

UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA
FACULTATEA DE INGINERIE ELECTRICĂ

ȘTIINȚE INGINEREȘTI APLICATE ÎN MEDICINĂ

DOMENIU DE STUDIU: Științe Inginerești Aplicate
DURATĂ: 2 ani

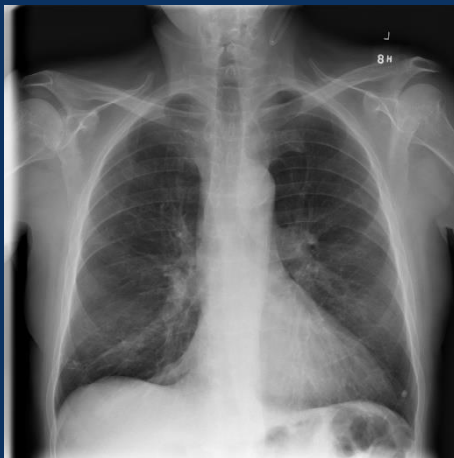
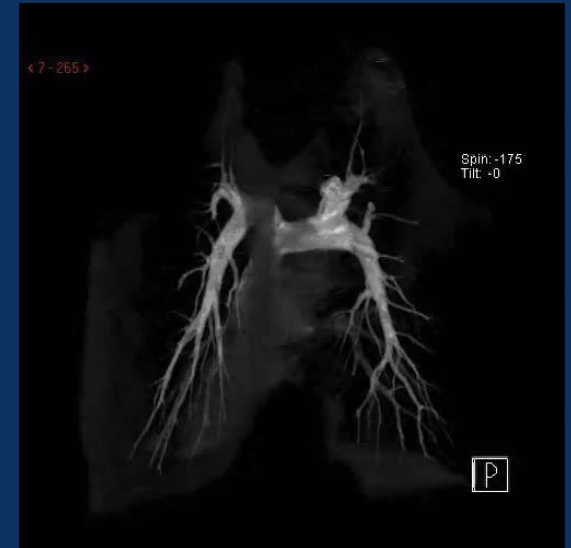
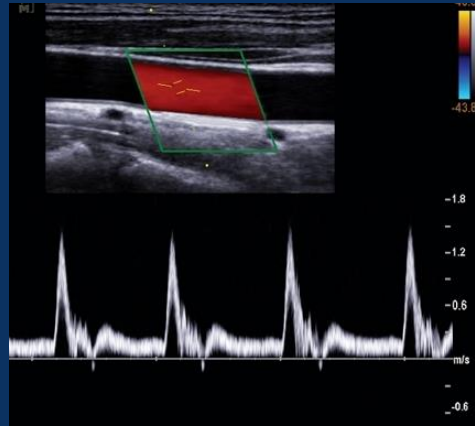
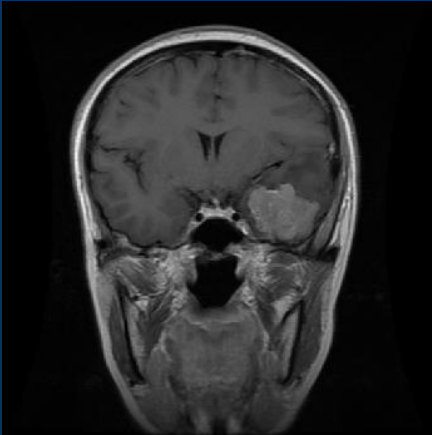
De ce ȘTIINȚE INGINEREȘTI APLICATE ÎN MEDICINĂ?

Industria pentru sănătate, care este cel mai mare sector mondial, cu o cifră de afaceri de peste 400 miliarde de dolari anual, și cu un ritm de creștere de 5% pe an

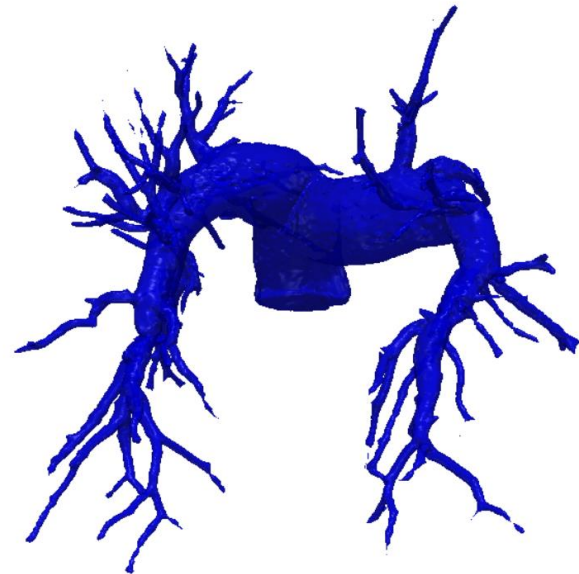
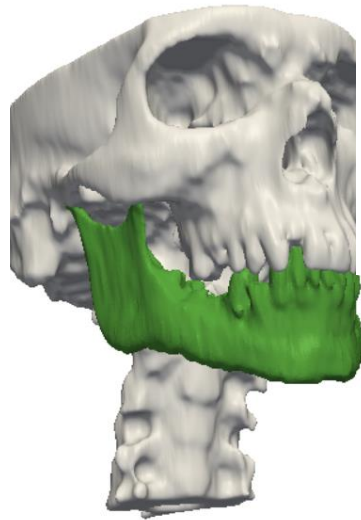
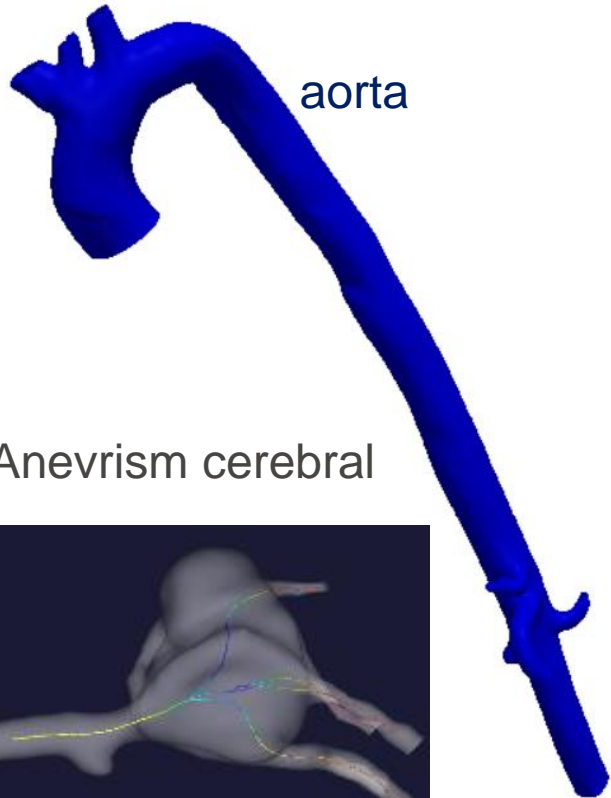
Prin structură, Ingineria Medicală este o specializare interdisciplinară, acoperind domeniile: electric, mecanic, matematic, informatic și medical.

Obiectivul specializării: crearea de specialiști capabili să proiecteze dispozitive și aplicații medicale și să participe activ la munca de cercetare în domeniul ingineriei biomedicale

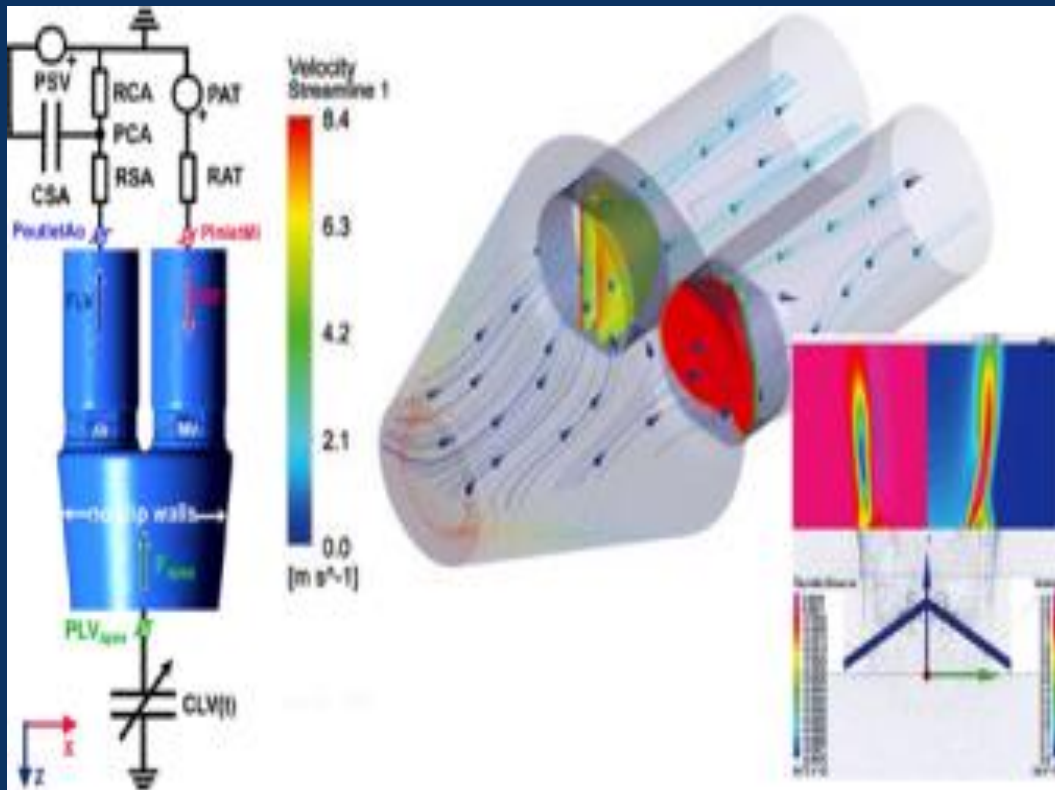
Imagistică medicală



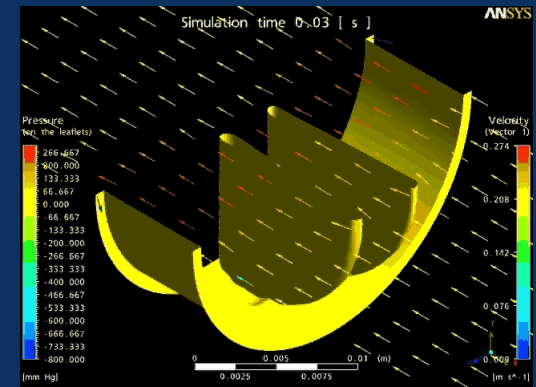
Reconstrucție 3D



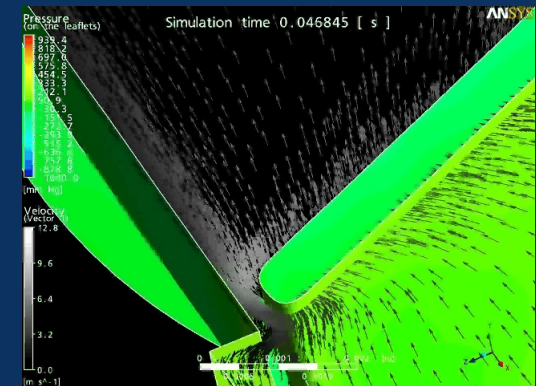
Modelare 3D



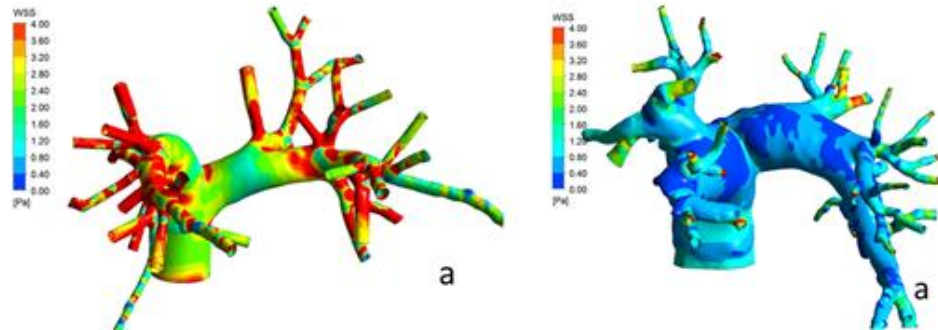
The 2-valves CFD-FSI model



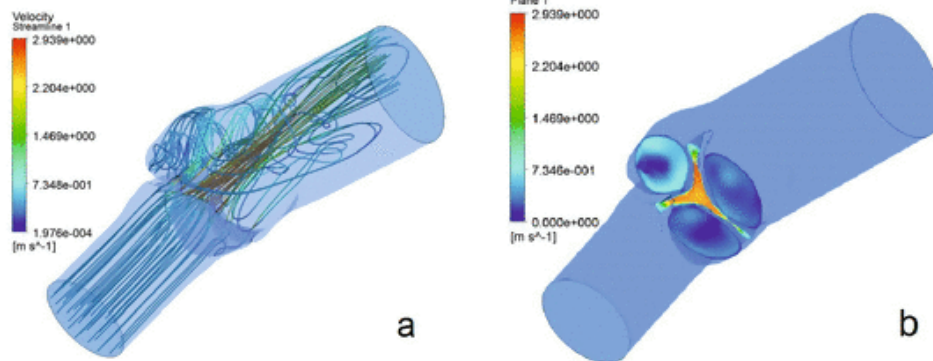
Flow filed in the valve during the first phase of its closure



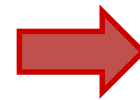
Modelare 3D



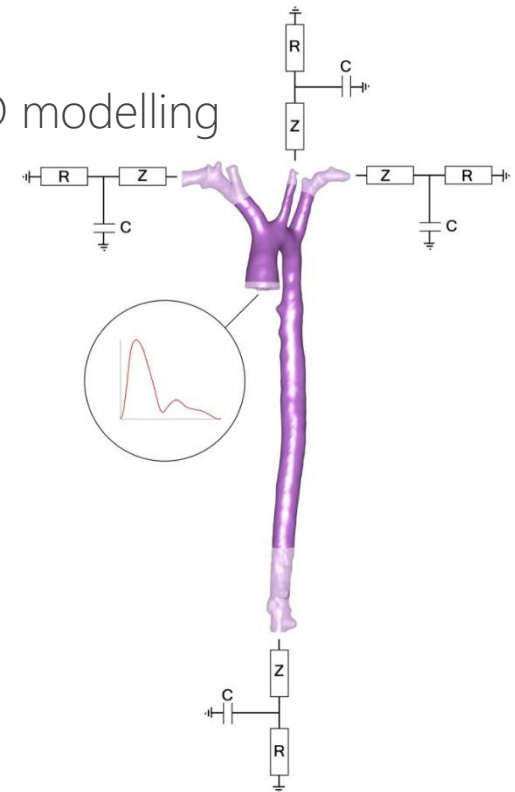
WSS in HV and CTEPH patients



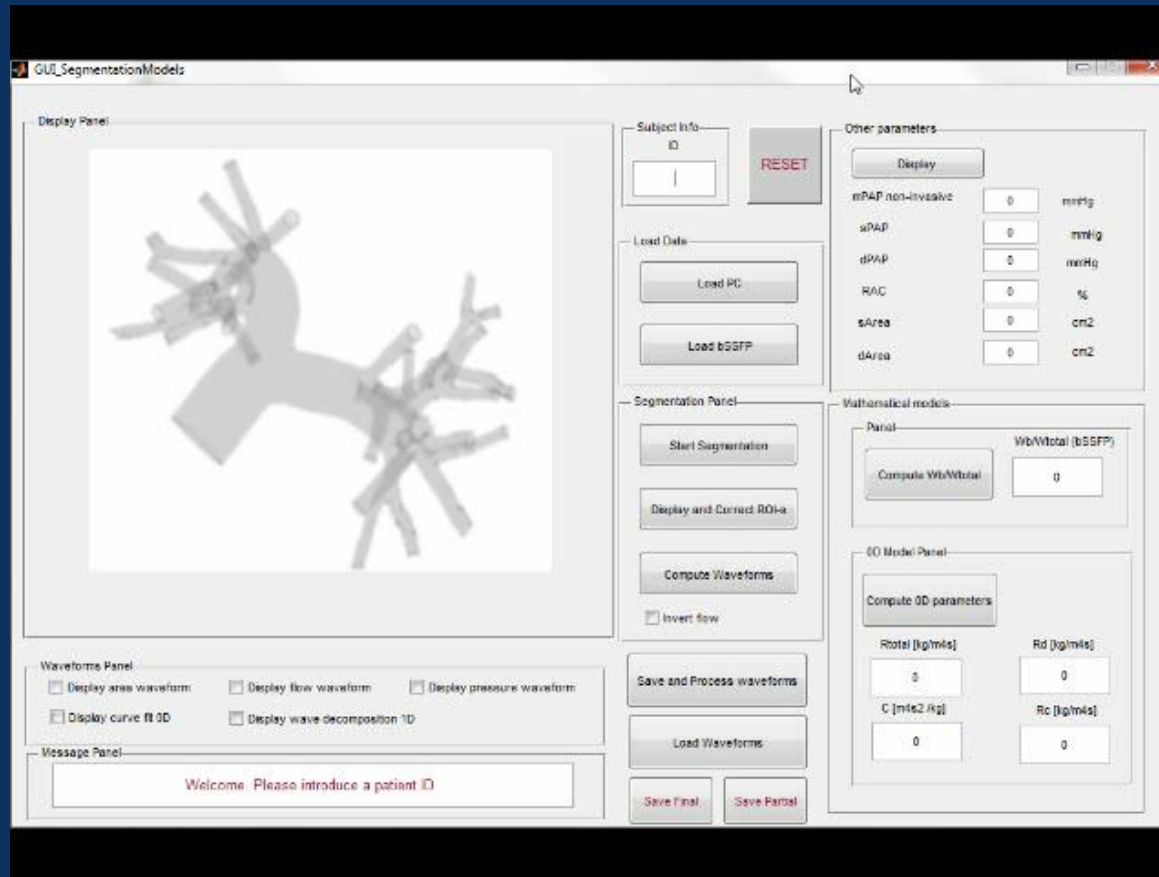
From J. Peters, A Lungu et al. , Comparison of CFD-Based and Bernoulli-Based Pressure Drop Estimates across the Aortic Valve Enabled by Shape-Constrained Deformable Segmentation of Cardiac CT Images



3D modelling

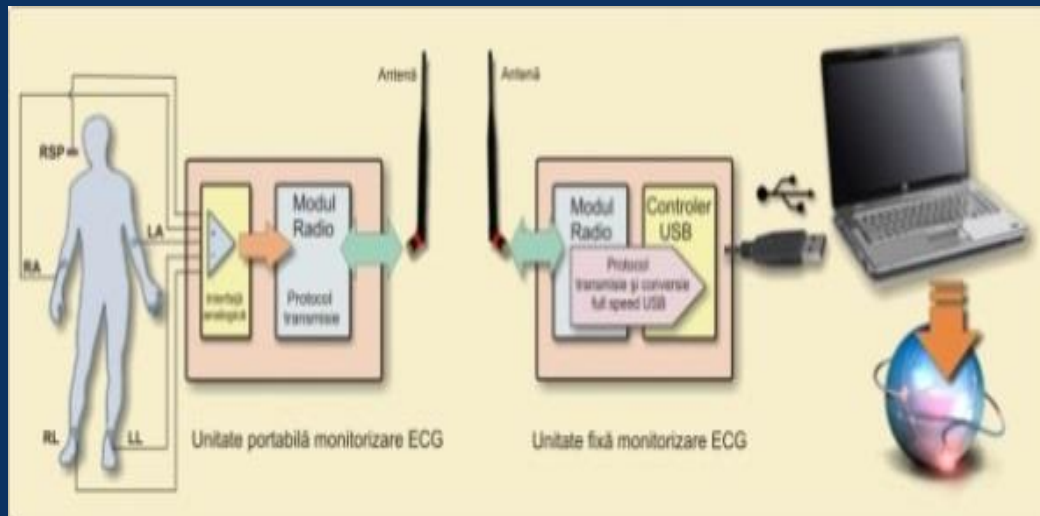


Modelare 3D

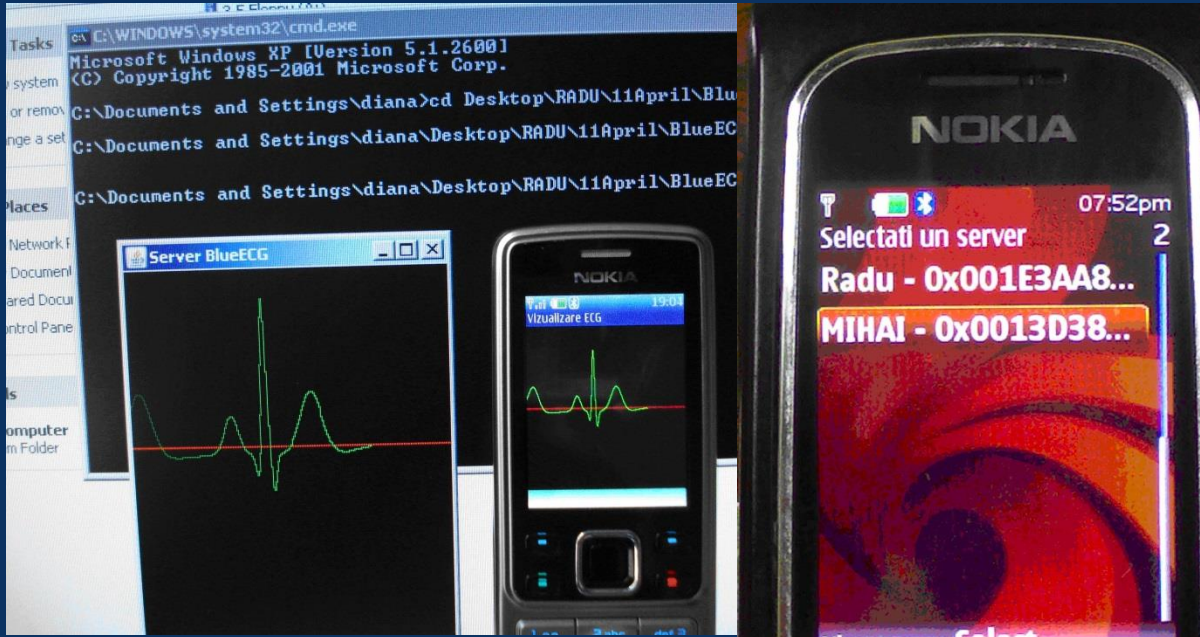


Diagnosticarea neinvazivă a hipertensiunii pulmonare

Transferul datelor medicale

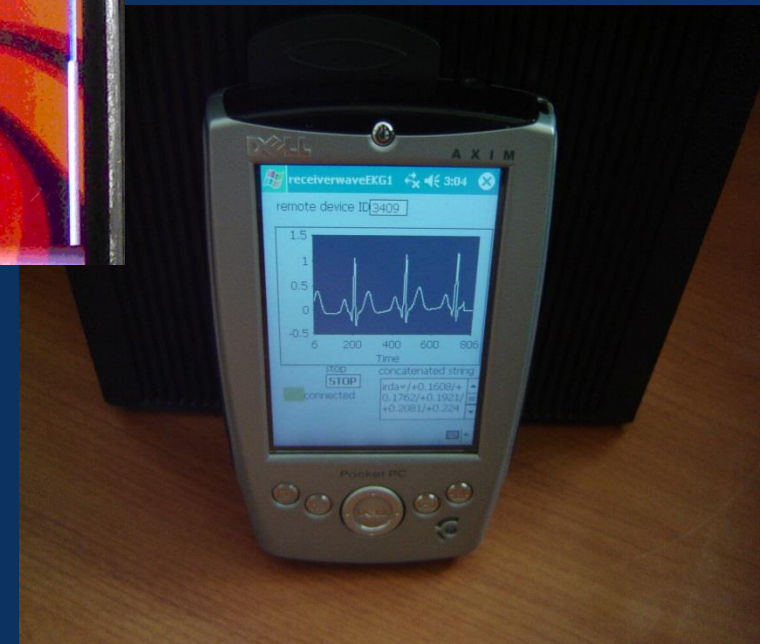


Transferul datelor medicale



Transferul semnalului EKG prin Bluetooth, de pe computer pe un telefon mobil; selectarea din listă a "serverului"

Transferul semnalului EKG prin infraroșu, de pe computer pe un dispozitiv "client" (PDA)



Ingineria protezării și reabilitării



Prototipuri experimentale ale unor echipamente specifice ingineriei reabilitării

Vă mulțumesc!