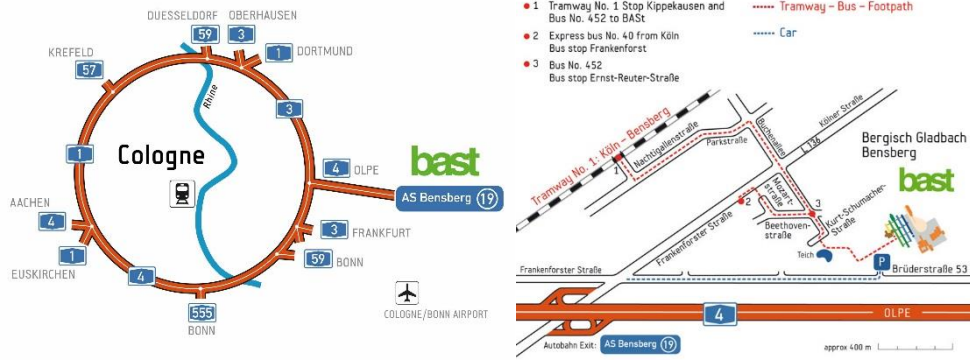


BAST (Bundesanstalt für Straßenwesen)

Federal Highway Research Institute

Brüderstraße 53, 51427 Bergisch Gladbach - Germany



Innovation and **N**etworking for **F**atigue and **R**eliability **A**nalysis of **S**tructures – **T**raining for **A**ssessment of **R**isk

**Bergisch Gladbach, Germany, March 20<sup>th</sup> 2018**

Organised jointly with **BAST**  
The German Federal Highway Research Institute

The 1st INFRASTAR Implementation Day aims at inviting companies, administrations, local authorities, academic experts, policy makers, research scientists, engineers in order to boost networking opportunities, to recognise the challenges on infrastructures in relation to fatigue and reliability and to discuss INFRASTAR research work in these fields.

The 1st INFRASTAR Implementation Day features talks by a panel of experts, discussions, round tables, demonstrations, poster exhibition showcasing the 12 research projects of the European project INFRASTAR.

## Registration and Contact

Registration to the 1st INFRASTAR Implementation Day is free but compulsory.

For more information please visit

<http://infrastar.eu/events/implementation-days/1st-implementation-day/>

[BAST Symposium](#)

or email [infrastar@ifsttar.fr](mailto:infrastar@ifsttar.fr)

Know more about the project and subscribe to the newsletter

<http://infrastar.eu/en/public-archive/newsletter/>



Stay tuned



## SAVE THE DATES

**March 20<sup>th</sup> 2018: 1st INFRASTAR Implementation Day**

March 21<sup>st</sup> 2018: National BAST Symposium on Smart Structures:

Intelligente Brücke – Neue Entwicklungen



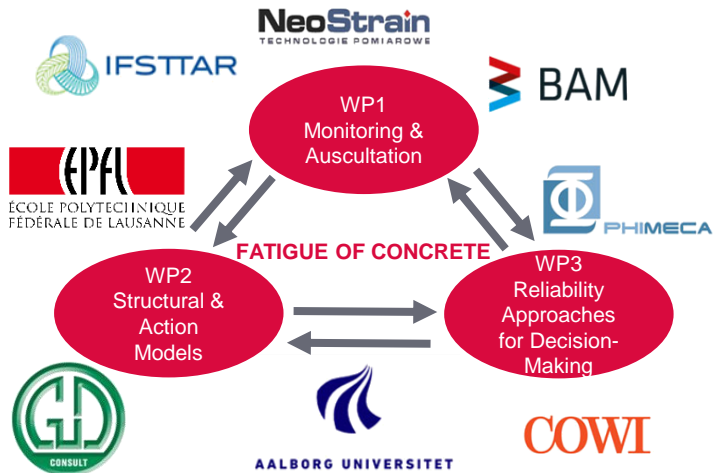
INFRASTAR project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 676139.

INFRASTAR aims to develop knowledge, expertise and skills for optimal and reliable management of structures in concrete: bridges and wind turbines in relation to fatigue. INFRASTAR addresses 3 major challenges:

- Advanced modelling of concrete fatigue behaviour.
- New NDT methods for early damage detection.
- Probabilistic approach of structure reliability under fatigue.

INFRASTAR includes 3 scientific Work Packages (WP), 4 first-class academic organisations, 4 industrial companies, 3 partner organisations, an advisory board composed of 6 members and 12 PhD students.

- WP1 leader: Dr. Ernst Niederleithinger (BAM)
- WP2 leader: Prof. Eugen Brühwiler (EPFL)
- WP3 leader: Prof. John Dalsgaard Sørensen (AAU)



The INFRASTAR Advisory Board is composed of:

- Morten Sjøgaard Andersen (DNV-GL)
- Prof. Jan Bien (Wroclaw University of Science and Technology)
- Prof. Marios Chryssanthopoulos (Surrey University)
- Pascal Collet (Total)
- Dr. Peter Lippert (Deutsche Bahn)
- Prof. Ton Vrouwenvelder (TNO)

## Partner organisations



**10:00 – 10:30** Registration and coffee

**10:30 – 10:40** Welcome and introduction  
Dr. Peter Haardt, BASt

**10:40 – 10:50** INFRASTAR at a glance  
Dr. Odile Abraham, IFSTTAR

**10:50 – 11:10** Challenges in maintaining a reliable and performant railway network  
Dr. Peter Lippert, Deutsche Bahn

**11:10 – 11:30** Focus on Work Package 1: Monitoring and auscultation  
Dr. Ernst Niederleithinger, BAM

**11:30 – 12:30** Advanced ultrasonic instrumentation for interferometric monitoring  
Xin Wang (BAM)  
Fibre-optic sensor for fatigue monitoring  
Antoine Bassil (IFSTTAR)  
Sensor integration, data fusion and information management for industrial monitoring systems  
Joyraj Chakraborty (NeoStrain)  
NDT parameters for fatigue damage identification in structural elements  
Imane Bayane (EPFL)

**12:30 – 13:30** Lunch buffet

**13:30 – 14:10** Fusion and calibration of distributed fiber optics and CODA wave NDT technique  
A. Bassil (IFSTTAR), A. Mankar (AAU), X. Wang (BAM)  
Quantification the value of SHM information on Crêt de l'Anneau viaduct  
I. Bayane (EPFL), L. Long (BAM)  
The optimal monitoring planning  
M. Ahmadiyala (PHIMECA), J. Chakraborty (NeoStrain), B. Sawicki (EPFL)  
Risk assessment of welded details in the deck of Millau viaduct based on the WIM data  
M. Nesterova (IFSTTAR), S. Rastayesh (AAU)  
Sensitivity of offshore wind turbine loads with respect to soil variability based on finite element method  
J. Velarde (COWI), G. Zorzi (GuD)

**14:10 – 15:10** Poster session & demonstrations  
Coffee & refreshments

**15:10 – 16:00** Round tables  
- Advanced ultrasonic instrumentation for interferometric monitoring  
- Fibre-optic sensor for fatigue monitoring  
- Sensor integration, data fusion and information management for industrial monitoring systems  
- NDT parameters for fatigue damage identification in structural elements

**16:00 – 16:20** Conclusion

**18:00 – 19:30** Evening dinner @ Kardinal Schulte Haus