COMSOL Multiphysics®, COMSOL Compiler™ a COMSOL Server™

Martin Kožíšek
Produktový manažer
HUMUSOFT

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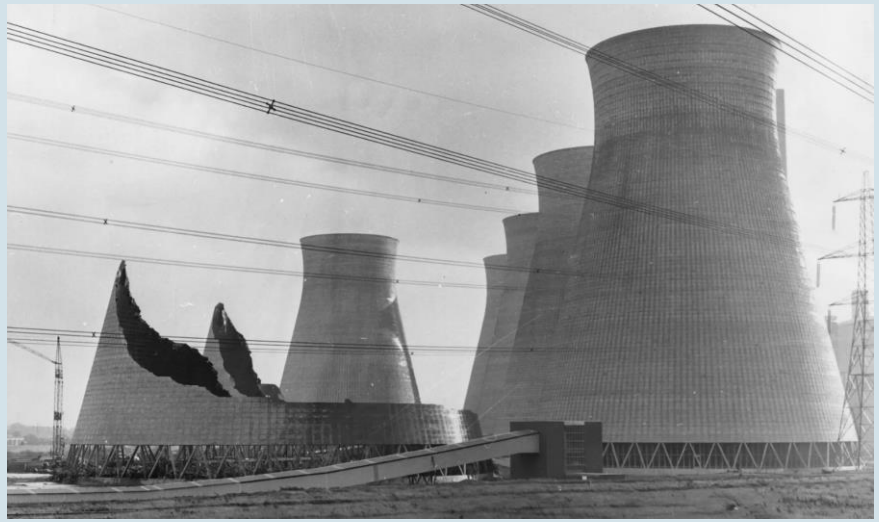
HUMUSOFT

Příklad fyzikálního děje

- Elektrárna Ferrybridge
- Inženýrská katastrofa 1.11.1965
- Výpočtáři neuvažovali rozložení věží při výpočtech aeroelasticity
- 28.7.2019 řízený odstřel věží

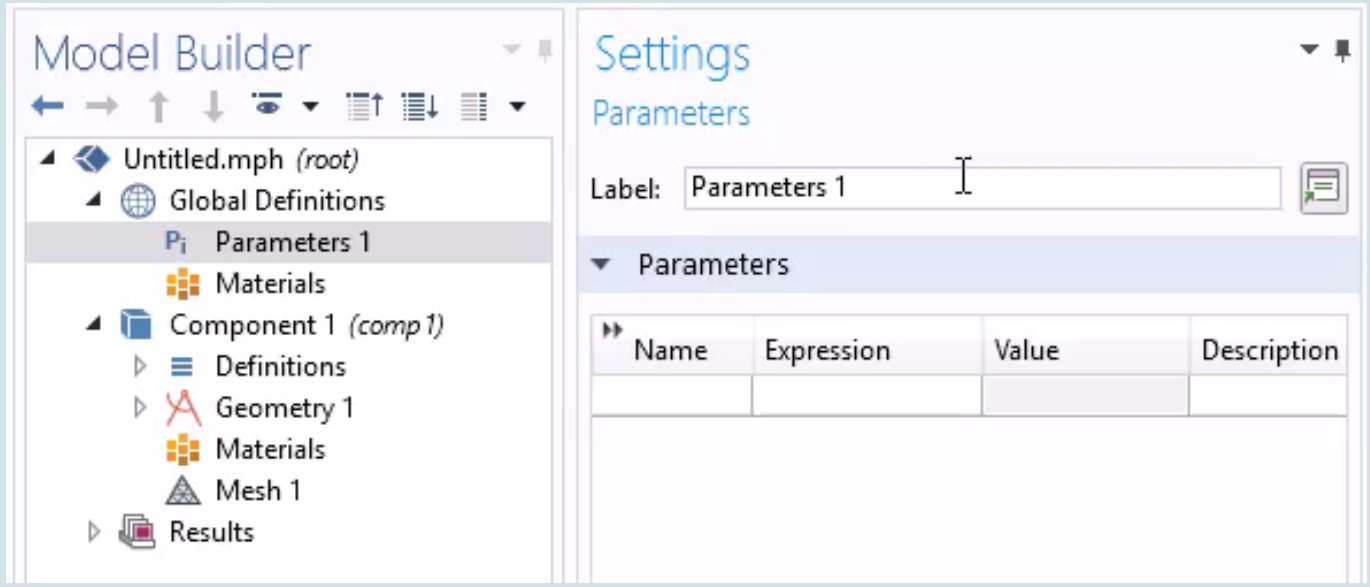
zdroj videa řízeného odstřelu 28.7.2019: youtube.com

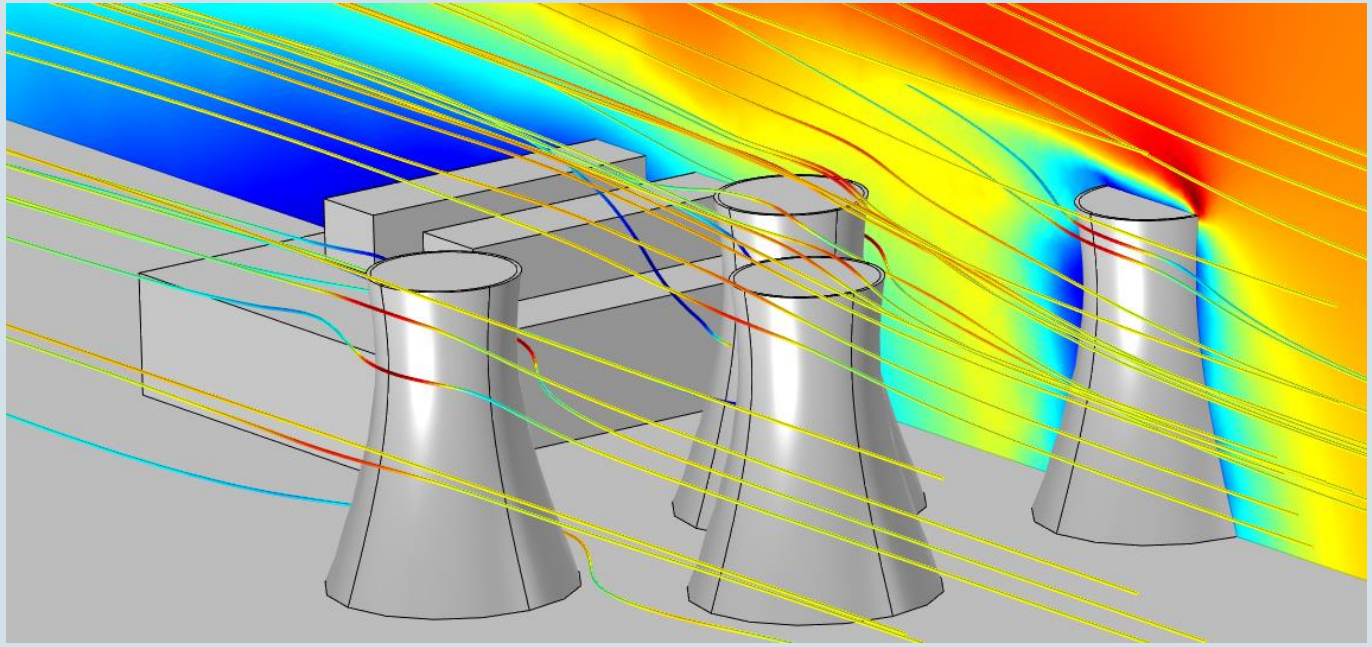


zdroj: wikipedia.com

COMSOL Multiphysics®

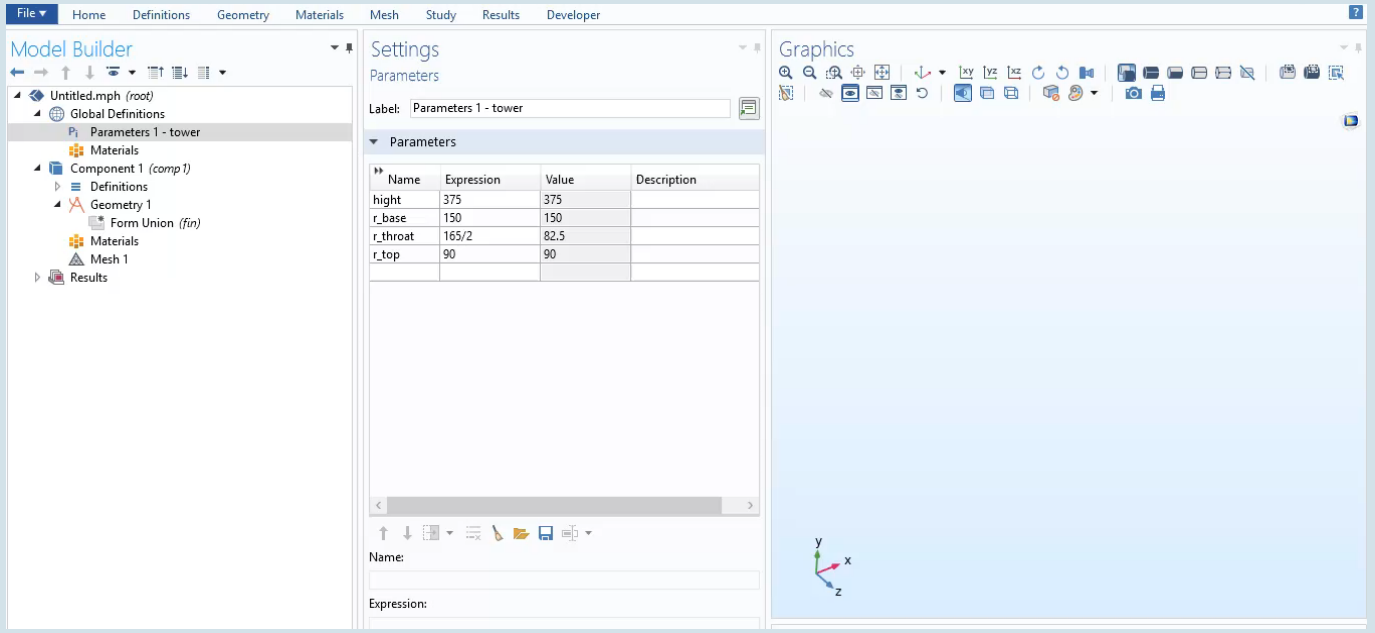
- Definice parametrů

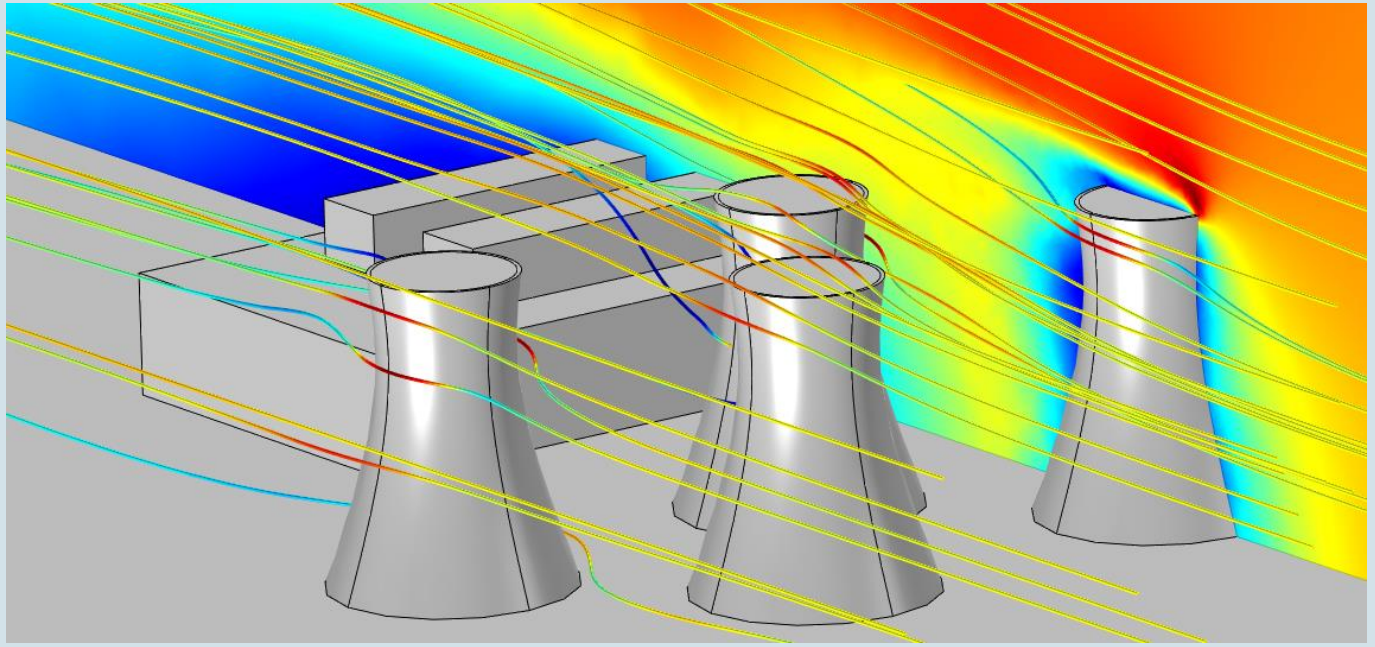




COMSOL Multiphysics®

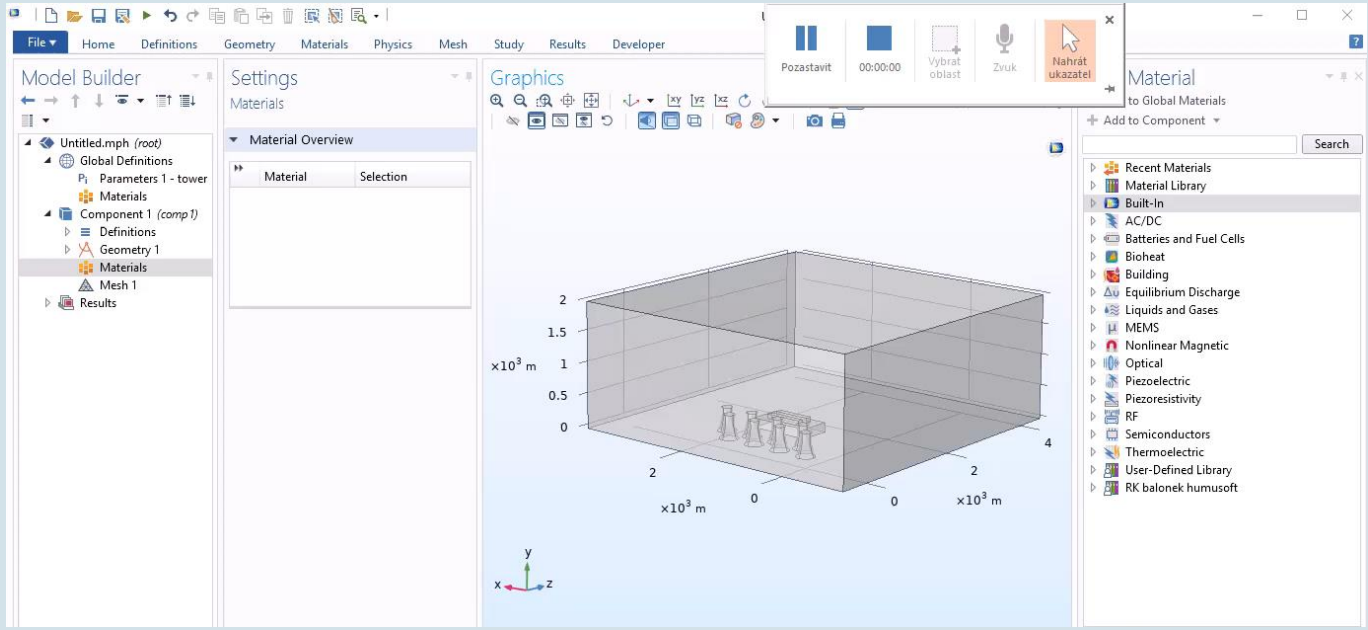
- Definice parametrů
- Tvorba/import geometrie

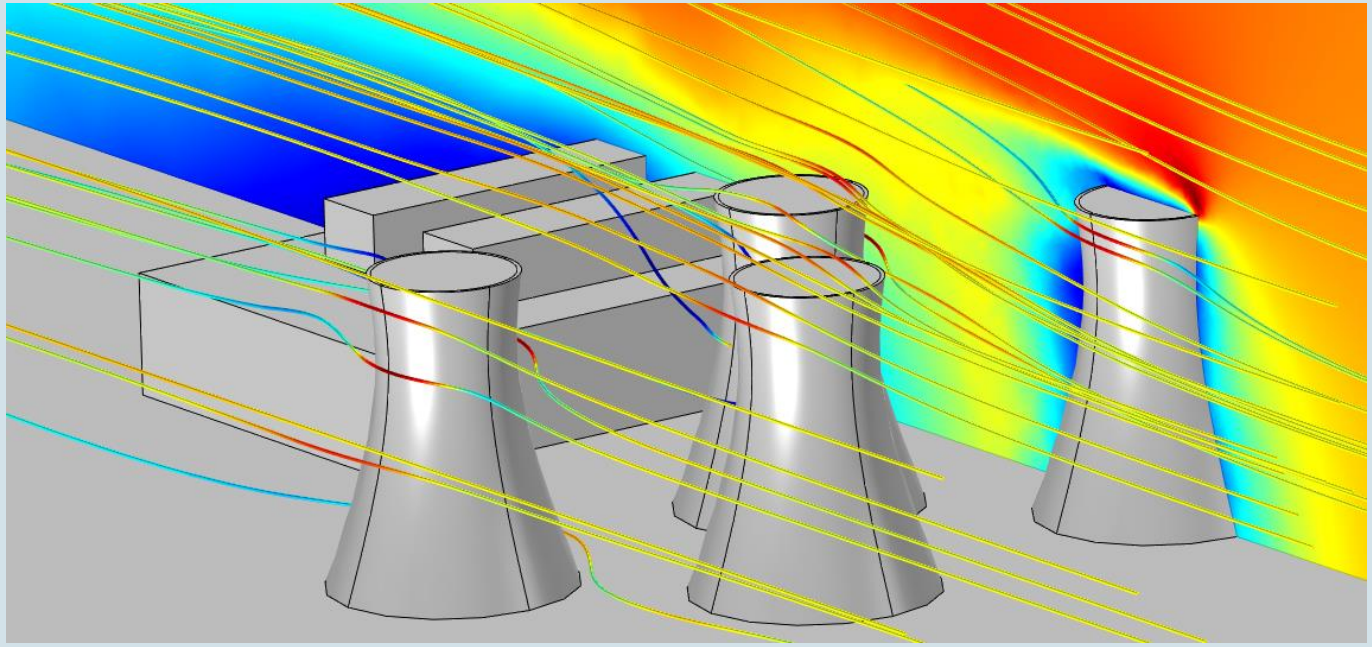




COMSOL Multiphysics®

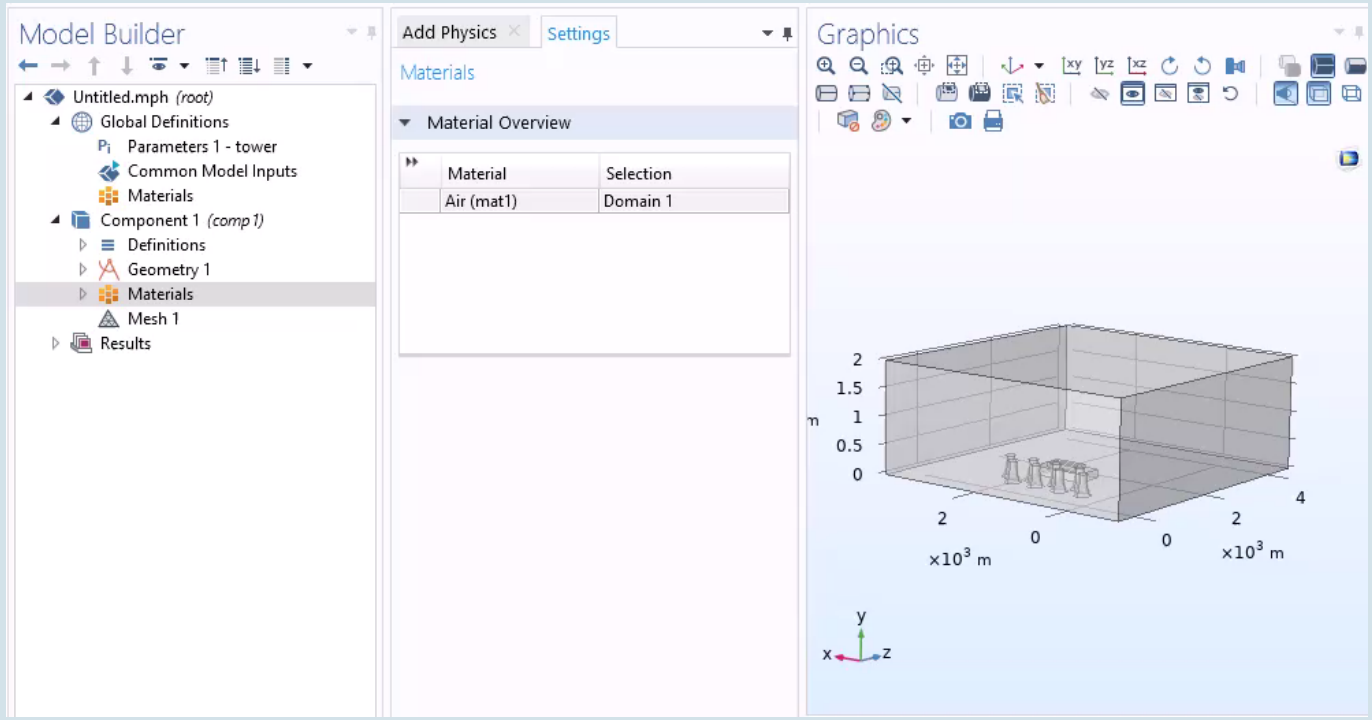
- Definice parametrů
- Tvorba/import geometrie
- Knihovna materiálů

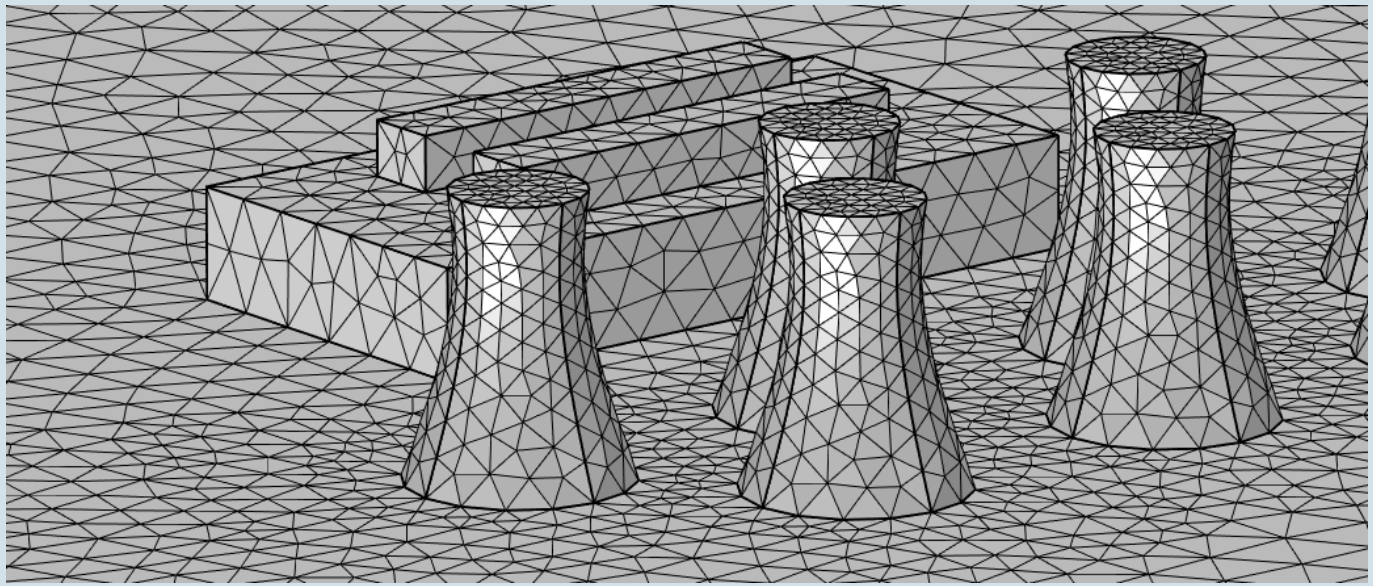




COMSOL Multiphysics®

- Definice parametrů
- Tvorba/import geometrie
- Knihovna materiálů
- Okrajové a počáteční podmínky
- Síťování výpočetní oblasti





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- Definice parametrů
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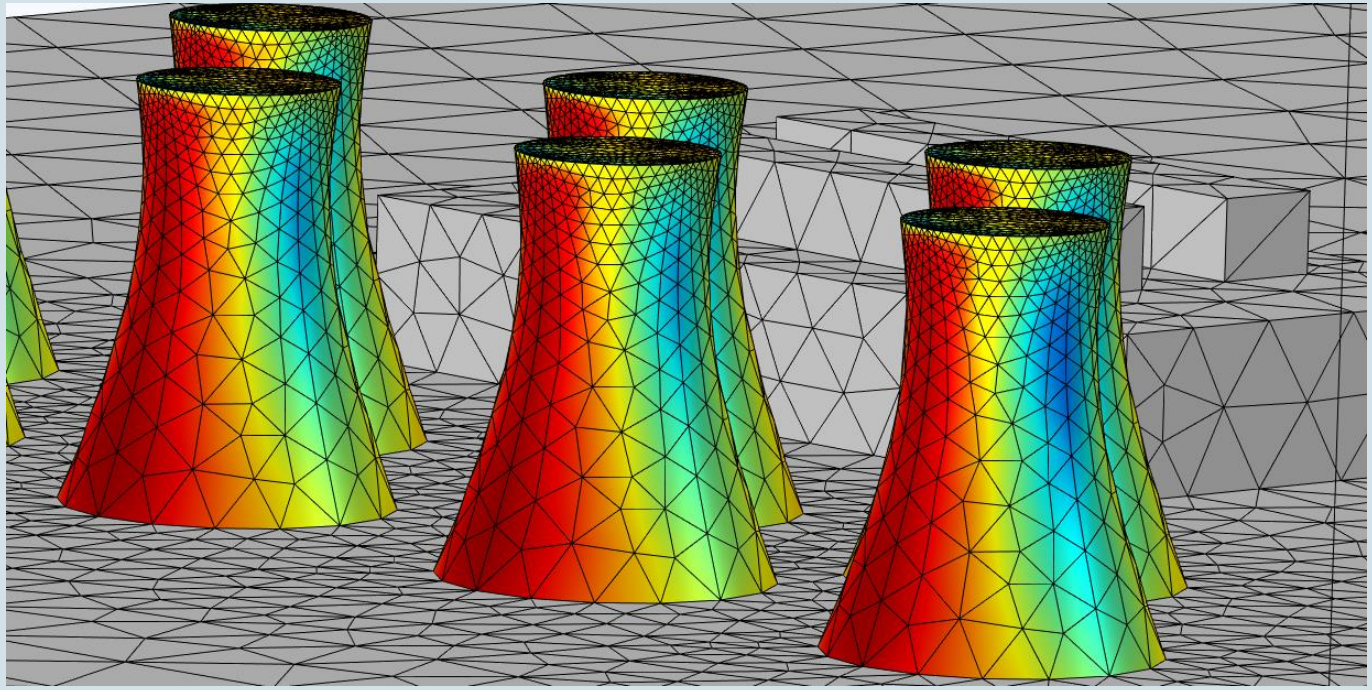
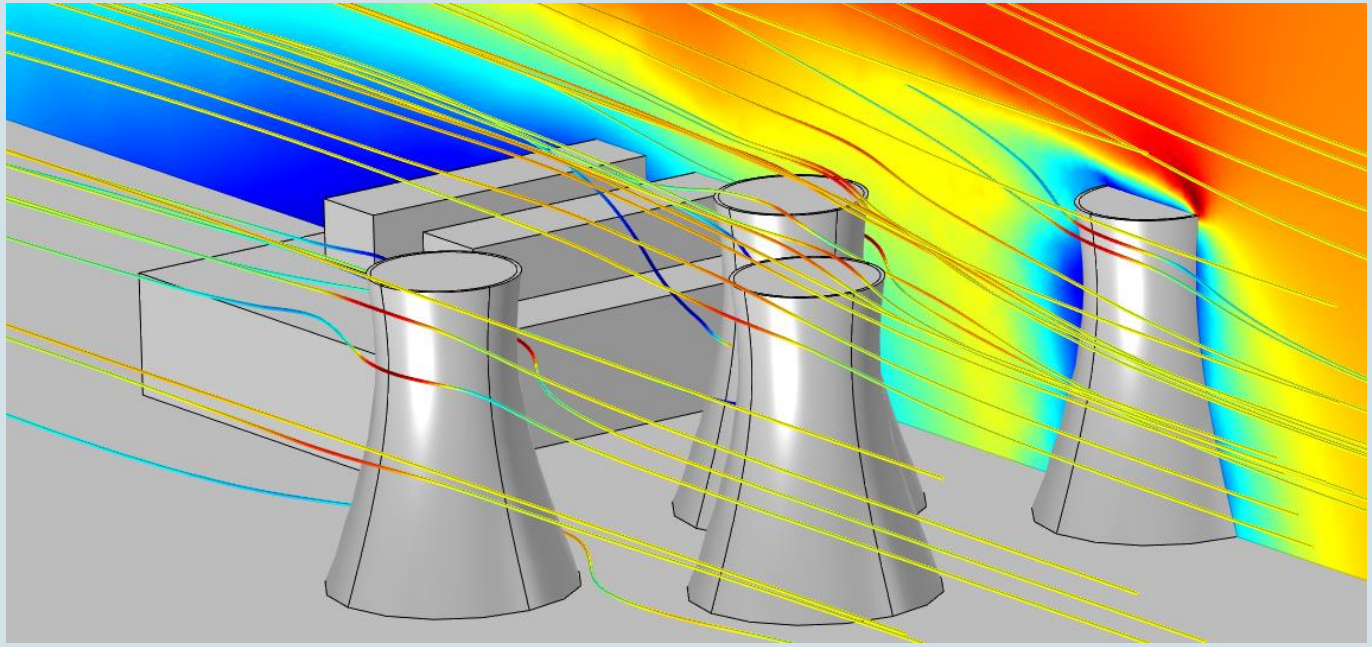
- Výpočet simulace fyzikálního děje
- Zpracování výsledků





COMSOL Multiphysics®

- Definice parametrů
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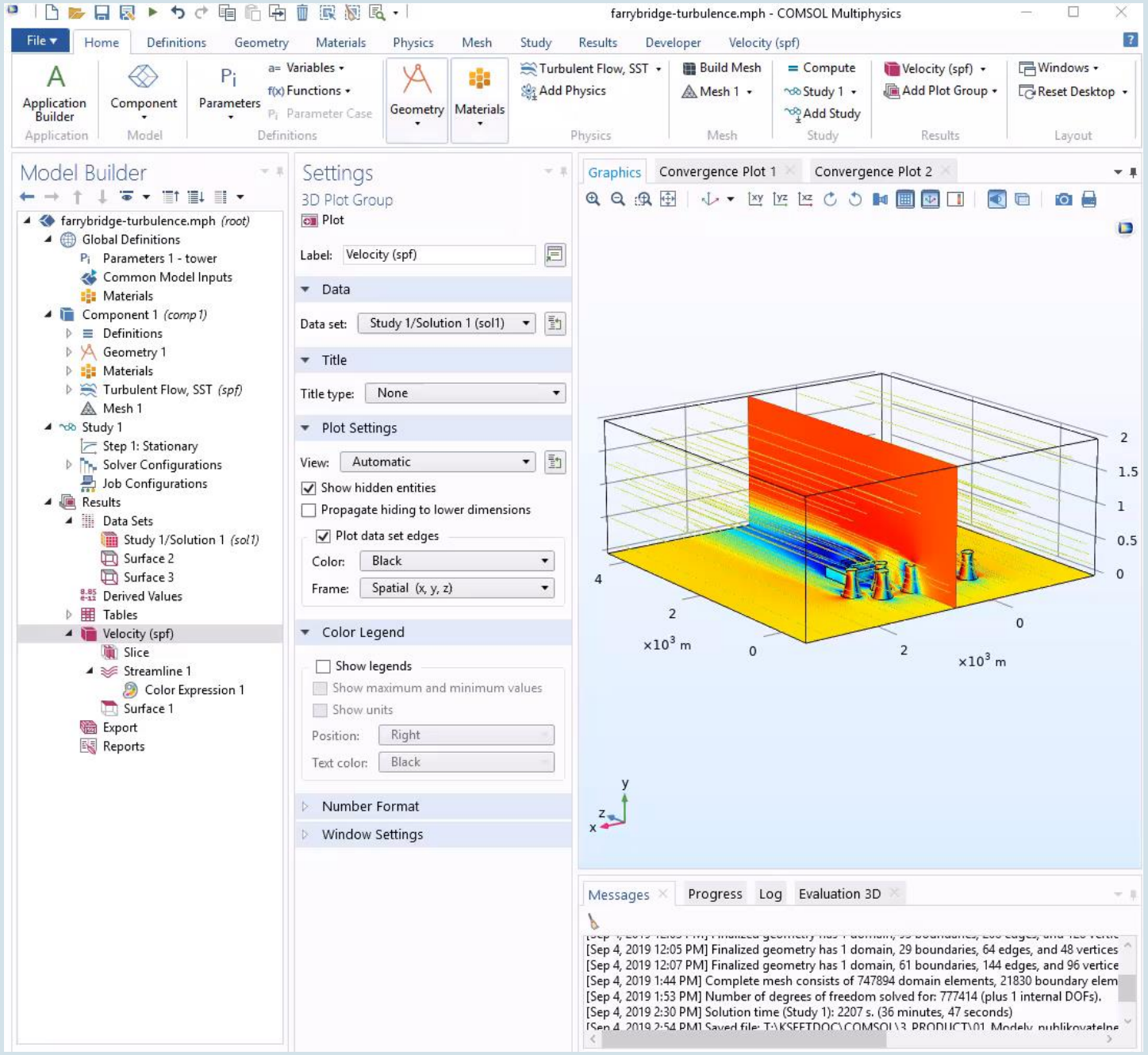
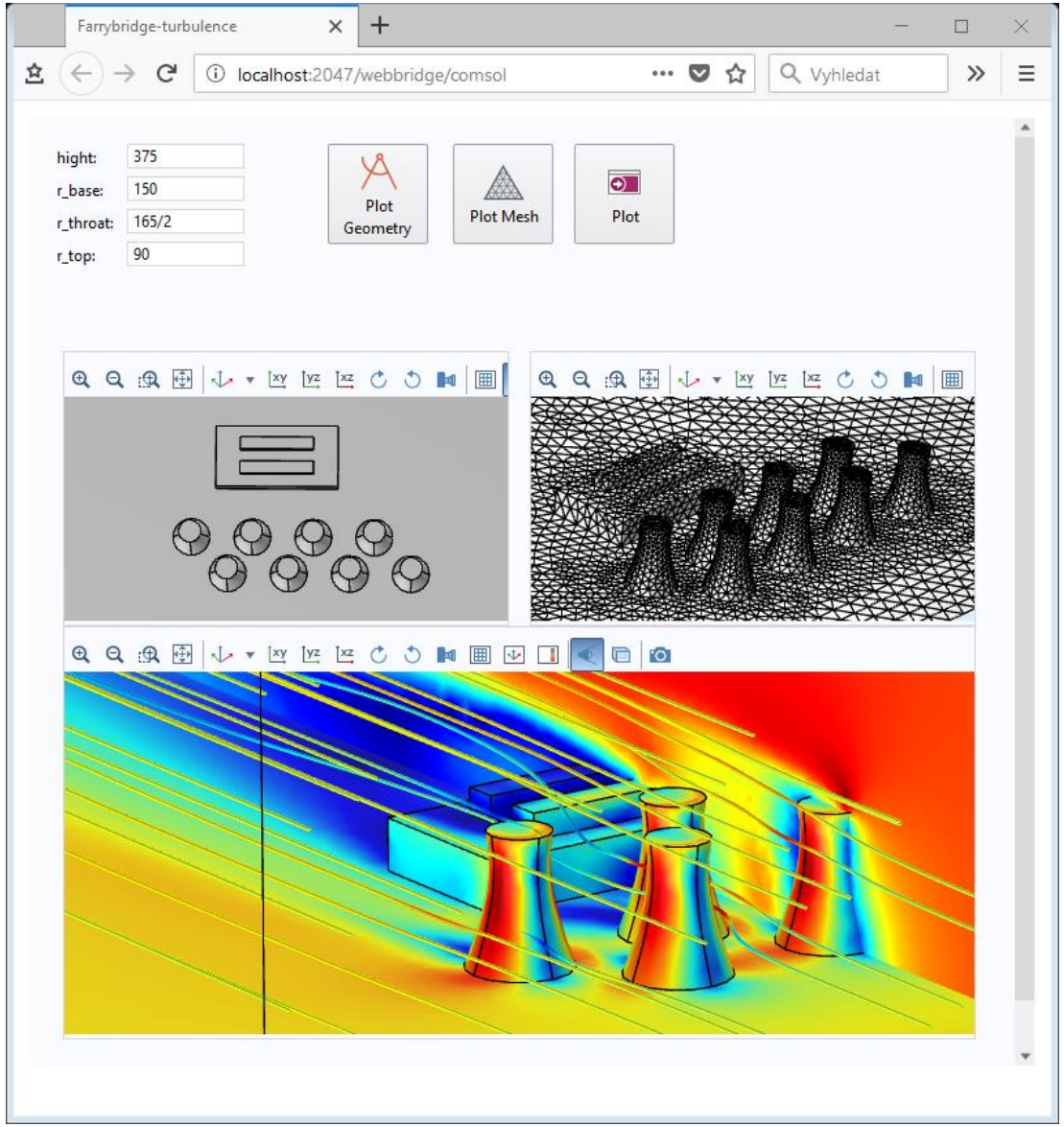
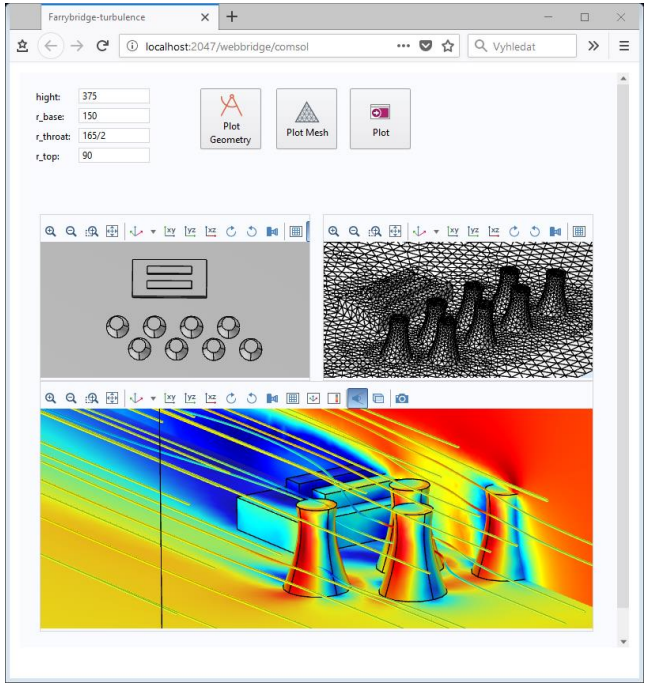
- Výpočet simulace fyzikálního děje
- Zpracování výsledků
- Tvorba aplikace





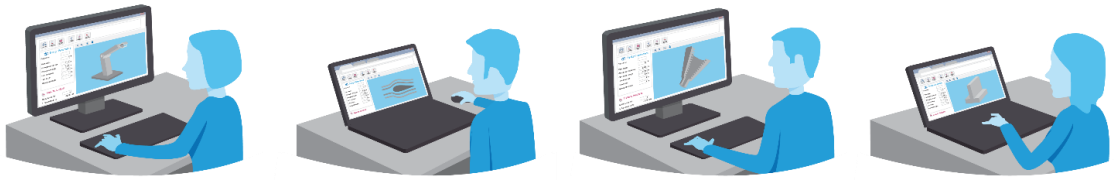
COMSOL Server™

- Sdílení aplikace přes webové rozhraní
- Server běží u vás na počítači
- Komu vygenerujete heslo, ten může ovládat aplikace
- Aplikace pro mobilní telefony



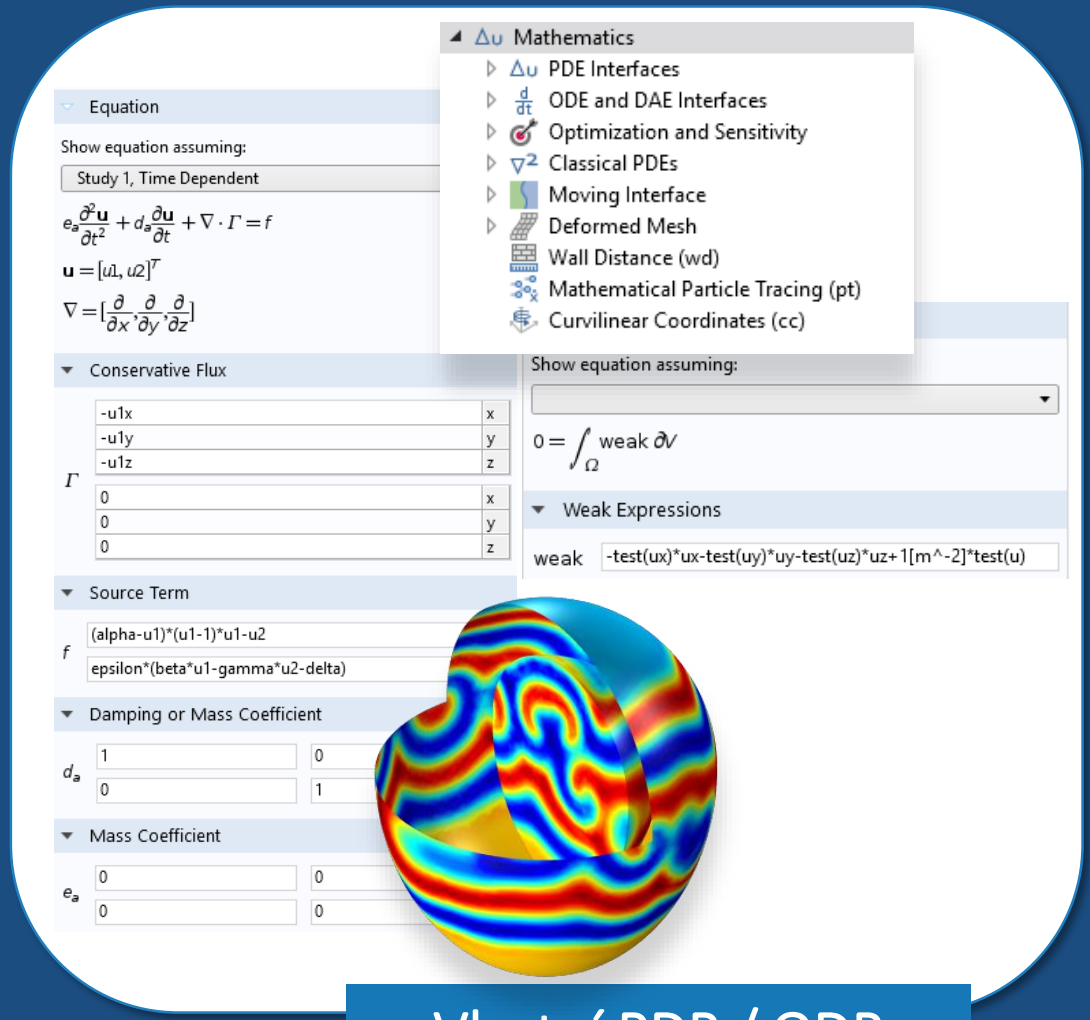
COMPILE and DISTRIBUTE multiple apps
with COMSOL Compiler™

RUN simulation apps
on any machine



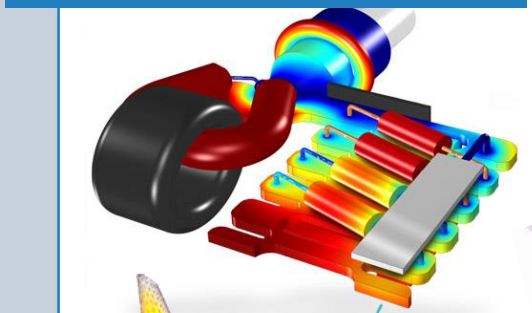
COMSOL Compiler™

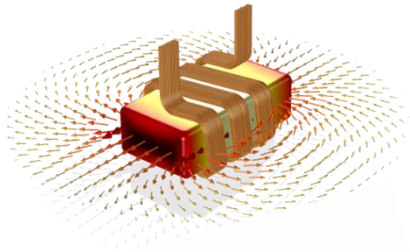
- Aplikace kompilovaná s RunTime knihovnami COMSOL Multiphysics
- Vytvoří stand-alone program pro simulaci dané úlohy
- Vygenerujete licenční soubor
- Prodáte program pro výpočet obtékání elektrárny

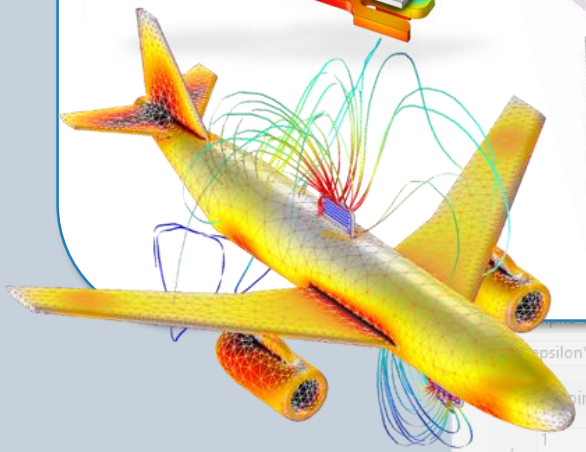


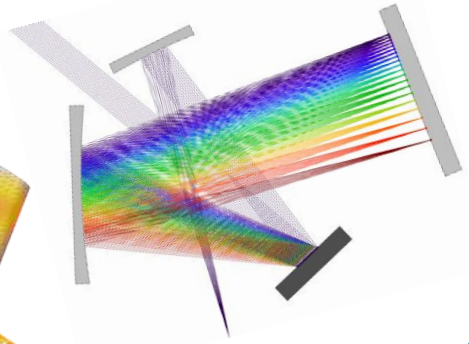
Vlastní PDR / ODR

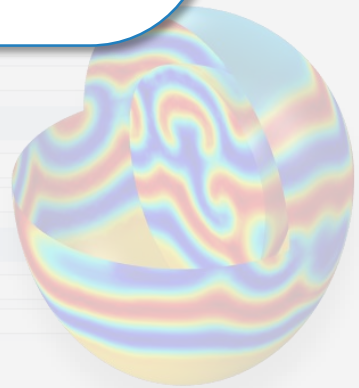
Elektromagnetismus











Vlastní PDR / ODR

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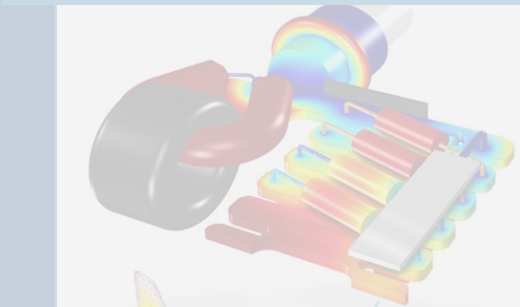
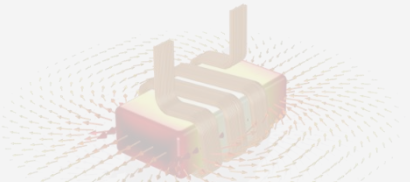
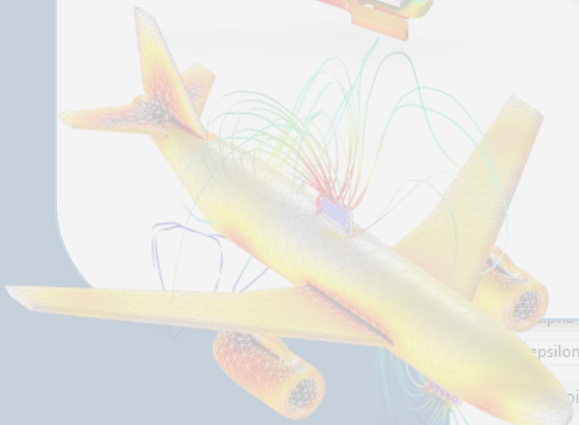
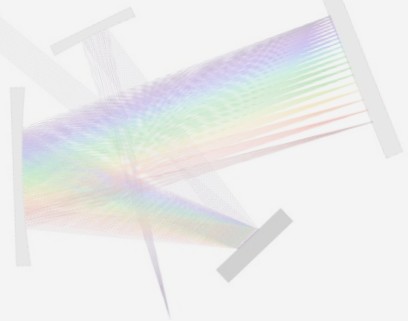
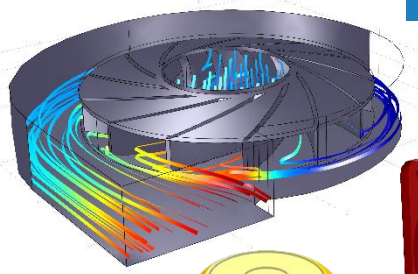


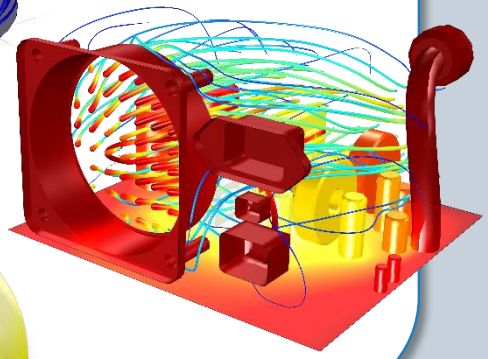


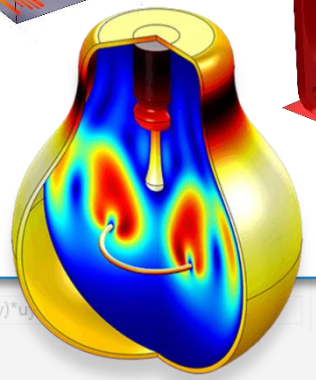


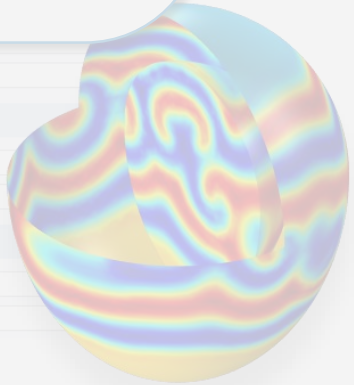


Proudění a teplo



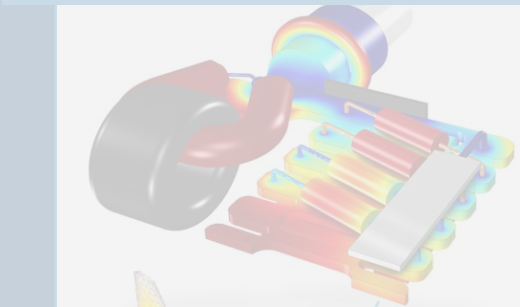


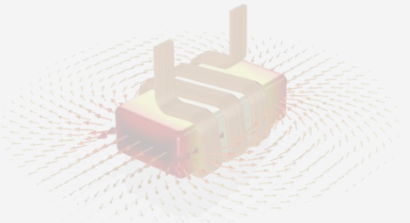


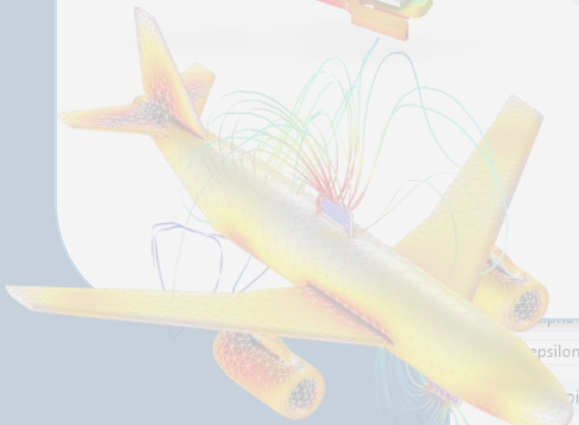


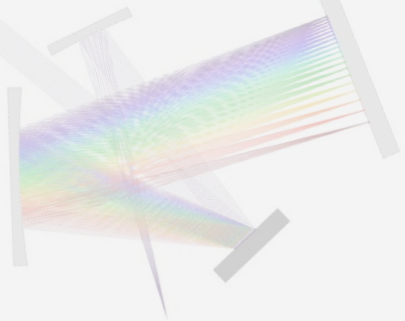
Vlastní PDR / ODR

Elektromagnetismus









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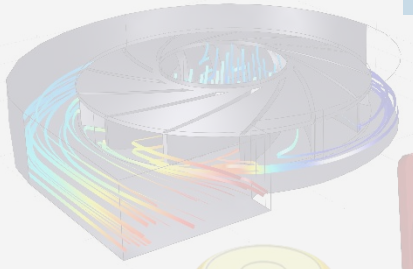
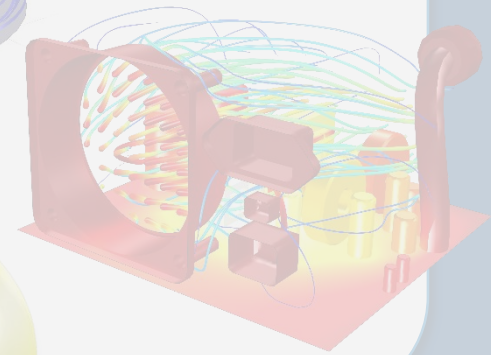
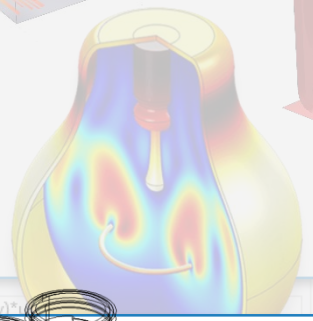
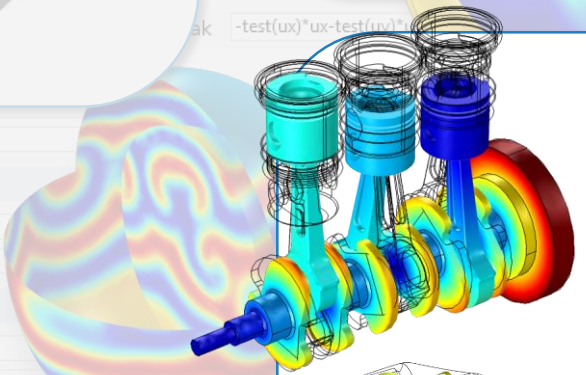
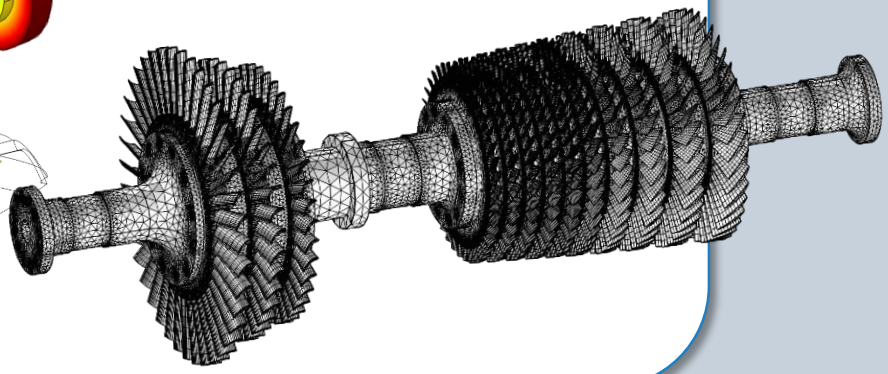


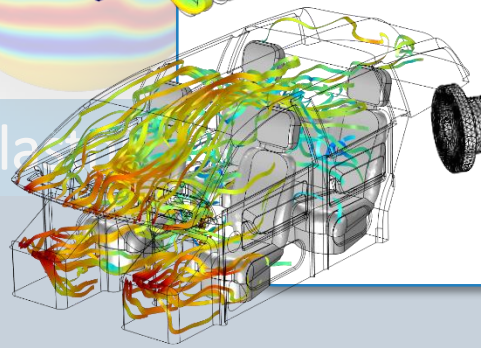




Strukturální Mechanika a Akustika

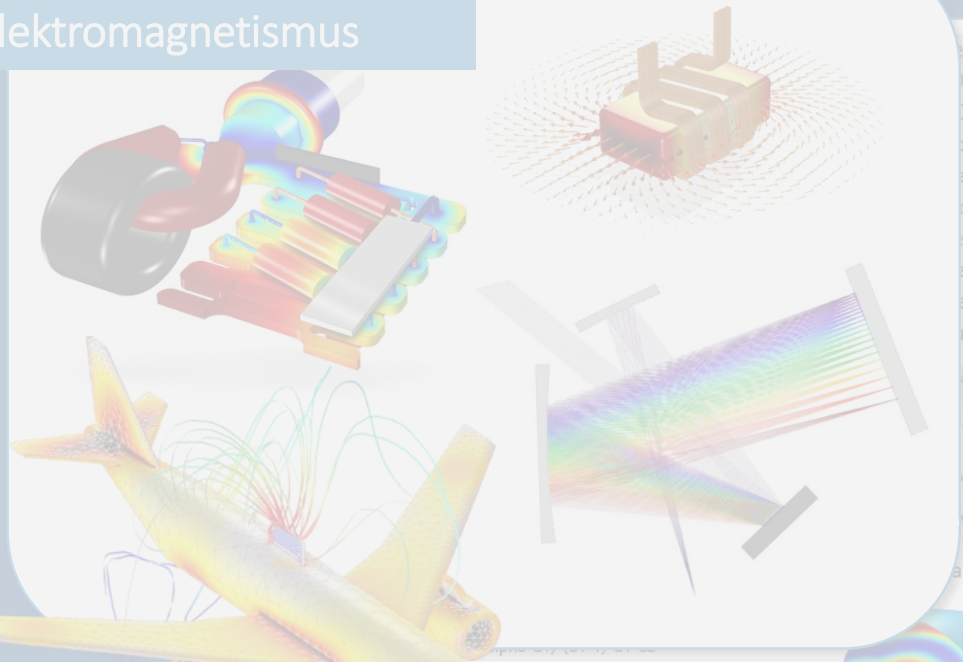






Vla

Elektromagnetismus



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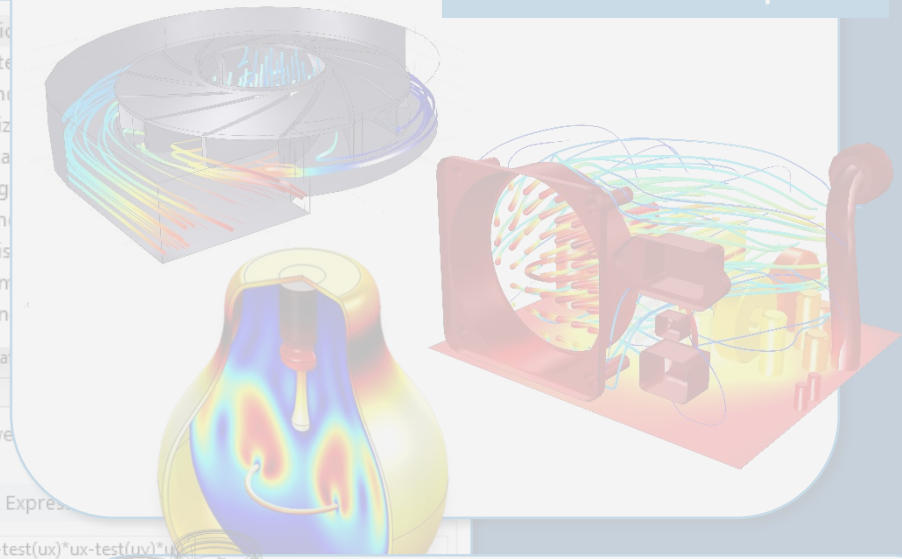
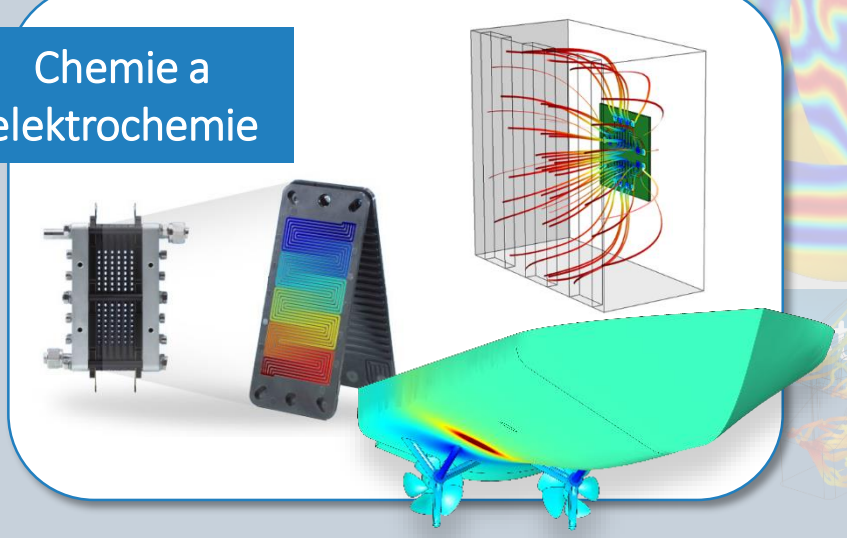


Chemie a elektrochemie



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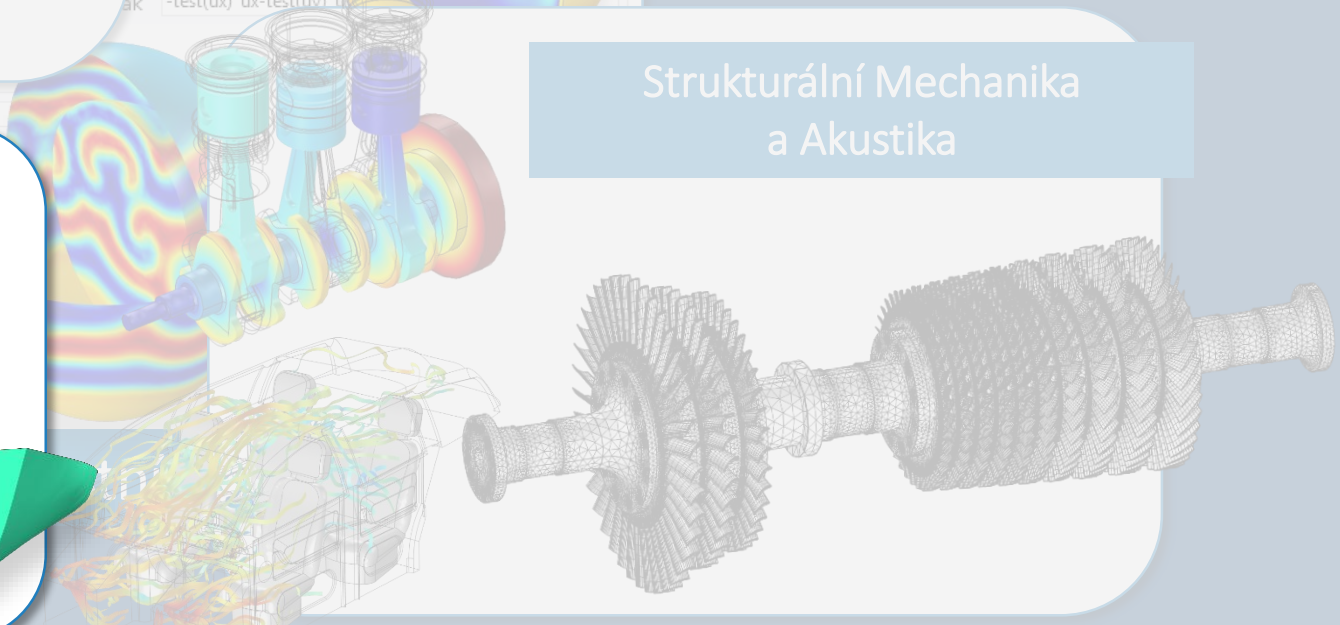

The COMSOL® Software Product Suite

COMSOL MULTIPHYSICS®

The platform product. Understand, predict, and optimize physics-based designs and processes with numerical simulation.

DEPLOYMENT PRODUCTS

- COMSOL Compiler™
- COMSOL Server™

Distribute simulation applications created with COMSOL Multiphysics.

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- Ray Optics Module
- Plasma Module
- Semiconductor Module

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  - Mixer Module
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- Pipe Flow Module
- Microfluidics Module
- Molecular Flow Module
- Heat Transfer Module

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  - Composite Materials Module
  - Geomechanics Module
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  - Multibody Dynamics Module
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- Electrodeposition Module
- Corrosion Module
- Electrochemistry Module

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- LiveLink™ *for* Excel®
- CAD Import Module
- Design Module
- ECAD Import Module
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- LiveLink™ *for* Inventor®
- LiveLink™ *for* AutoCAD®
- LiveLink™ *for* Revit®
- LiveLink™ *for* PTC® Creo® Parametric™
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