Scaling Fallacy

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Tendency to assume:

if a system that works at one scale
=> also works at a smaller or larger scale
Flying at different scales
Load assumptions

- scaling the design by some factor
- assuming the working stresses by the same factor
Interaction assumptions

- scale a design
- assume the design interaction is the same at other scale levels
• **Avoiding scaling fallacy**

  – **Verify load assumptions through:**
    - careful calculations
    - systematic testing
    - appropriate safety factors

  – **Minimize incorrect interaction assumptions through:**
    - careful research of analogous designs
    - monitoring how design is used after implementation
Thank you for your attention!