact

New building code seismic design provisions for retaining walls have saved millions of dollars across two recent projects, including the Intuit Dome in Los Angeles. These design provisions were developed using computations and experimental data available in **DesignSafe**.

DesignSafe and its AI partners, such as Chishiki-ai.org, have trained almost 1,000 researchers on a wide variety of AI methods and their application to **DesignSafe** data using **DesignSafe** computational resources.

Elevated homes, common in coastal communities, will be better designed for hurricane winds using new wind load specifications in the building code. These wind load specifications were derived from hurricane field damage data and wind tunnel experimental data available in **DesignSafe**.

The Texas Coastal Resiliency Master Plan and the US Army Corps of Engineers utilized storm surge simulations available on **DesignSafe**, as well as models of tank damage developed on **DesignSafe**, to assess hurricane risks to the Texas Gulf Coast and to evaluate the benefits of multi-billion dollar coastal protection systems.