



FROM VISION TO DECISION

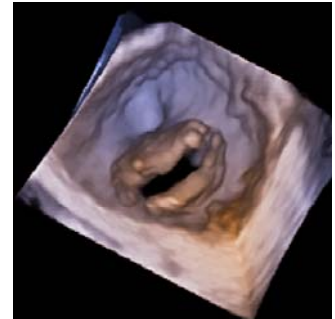
Stein Inge Rabben, **MSc, PhD**

Group Leader Display & Image Analysis; **GE Vingmed Ultrasound**

Visualization and Image Analysis of Cardiac 3D Ultrasound Data

Fri., 2010-09-10, 12h15–13h

Store Aud. (room 2144), **Høyteknologisenteret** (data blokk, 2nd floor), Thormøhlensgate 55



Abstract:

The last years we have experienced a rapid development in 3D echocardiography. Along this journey of development, technology battles have been won at many frontiers. Modern 3D scanners are now fully armed with cutting-edge technology. Breakthroughs in transducer design, beamforming, display technologies, and quantification have been released almost on a yearly basis. These developments have been enabled by great work of numerous engineers, both in academia and industry.

In this talk, I will present the current status of the visualization and image analysis technologies on-board the most recent cardiac 3D ultrasound systems. On a modern ultrasound scanner, 3D data is usually displayed as a combination of multi-plane reconstructions (MPRs), volume renderings or surface renderings and I will go through the unique requirements and solutions to these standard techniques when implemented on a cardiac 3D ultrasound scanner. Even though visualization of cardiac anatomy in 3D is important in itself, clinicians need to quantify the cardiac anatomy and function. 3D segmentation methods will therefore briefly be presented. The talk will end with a discussion about future directions and requirements for visualization of cardiac 3D ultrasound data.



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Paolo Angelelli

Visualization Research Group; **University of Bergen**

Visualization for Ultrasonography

Fri., 2010-09-10, 12h15–13h

Store Aud. (room 2144),
Høyteknologisenteret
(data blokk, 2nd floor),
Thormøhlensgate 55

Abstract:

Ultrasound recordings of examinations (video clips) can be challenging to review. They do not contain any information about the acquisition setup, imaged organs, and probe movements. Moreover they can last several minutes, making the reviewing process especially time-consuming.

In this talk, I will present a solution for ultrasound video data reviewing that makes use of a combination of Degree-of-Interest functions and US-probe tracking to ease the access to the (relevant) sections of video clips, showing the anatomy of interest. The talk will also briefly present other works in medical visualization, in progress or completed, developed by the visualization group at the University of Bergen.

