



EPIC Online Technology Meeting on Optical Fiber Sensing for Structural Health Monitoring

7th NOVEMBER 2022

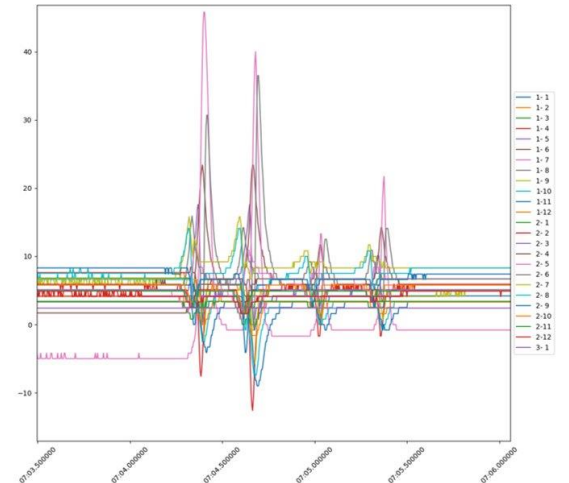
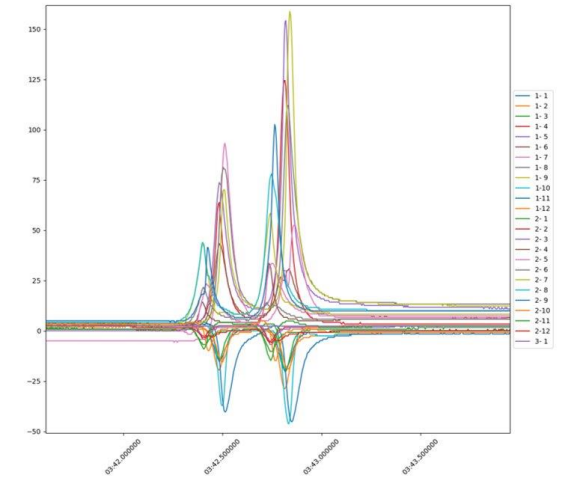
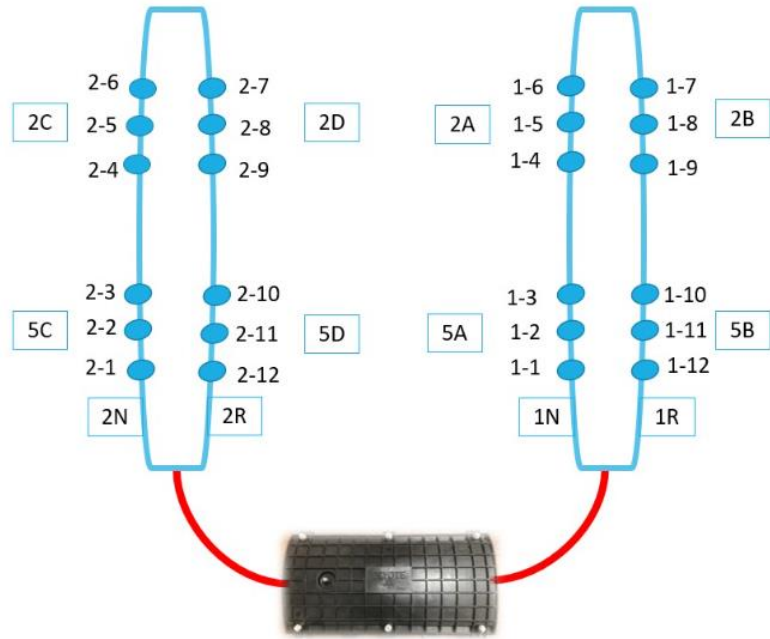
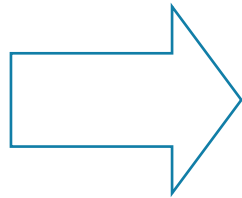
ASPHALT

FBG TECHNOLOGY TO DESIGN NEW ASPHALT MODELS





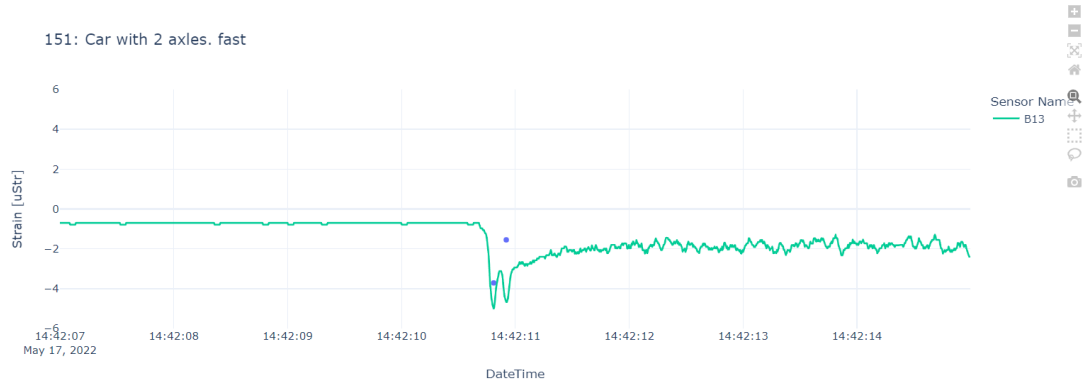
ASPHALT REAL TIME SENSOR RESPONSE



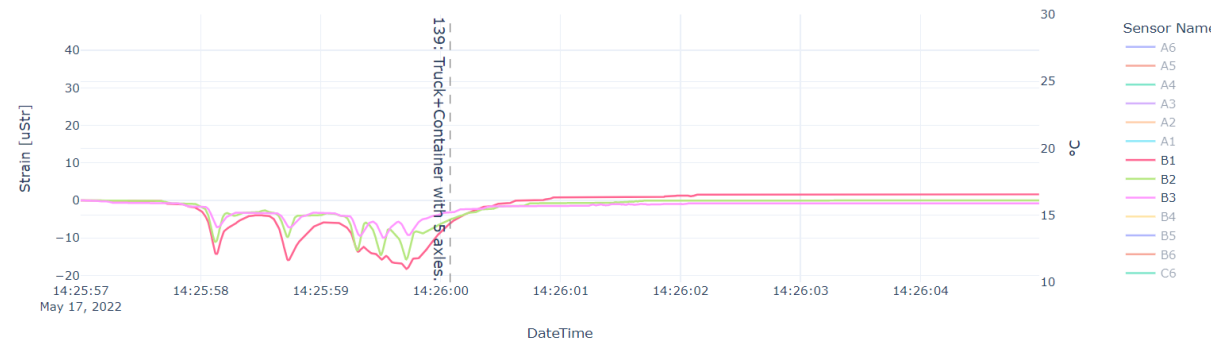
ASPHALT PROCESSED DATA



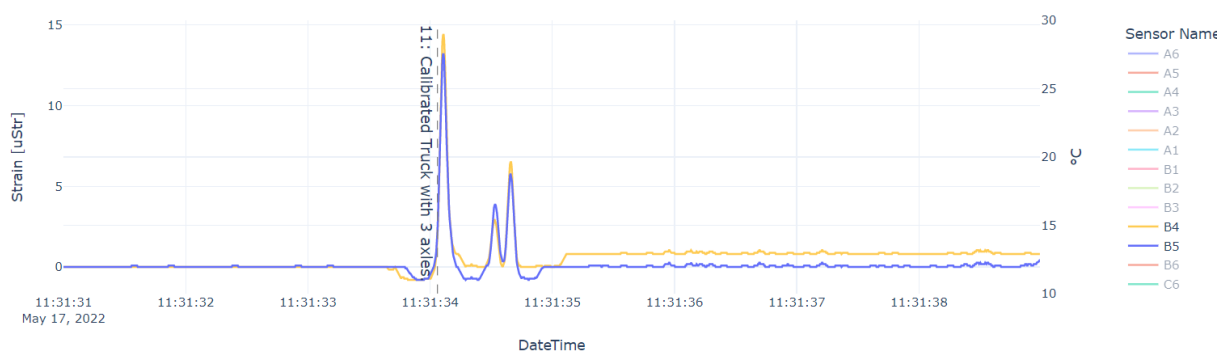
151: Car with 2 axles. fast



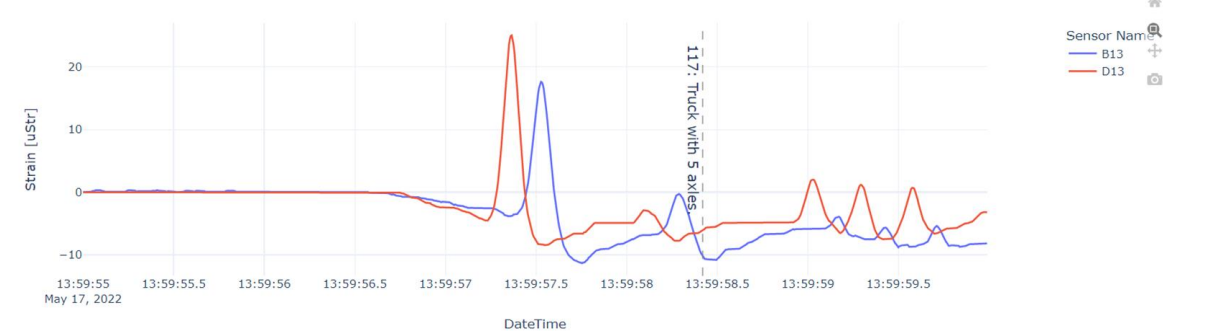
139: Truck+Container with 5 axles.



11: Calibrated Truck with 3 axles.



117: Truck with 5 axles.

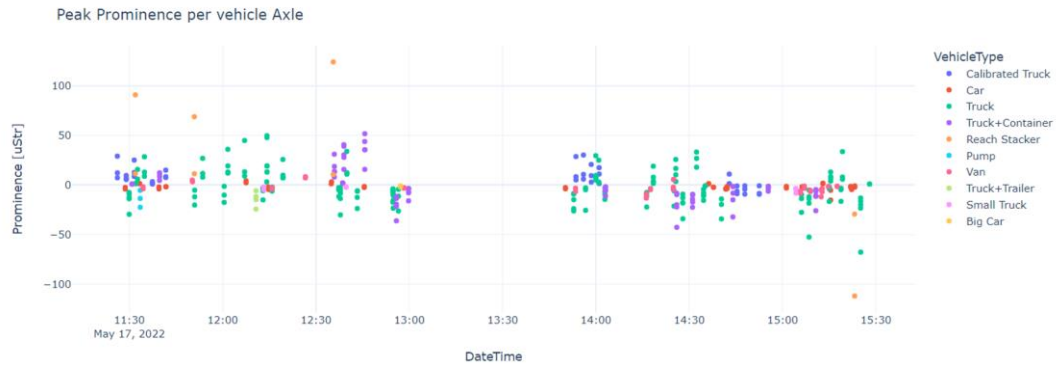




ASPHALT DATA ANALYSIS

The calculated peak prominence values can be used to analyse the magnitude of strain/deformation induced by type of vehicles.

The graph below shows the peak prominence per axle. Events are coloured by vehicle types. The horizontal lines indicate an individual event

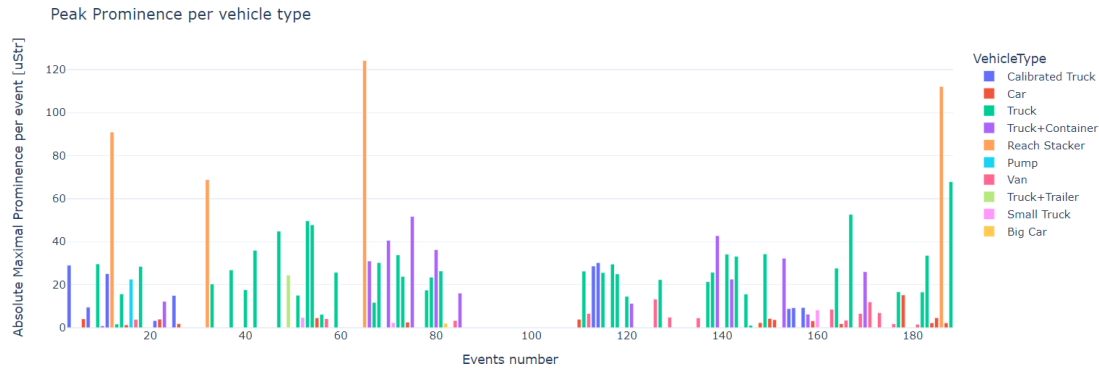


A basic statistic of the prominences per axle is shown below. The statistics are calculated on maximal/minimal value per axle.

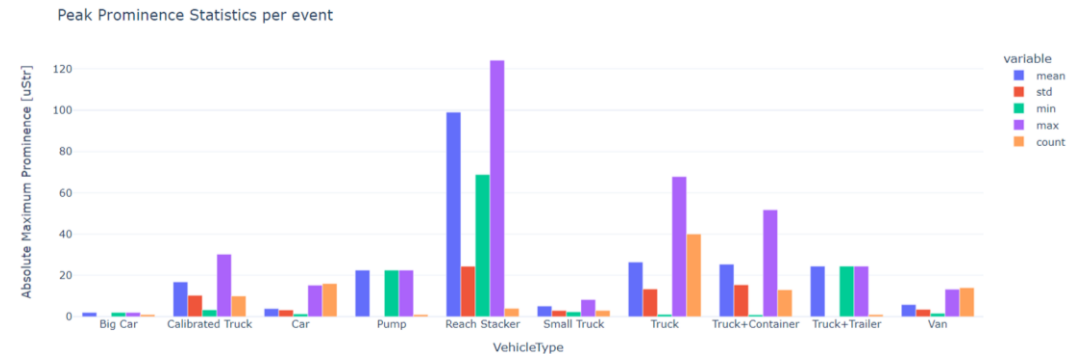
As can be noted, the presence of both positive and negative prominence values flattens out the averages when evaluated per vehicle type.



The graph below shows a the absolute maximum peak prominence per event. Events are coloured by vehicle types



A basic statistic of the prominences per event is shown below. The statistics are calculated on the absolute maximum prominence value per event.



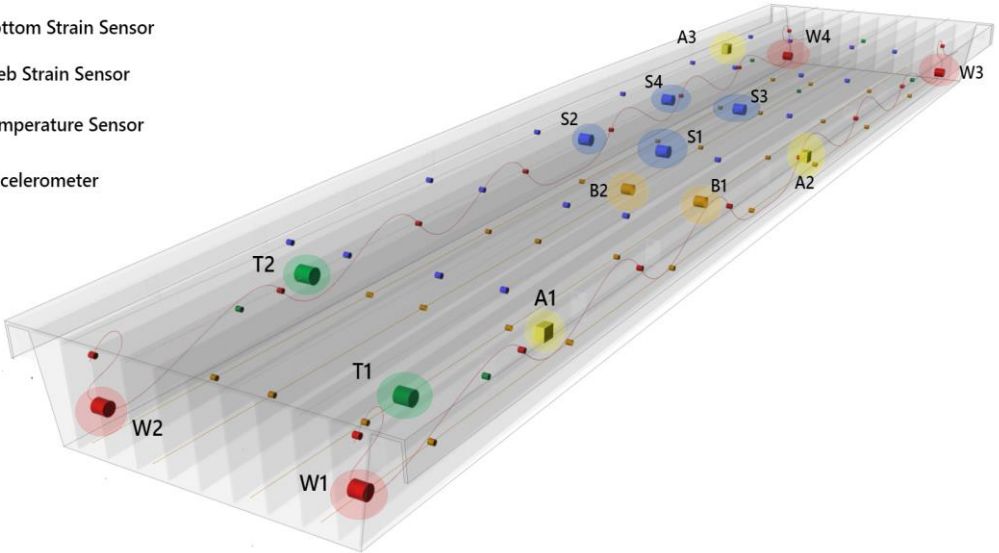


COMPOSITES STRUCTURES

INTERREG SMART CIRCULAR BRIDGE



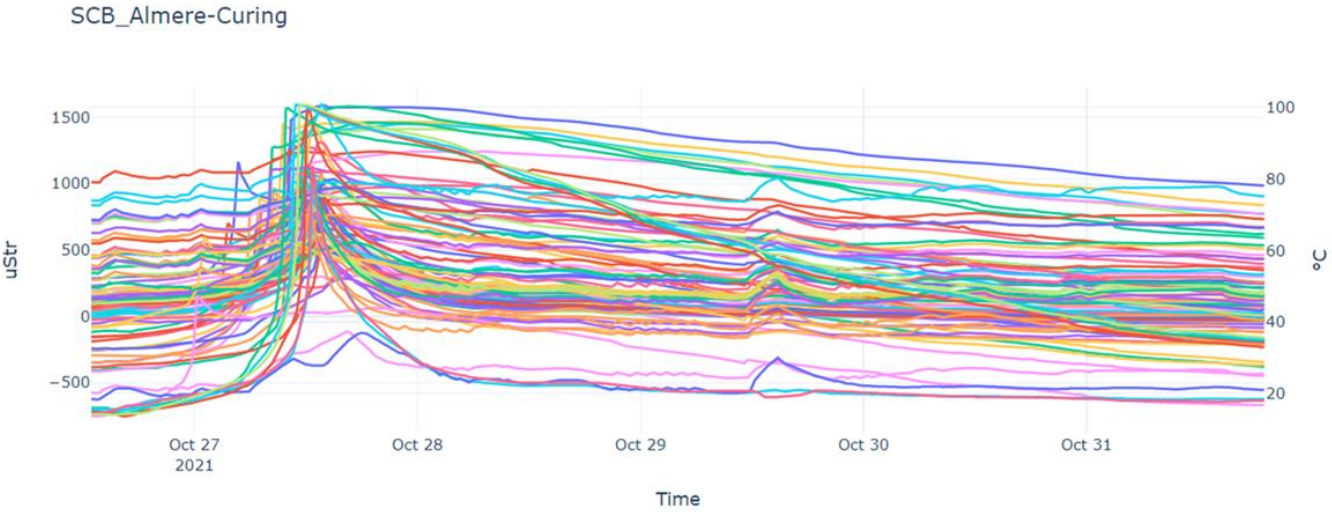
- Deck Strain Sensor
- Bottom Strain Sensor
- Web Strain Sensor
- Temperature Sensor
- Accelerometer





COMPOSITES STRUCTURES PROCESS MONITORING

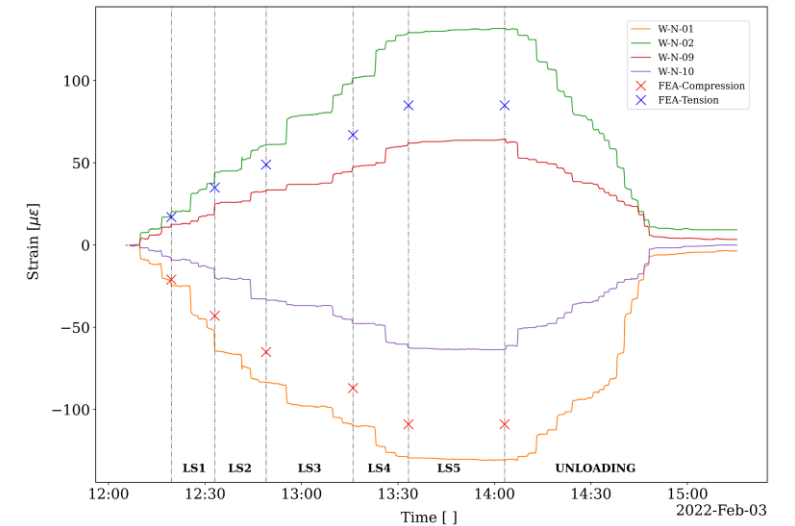
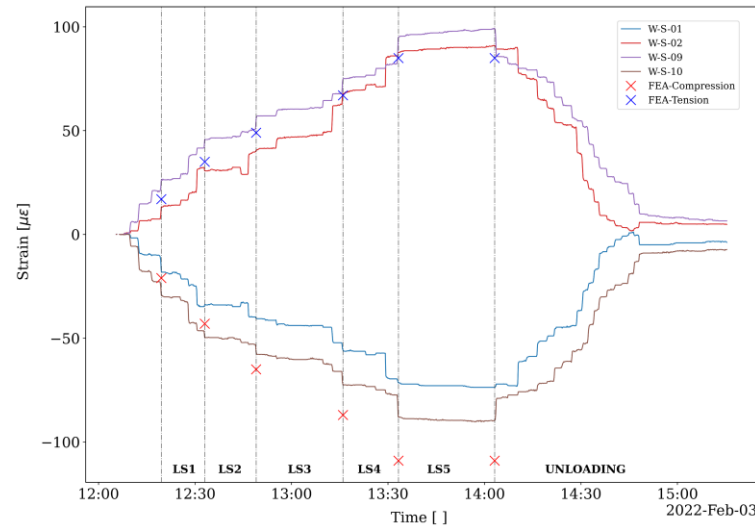
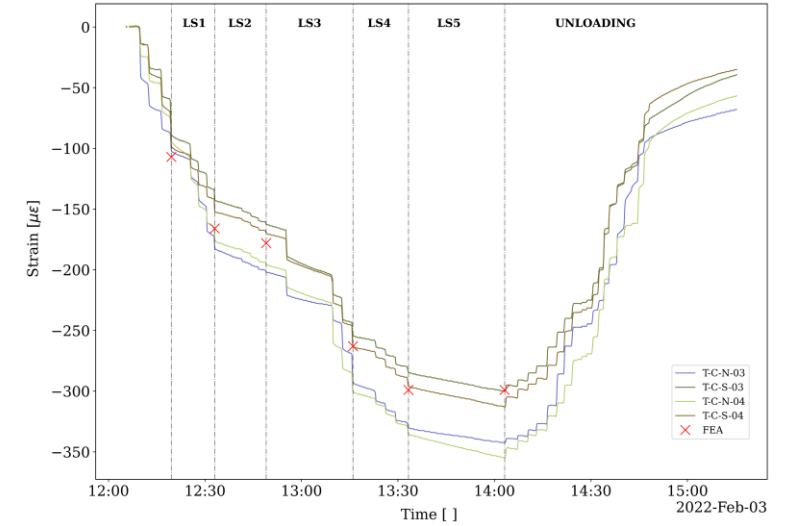
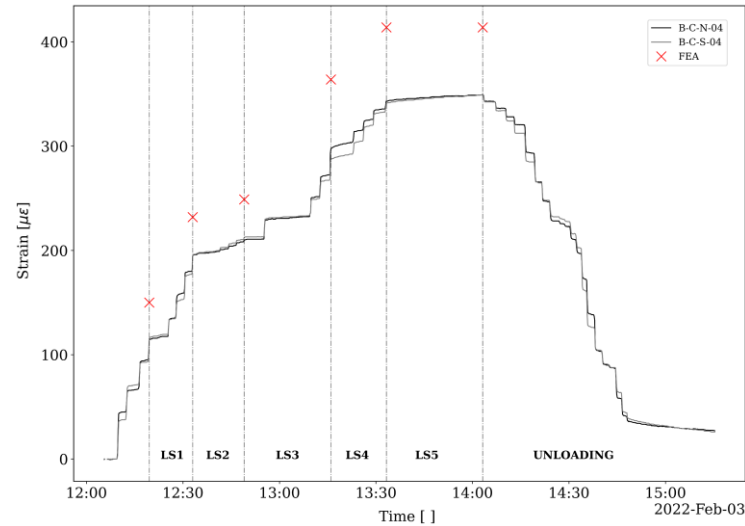
REAL TIME INFUSION, CURING, CREEP MEASUREMENTS



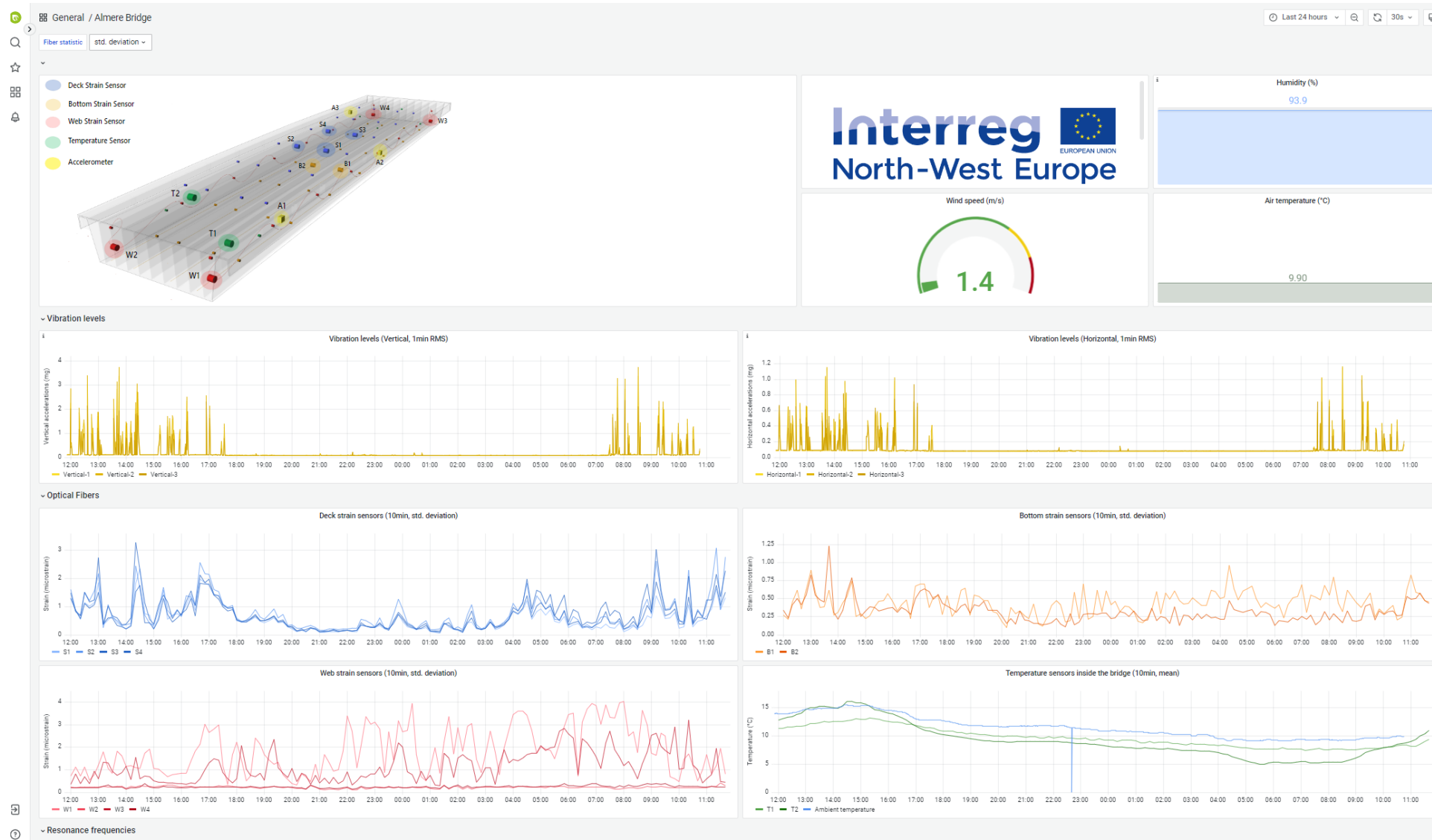


COMPOSITES STRUCTURES DESIGN VALIDATION

LOAD TESTS



COMPOSITES STRUCTURES STRUCTURAL HEALTH MONITORING





Biobased Composite brug Ritsumasyl

3d Model Toelichting

Wissel naar historisch weergave | 4 Nov 2022 (11:53) | realtime | Aanpassen weergave | Historisch data | Login

Brug parameters	
Brug Aantal autos	1 #
Brug Aantal fietsers	2 #
Brug Aantal personen	1 #
Brug Motor	358 h
Brug Openingen	11368 #
Brug Regelaar	26538 h
Opzet Noord Kracht	0,0 N/m
Opzet Noord Postie	93,8 °
Opzet Zuid Kracht	0,0 N/m
Opzet Zuid Postie	96,4 °
Weerstation Luchtdruk	1003,7 mbar
Weerstation Luchtvochtigheid	100,0 %
Weerstation Neerslag	0,00 mm
Weerstation Temperatuur	11,0 °C
Weerstation UwMeter	306,0 W/m²
Weerstation Windsnelheid	4,4 m/s

Bezig: Defectieve waarde label

COM&SENS MAKES ABSOLUTE SENSE !

Composites & Sensing

Proud Technology Spin-off
Ghent University Material Science and Engineering



FOUNDED IN 2012 BY GEERT LUYCKX & ELI VOET

2022 : 8 STAFF AND RECRUITING

THEY TRUST US :

