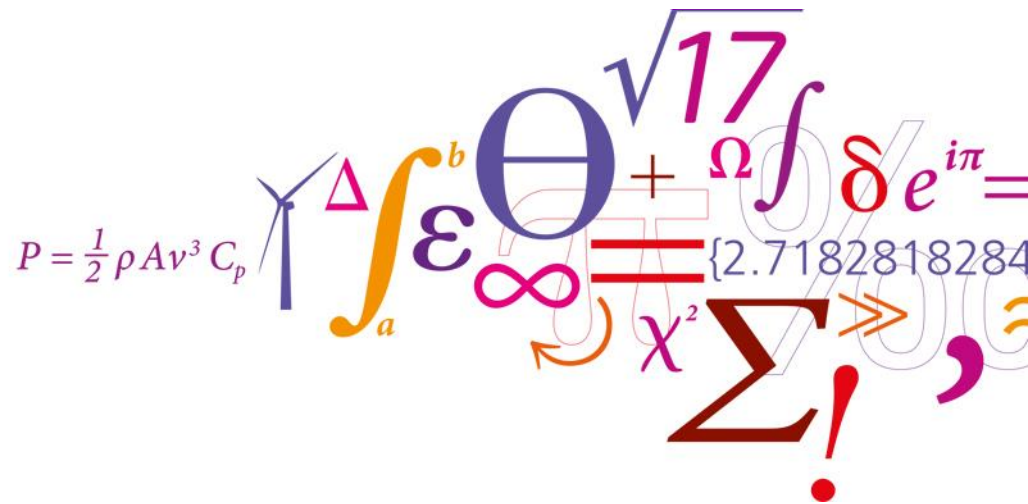
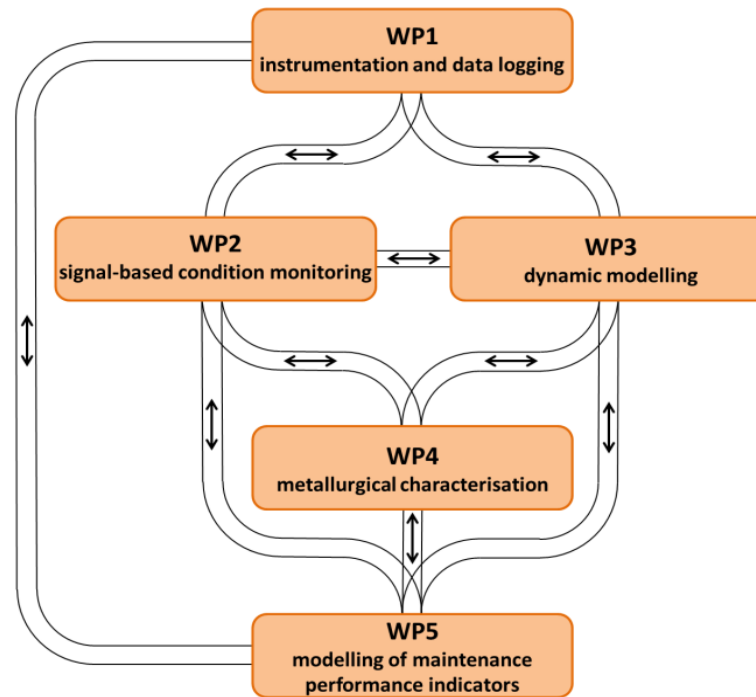


Intelligent Quality Assessment of Railway Switches and Crossings

Dorte Juul Jensen



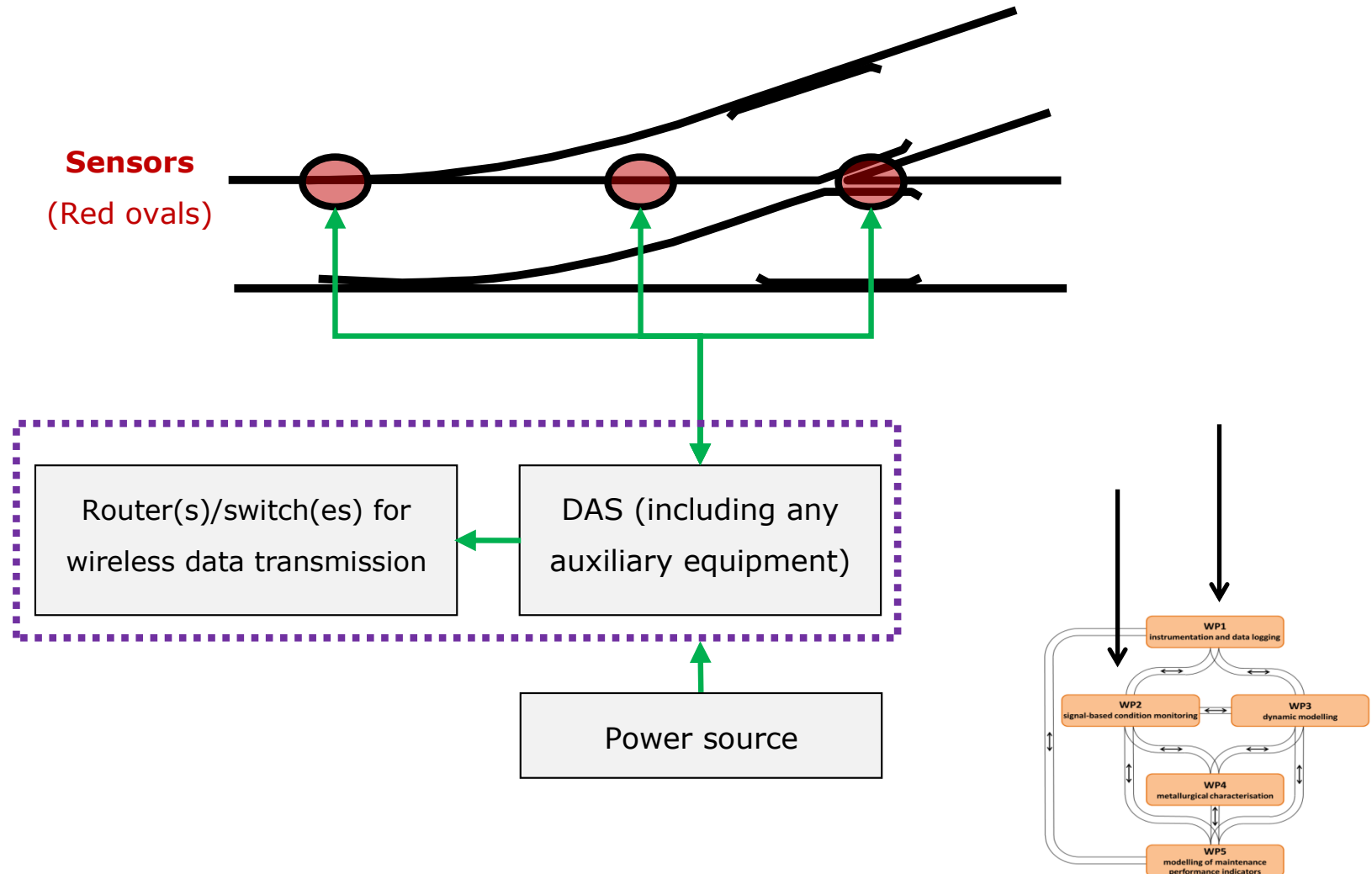


DTU

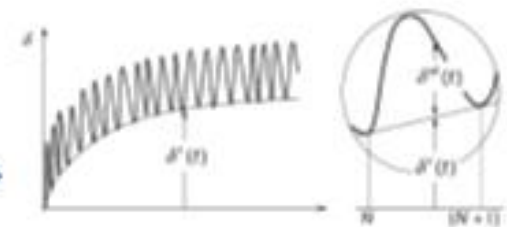
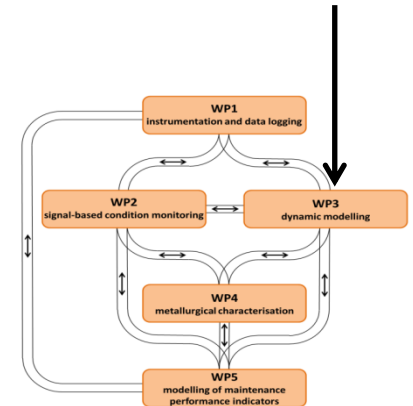
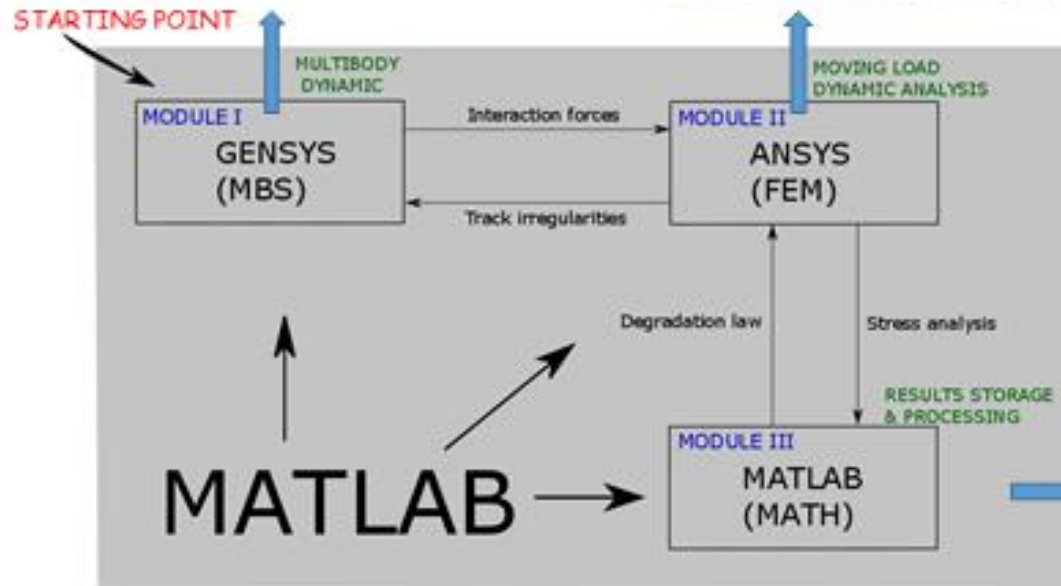
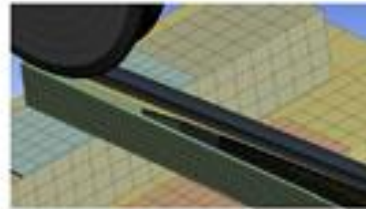
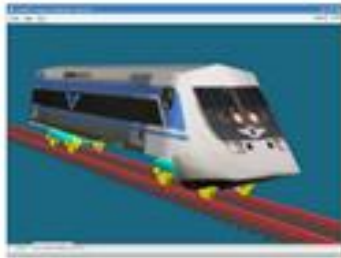
- Wind Energy, Materials Science and Advanced Characterization
- Electrical Engineering, Automation and Control
- Mechanical Engineering, Solid Mechanics
- Compute, Statistics and Data Analysis

Rail Net Denmark

Switch Measurement System Architecture



INTELLISWITCH WP3 Dynamic modelling



Metallurgical Characterization WP4

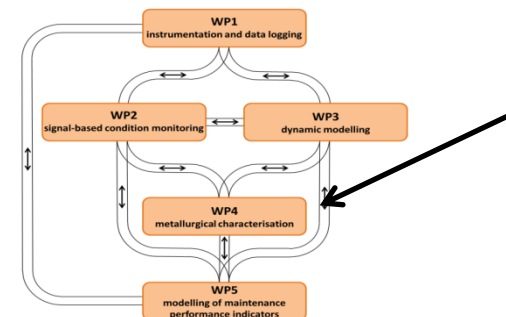
Acquire damaged S&C with different conditions

Investigate crossing nose and switch blade at different stages of degradation

Acquire load history

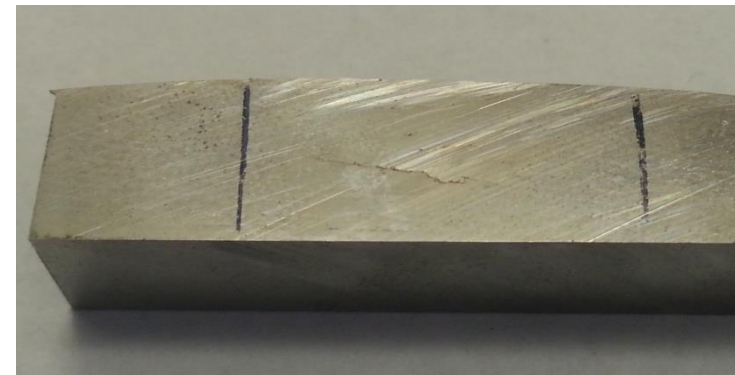
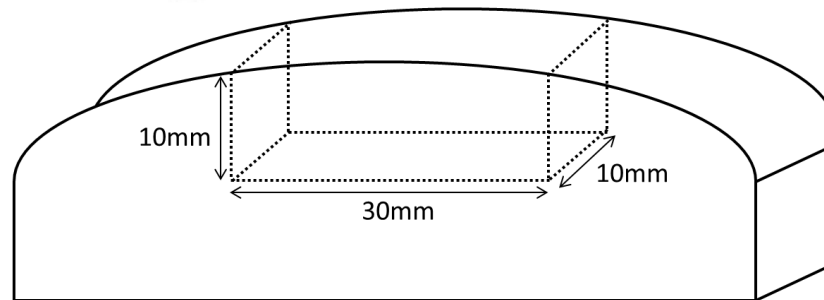
Characterisation of damage

Investigation of damage mechanism





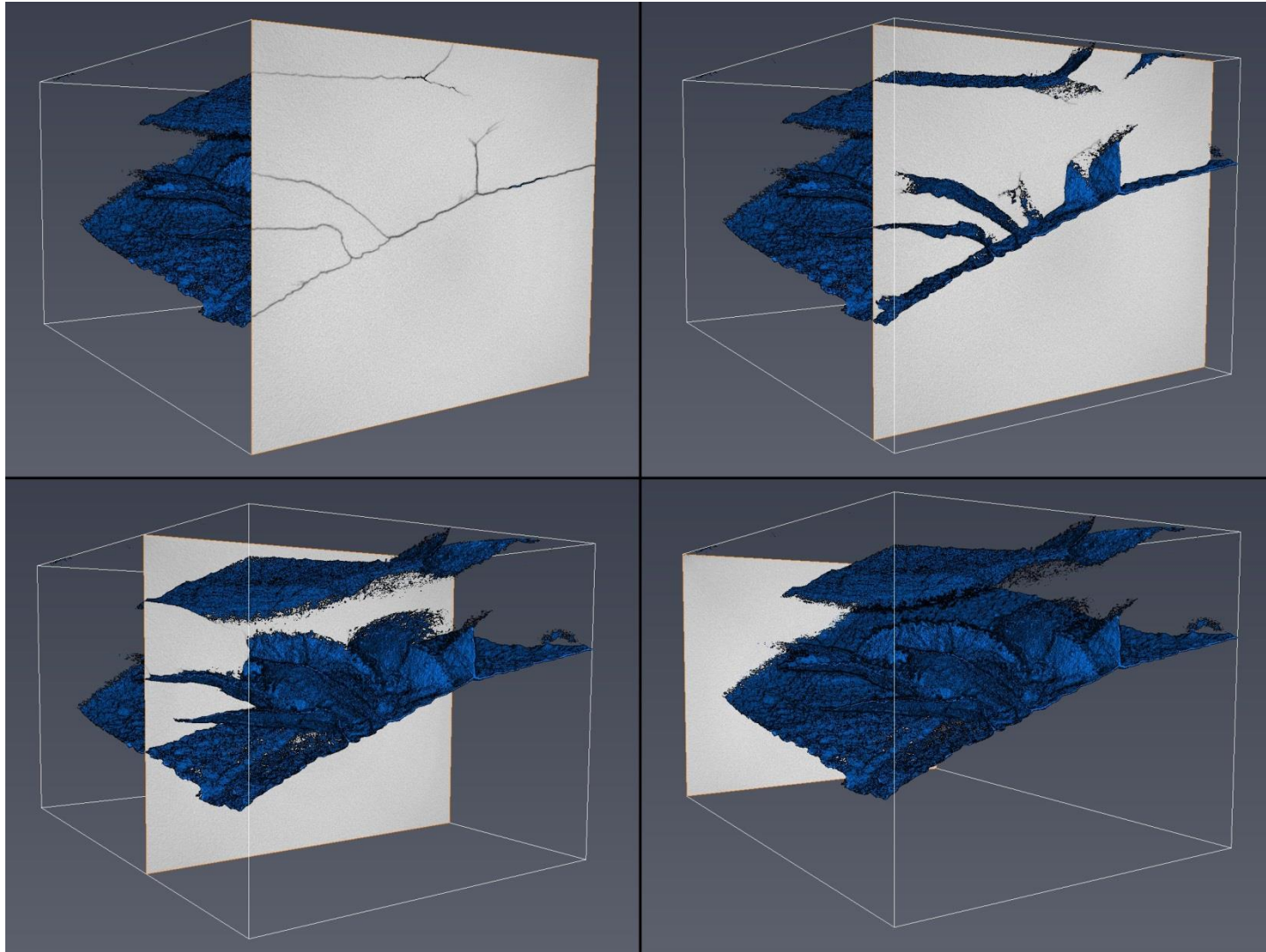
Very Powerfull X-Ray
Tomography Equipment



Video from rail

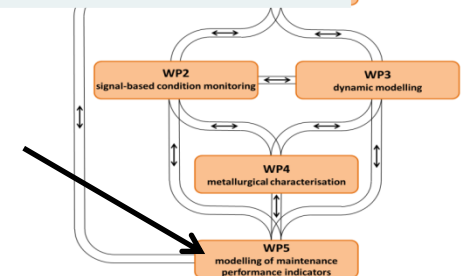
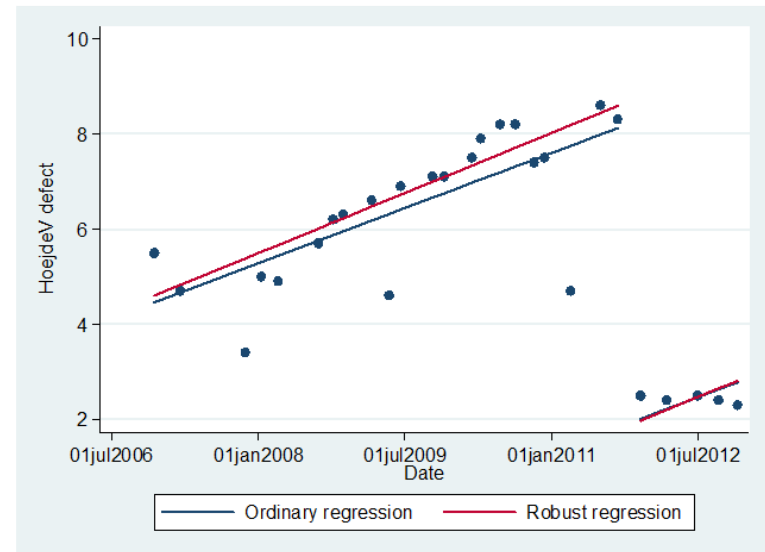
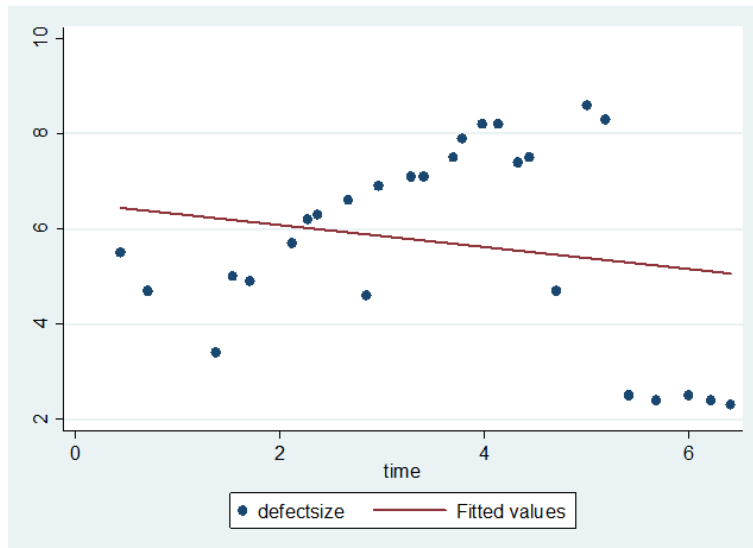


Recreating crack in 3D



Deterioration of the Track Modelling Track Segments with Repairs

- Regression (ordinary or robust) as a method to plan necessary maintenance
- Automatic detection of repair-dates is crucial for the method to work



INTELLISWITCH

