



## **Roar Nybø, Ph.D.**

Research Scientist  
Drilling and Well Department  
SINTEF Petroleum Research



### ***Making Sense of Drilling Operations***

A human driller has a picture in his or her head of what is going on down in the well and how the well would react to actions the driller might take. This is what we call a "mental model" of the well. In computerized decision support and control and automation systems, the same models are present. However, how humans and automation systems build their models from observations and how they "change their mind" in the face of new information is very different.

This talk will discuss what strategies humans in a drilling organisation take when faced with unexpected situations and the ways that automation systems and organisational structures can both facilitate and obstruct this process. We open the discussion of a future automation scenario, where the industry could gain value from a closer integration between humans and computers, while at the same time increasing the automation of drilling operations.

#### **Biography:**

Roar Nybø is a research scientist at SINTEF Petroleum in Bergen, Norway. After completing his PhD thesis on artificial intelligence and alarm systems in offshore drilling, Roar has worked at SINTEF on projects related to improved drilling automation and decision support.