



FROM VISION TO DECISION

SEMINAR FRIDAY 14.12.2012

PLACE: Laboratoriebygget, 9th floor, Meeting room 9.1-9.2

TIME : 12:00-13:00

TITLE:

1. The Laboratory Fish – image analyses along the route to implement translational research
2. Exciting Years with Ultrasound et al.

SPEAKERS:

1. Prof Ragnar Nortvedt, Program Manager MedViz
2. Associate professor Ivan Viola

ABSTRACT

Ragnar Nortvedt

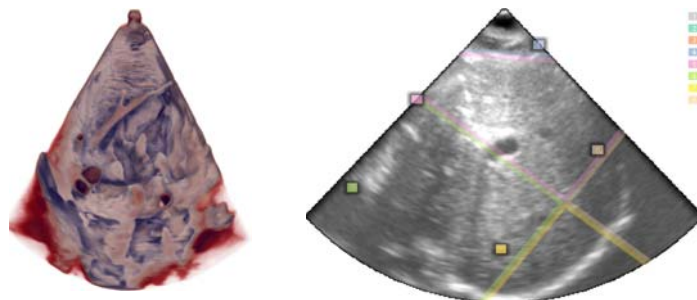
The present talk will give some examples of image analysis from the previous millennium, starting with two perpendicular oriented cameras to quantify fish swimming speed, proceeding with quantification of muscle contraction, segmentation of muscle anomalies and visualizing body composition of fish.

The laboratory fish can serve as a model in translational research. Although fish will probably never replace mammals as experimental animals, they can substitute for mammals in certain tages, e.g. of carcinogenicity testing experiments using fish can be more sensitive, conducted more rapidly, and more economical than experiments using mammals.

From my own research background I foresee that future medical imaging can base some of the experiments on basic biological research, combining several imaging technologies and latent variable projections to extract crucial information and model medical responses from a multitude of images. This can only be achieved by an even closer co-operation by the scientists in the MedViz cluster.

Ivan Viola

Medical ultrasound is in the recent years experiencing a rapid development in the quality of real-time 3D ultrasound imaging. Image quality of the 3D volume that was previously possible to achieve within the range of few seconds is now possible to achieve in a fraction of a second. This technological advance offers entirely new opportunities for the use of ultrasound in clinics. In my talk, I will discuss several enabling visual computing technologies such as image registration, filtering, segmentation, and visualization, developed in the course of the IllustraSound project that together give the ultrasound new potential for the use in clinical environment.



Rigor fillet contraction by image analysis

