

COMSOL Multiphysics®

LabEx PRIMES
Journée industrielle 2ème édition
13 septembre 2017

COMSOL

- Modeling and Simulation
 - Ready made physics interfaces
 - General mathematics interfaces
 - Built-in CAD tools
 - Add-on modules with specialized physics interfaces
 - LiveLink™ products to connect with partner software
 - Most major CAD tools
 - MATLAB®
 - Excel®
- Development tools
 - Model Builder
 - Physics Builder
 - Application Builder
- Deploying Apps
 - COMSOL Multiphysics®
 - COMSOL Server™
 - Browser and Windows® clients



Biomedical Electromagnetic Simulation example : MRI Tumor-Tracked Cancer Treatment

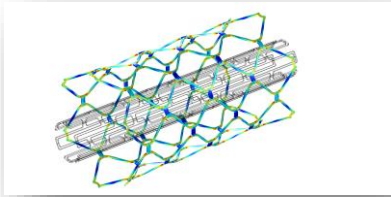
<https://www.comsol.com/story/mri-tumor-tracked-cancer-treatment-15235>

Optimizing Hematology Analysis: When Physical Prototypes Fail, Simulation Provides the Answers

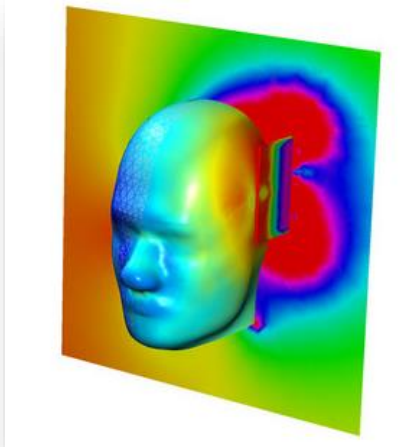
<https://www.comsol.com/story/optimizing-hematology-analysis-when-physical-prototypes-fail-simulation-provides-19683>

Modèles tutoriels

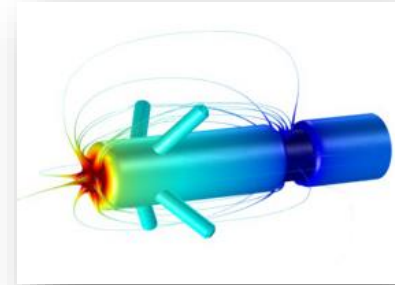
700+ modèles disponibles



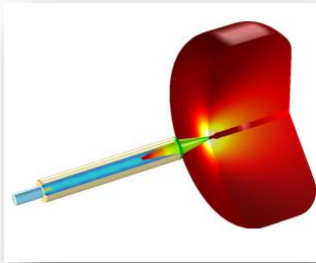
Deformation of a stent subjected to a radial outward pressure using an elasto-plastic material model with linear hardening.



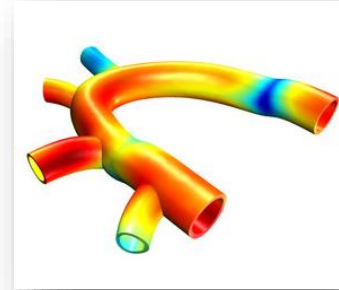
Absorption of a radiated wave from an antenna by human head and induced increase of the temperature.



Current distribution around the electrode of a pacemaker inside the human heart.

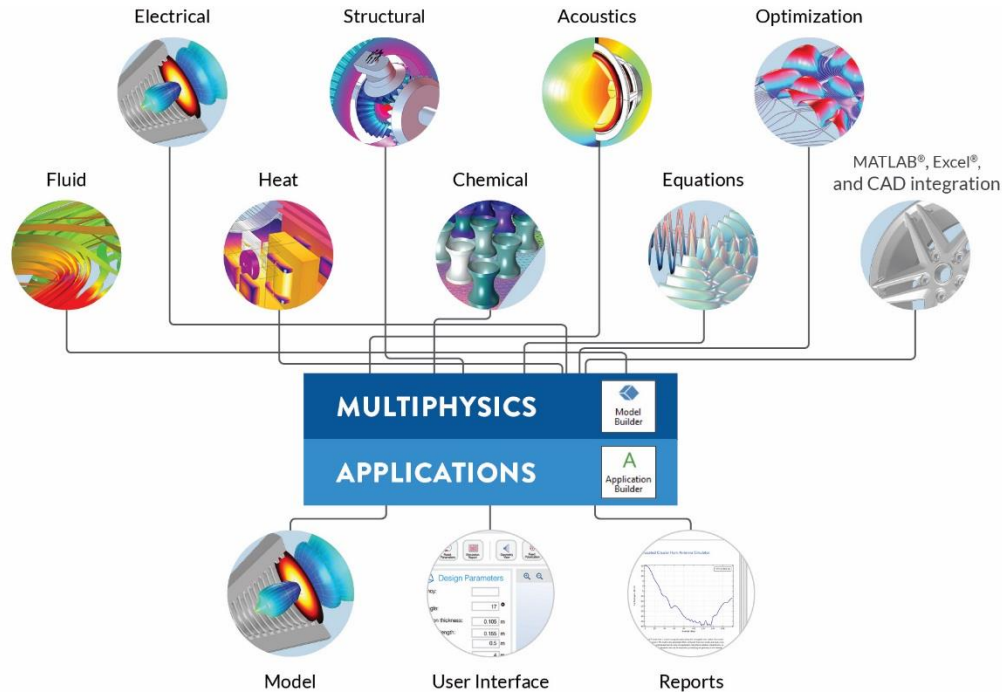


Skin cancer diagnostic : temperature variation of the skin and the fraction of necrotic tissue.



A blood vessel is deformed during the flow of blood.

COMSOL Multiphysics®



COMSOL Server™

Application Library



Browser client



Windows® client



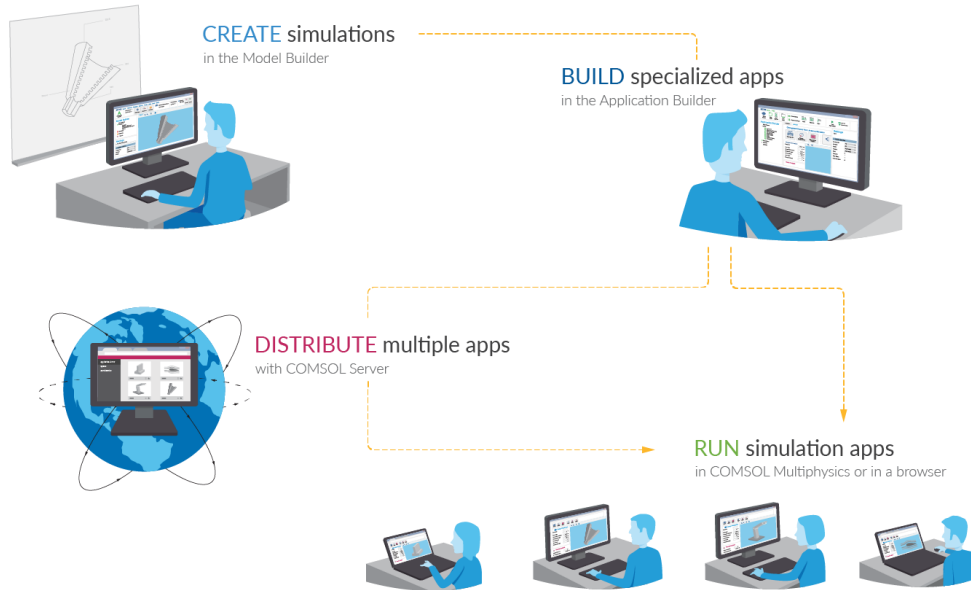
User management



Branding



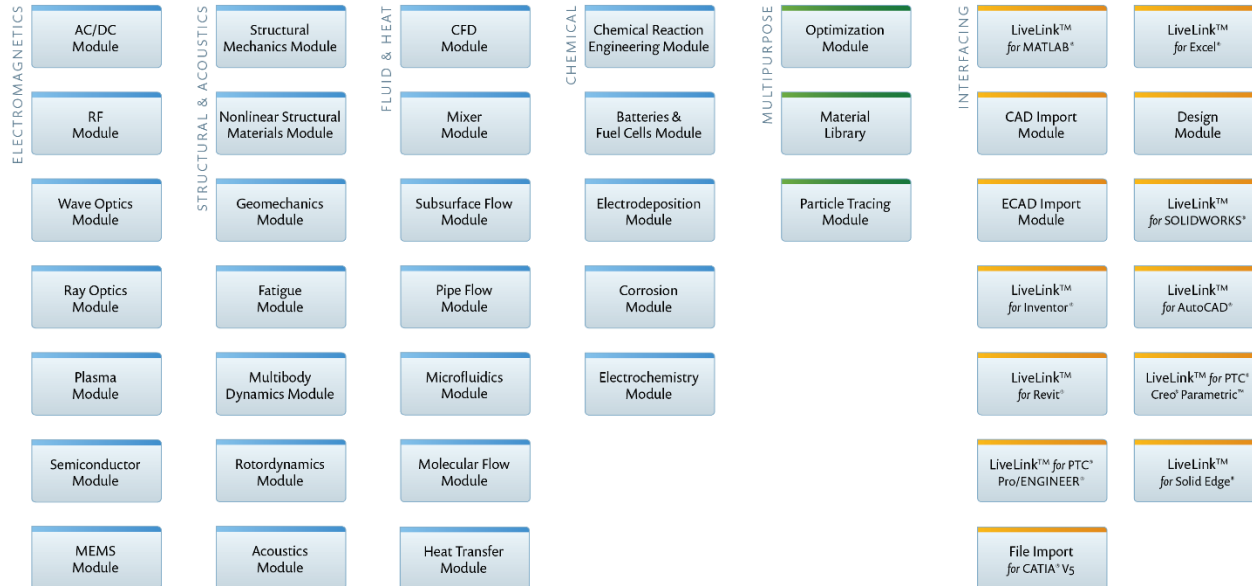
App Deployment



Product Suite – COMSOL® 5.3

COMSOL Multiphysics®

COMSOL Server™



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