### Practical MDO with spen/ND/O

#### John Jasa

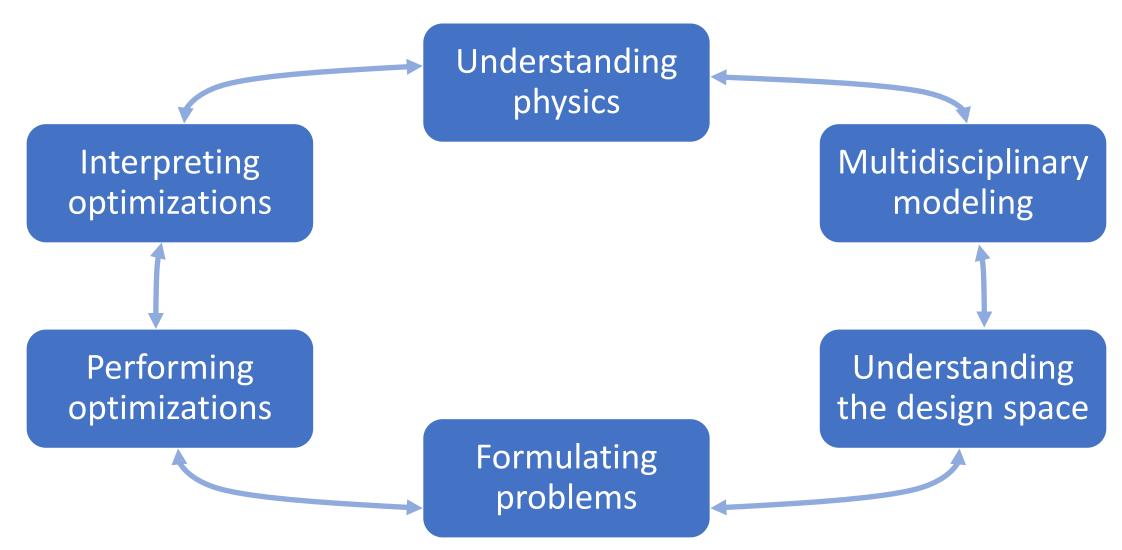
john.jasa@nasa.gov

Banner Quality Management Inc (BQMI) NASA Glenn Research Center

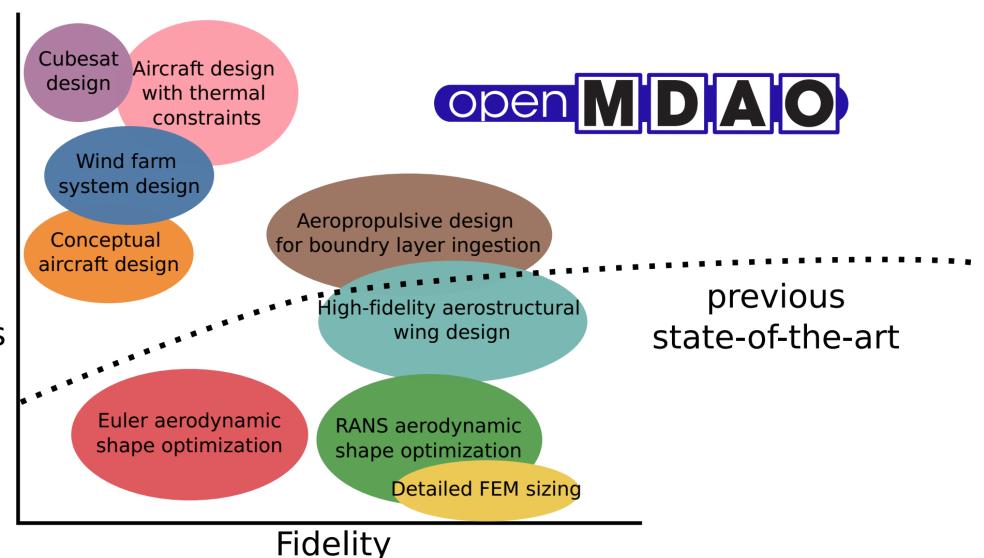
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# MDAO is a powerful tool but understanding and harnessing that power is not easy



### Making the hard easy and the impossible hard



# of Disciplines

#### The course focuses on three main topics

Optimization Modeling f,g,hOptimizer **MDAO** df dg dh $\frac{dx}{dx}, \frac{dx}{dx}$ Differentation

## The video lessons should be an accessible entry point for many ideas related to MDAO

- Each about 5-15 minutes
- A mix of figures, math theory, and code walkthroughs
- We connect different lessons together and reference them in the video and description
- Each lesson is placed in the larger context of the course

## Most lessons have an accompanying interactive Jupyter notebook

- More exposition and detail
- Links to references and docs
- Corresponding OpenMDAO code for concepts
- Also exercise type notebooks with problems, hints, and solutions

## Lessons are organized into the three main topics and as collections

- Collections of guided lessons include:
  - 0 to optimization in 10 steps
  - What to do when someone hands you a model
  - What you need for just gradient-free optimization

#### Other notes

- Subtitles and transcripts provided for each lecture for accessibility
- Searchable website so you can find keywords or jog your memory
- Cross-posted and cross-linked lessons on the website

### Live walkthrough of the website

https://openmdao.github.io/PracticalMDO/intro.html

#### Thanks!

john.jasa@nasa.gov