

MAE Praxair Seminar

The Link between DIET, Breast Cancer and Engineering

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Mechanical stiffness is a material parameter that has been identified as a direct link to tissue related disease, such as breast or prostate cancer. The emerging field of research, Elastography, therefore aims to image the stiffness of a domain, in order to support the diagnosis of tissue defects. Within this field, Digital Image Elasto-Tomography (DIET) is a new imaging-technique, using only motion data available on the boundary of the domain, to reconstruct interior elastic material parameters of the human breast.

After reviewing current breast cancer screening methods as well as current elastographic methods, this presentation introduces the concept of the DIET-system, some of the numerical approaches of the resulting inverse problem as well as current simulation results.

**206 Furnas Hall
Tuesday, April 17, 2007
Refreshments 3:00 pm
Seminar 3:30 pm – 4:30 pm**