1st Technical Workshop

DC7: Complex (constitutive) modelling for immersed and shell discretizations

Presenter name: Angelos Pagonas
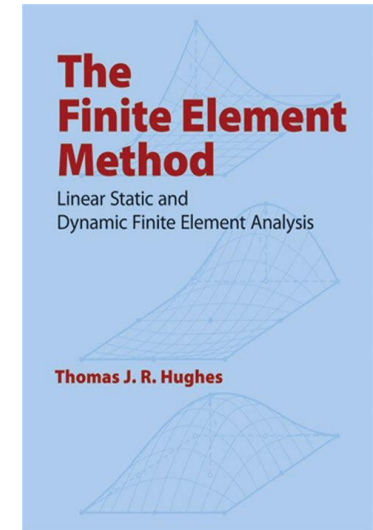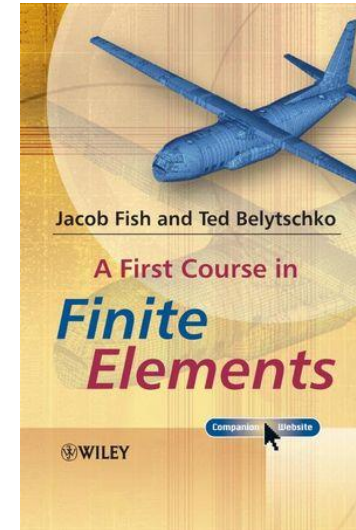**Email: angelos.pagonas@pm.me**
Date: 9/1/2024

Design for IGA-type discretization workflows

Funded by the European Union

Revision of the FEM

- Theory of FEM

- More academic and fundamental point of view

- Emphasize more on mathematical concepts

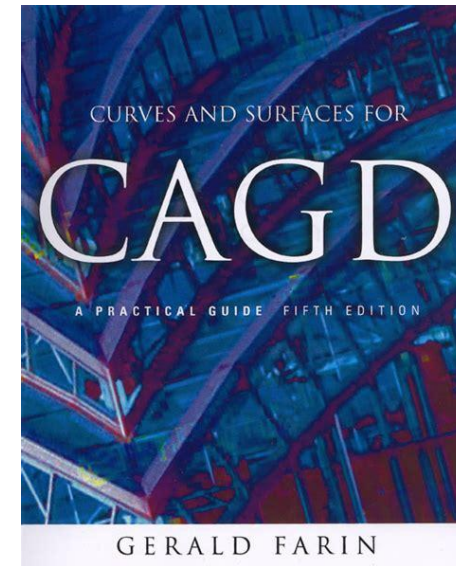MIT 18.085 Computational Science & Engineering I, Fall 2008
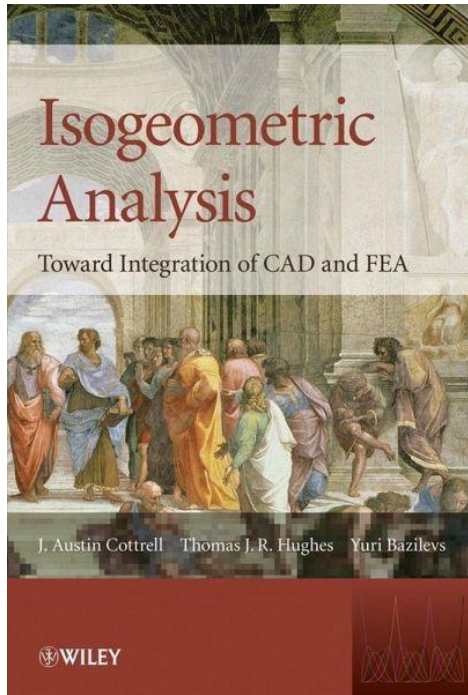Lectures by Prof. Strang

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Design for *IGA*-type discretization workflows
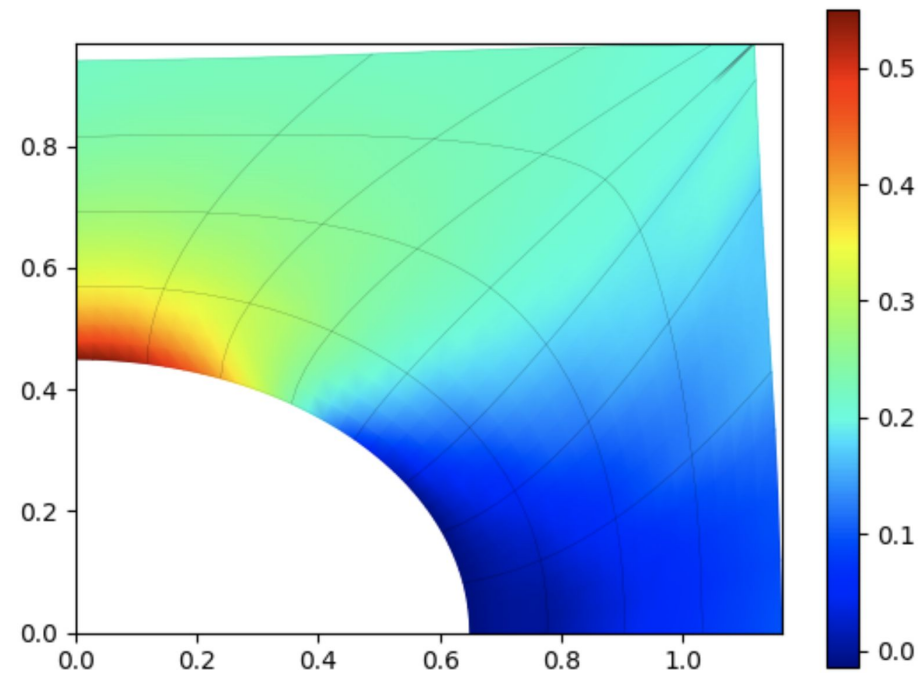
Introduction to B-Splines

- De Casteljau Algorithm
- Bernstein form of a Bézier Curve
- B-Splines
- Rational B-Splines
- Tensor Product Patches

Introduction to IGA

- IGA book and additional material
- Exploring the Nutils framework
- Testing and studying existing examples

Next steps

- Emphasize more on hands-on learning through Nutils

- Trying to modify the existing examples and understand the underlying structure

- Revisit the IGA book to develop more confidence in topics that are not yet clear

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Design for *IGA*-type
discretization workflows

Thank you!

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