



Innovation and Networking for Fatigue and
Reliability Analysis of Structures – Training for
Assessment of Risk

INFRASTAR Project

Final workshop

BRUSSELS – 6th Feb. 2020

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



Odile ABRAHAM – Project Coordinator
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INFRASTAR

H2020 - MSCA - ITN - ETN

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

– 4 years: 01 May 2016 - 30 April 2020

– Budget: 3 161 113 €

- **H**orizon **2020**

European research programme started in 2014 for 7 years

Calls with open topics

- **M**arie **S**klodowska **C**urie **A**ctions

Provide grants for all stages of researchers' careers

- **I**nnovative **T**raining **N**etworks

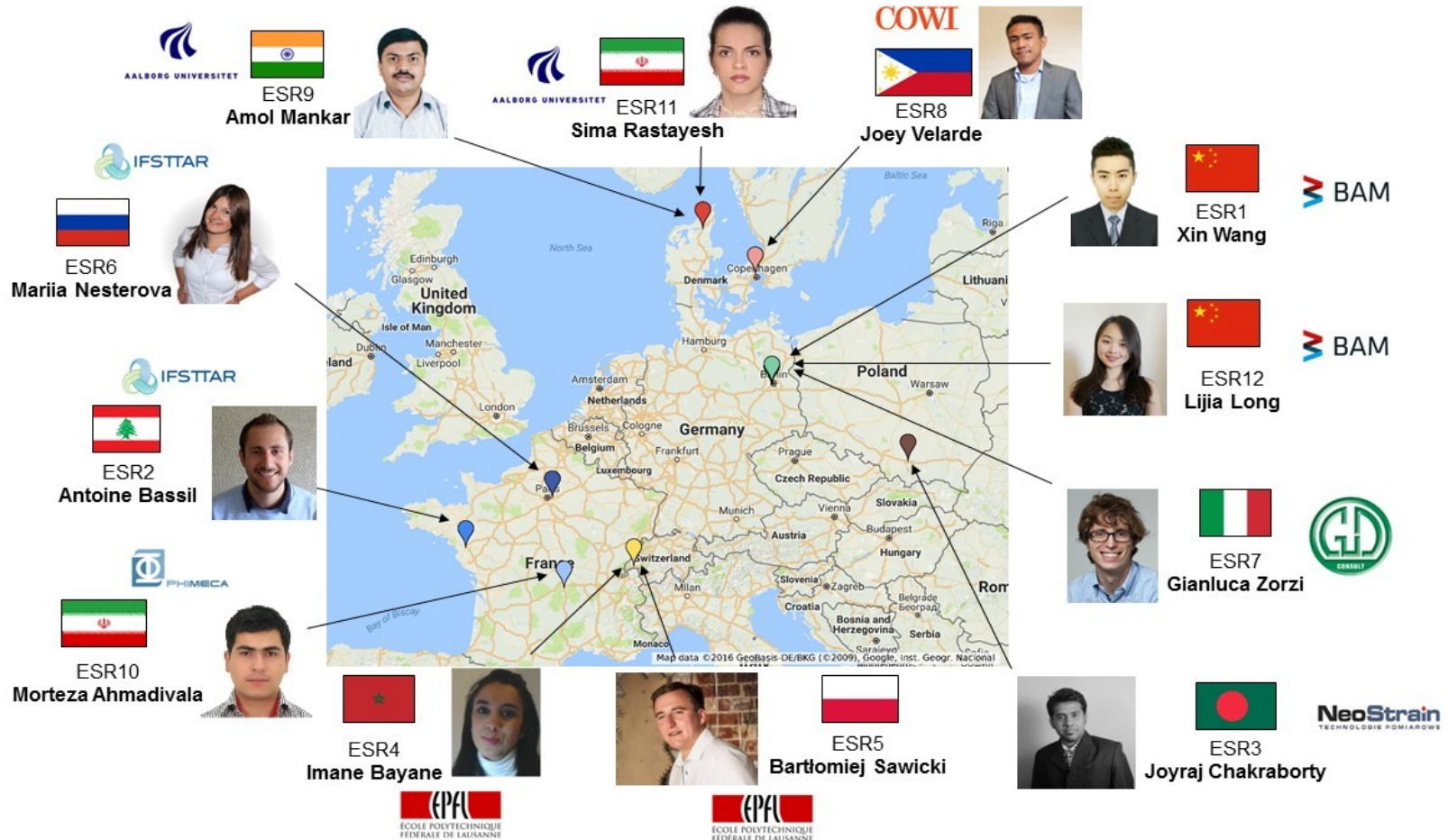
- **E**uropean **T**raining **N**etworks

Participants implement a joint research training programme



The ESRs

Early Stage Researchers







Develop knowledge, expertise and skill
for optimal and reliable management of structures



Fatigue
of
concrete



Develop knowledge, expertise and skill
for optimal and reliable management of structures

3 major challenges

- To develop **new relevant auscultation and monitoring systems**
- To **reduce and optimize the safety margin** encountered in wind turbine and bridge design **in the assessment of remaining strength**
- To **optimize design and life cycle costs**



Fatigue
of
concrete

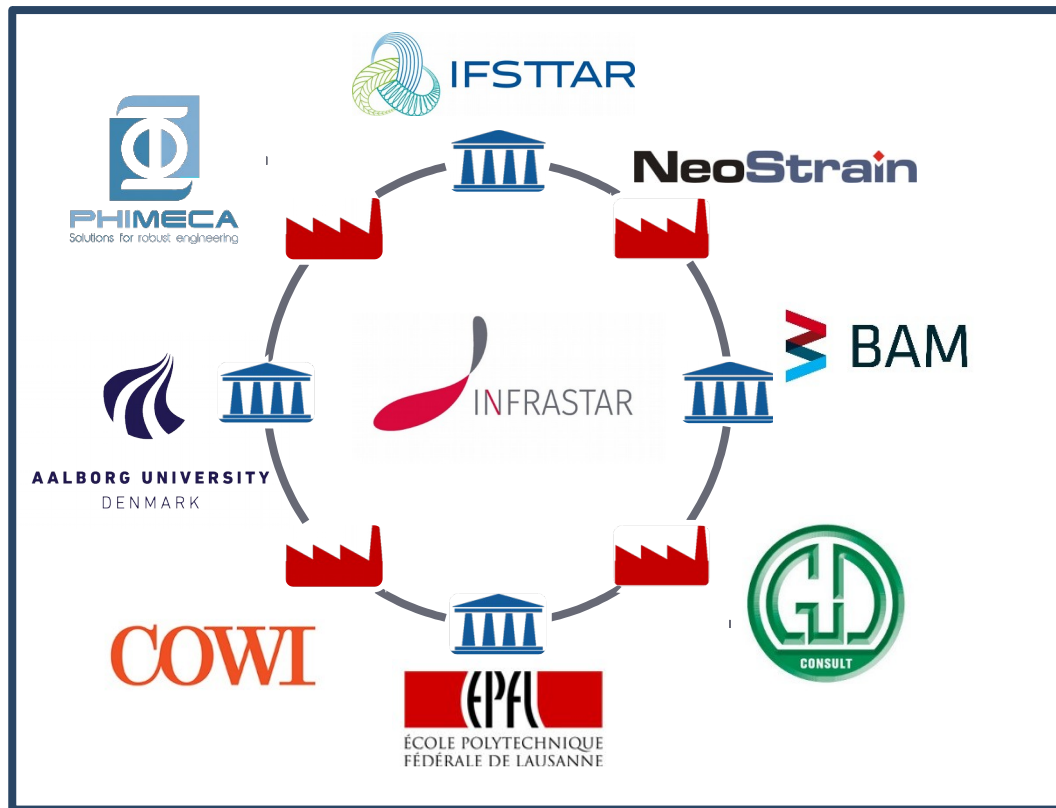


Innovation and Networking for Fatigue and Reliability Analysis of Structures – Training for Assessment of Risk

- 3 scientific Work Packages
 - WP1: Monitoring and auscultation
 - WP2: Structural and action models
 - WP3: Reliability approaches for decision-making
- WP4: Recruitment and training policy
- WP5: Management, dissemination, outreach and business opportunities



The network



8 beneficiaries

- 4 academic institutions
- 4 industries



3 partner organisations



1 advisory board with 6 members

TNO innovation for life

DNV GL

UNIVERSITY OF SURREY

TOTAL

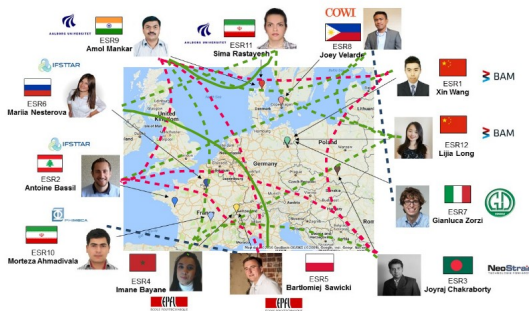
Politechnika Wroclawska

DB

BAM

For each ESR: to make a personal **contribution to knowledge**

For each of them in **Infrastar**: to benefit of a **multi-disciplinarity** breeding ground to **amplify** their contribution



→ How: the **shared objects**

On site shared objects



Millau viaduct

To promote collaboration between the Wps

To boost ESRs collaboration

To exemplify the inter-sectoral approach



**Bridge over
Kłodnica river**



Chillon viaduct

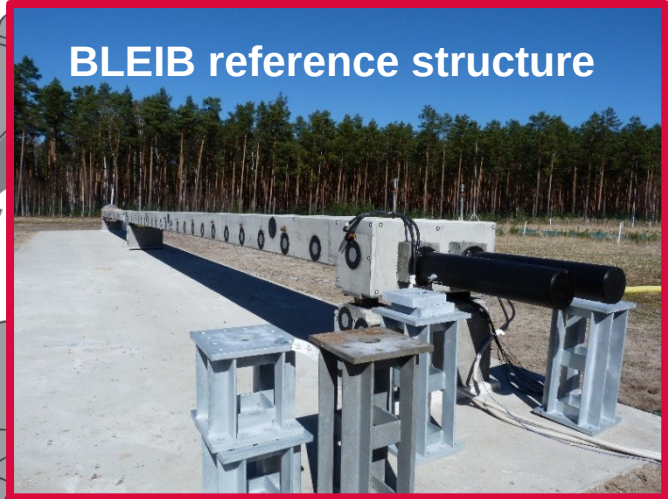
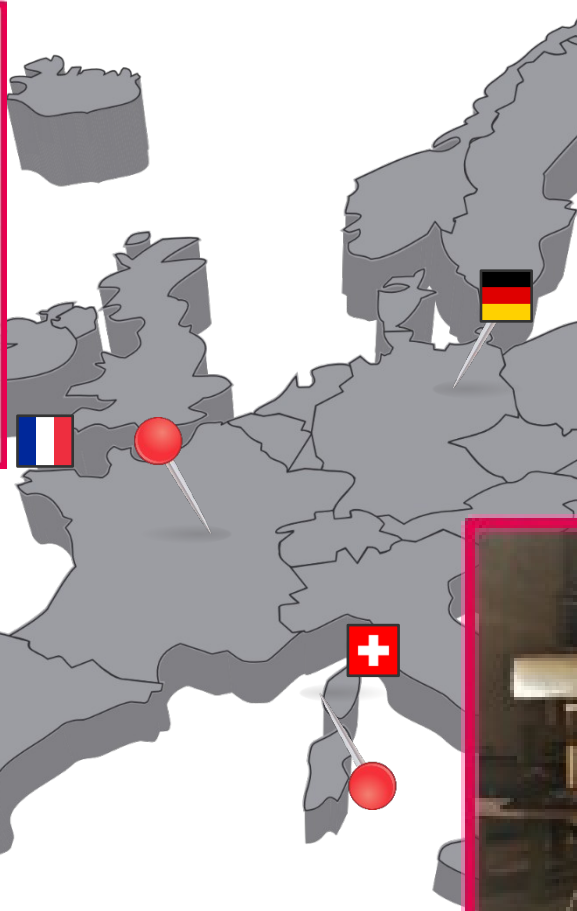
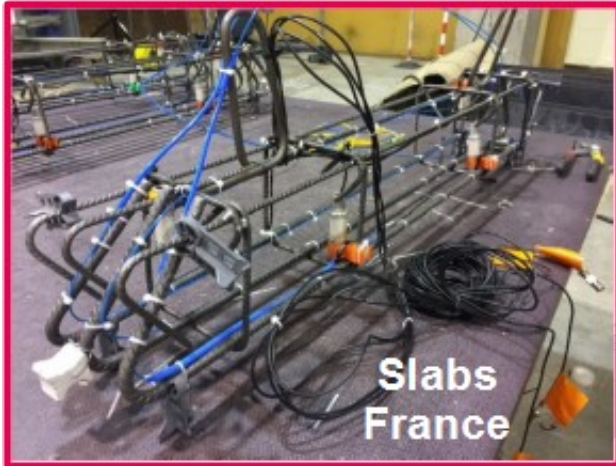


Crêt de l'Anneau viaduct



Onshore wind turbine

Lab shared objects



Network-wide training activities

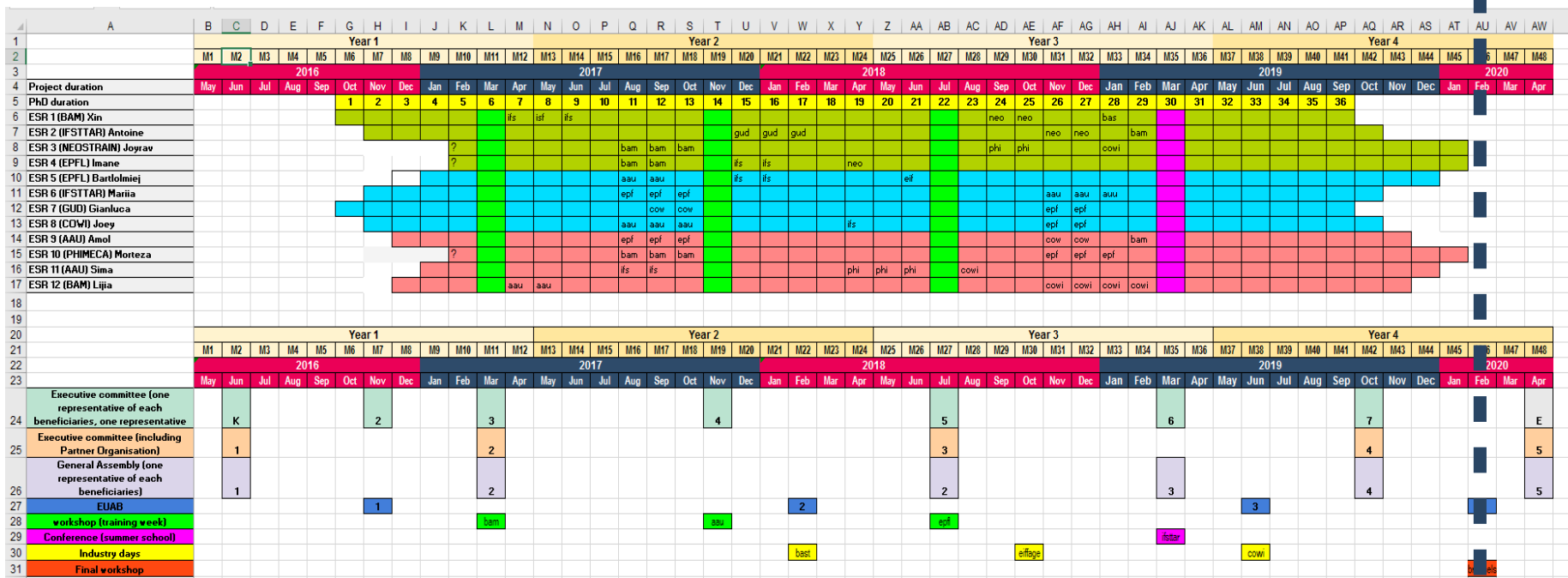
2 to 3 secondments for 2 to 3 months for each ESR.

3 training weeks: BAM (March 2017), EPFL (Nov. 2017), Aalborg (Jul. 2018).

3 implementation days: BAST (Feb. 2018), EIFFAGE (Oct. 2018), COWI (Jun. 2019).

1 winter school: IFSTTAR (Apr. 2019)

1 final workshop: Brussels (Feb. 2020).



Network-wide training activities

2 to 3 secondm
3 training week
3 implementati
1 winter schoo
1 final worksh

69 months of secondment
101 hours of common trainings

18 journal papers
45 conference papers / 17 countries visited

Blog: 12 blogs / 152 posts / 33188 views
Social networks: Facebook, Twitter, LinkedIn : 606 followers, >1500 posts.

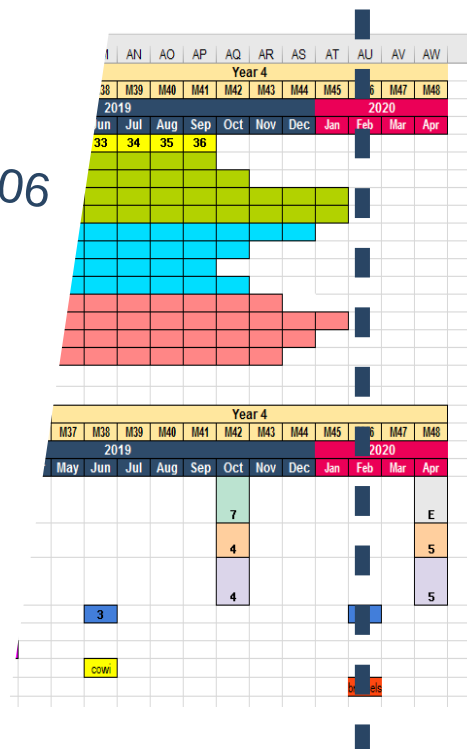
42 Consortium ConfCalls
8 Executive Committee meetings
49 ConfCalls dedicated to Infrastar events

1 wedding (Xin)
1 baby (Gianluca)

And thousands of litres of coffee (:

. 2018).
JWI (Jun. 2019).
s in Apr 2020.

	A	B	C	D
1				
2				
3				
4	Project duration	May	Jun	Jul
5	PhD duration			
6	ESR 1 (BAM) Xin			
7	ESR 2 (IFSTAR) Antoine			
8	ESR 3 (NEOSTRAIN) Jojray			
9	ESR 4 (EPFL) Imane			
10	ESR 5 (EPFL) Bartolmiej			
11	ESR 6 (IFSTAR) Mariaia			
12	ESR 7 (GUD) Gianluca			
13	ESR 8 (COWI) Joey			
14	ESR 9 (AAU) Amol			
15	ESR 10 (PHIMECA) Morteza			
16	ESR 11 (AAU) Sima			
17	ESR 12 (BAM) Lijia			
18				
19				
20				
21				
22				
23				
24	Executive committee (one representative of each beneficiaries, one representative			
25	Executive committee (including Partner Organisation)			
26	General Assembly (one representative of each beneficiaries)			
27	EUAB			
28	workshop (training week)			
29	Conference (summer school)			
30	Industry days			
31	Final workshop			



It continues

Next Infrastar Spring School
April 14-16 2020
Nantes, France
<https://trainingschool.infrastar.eu/>

. 2018).
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 s in Apr 2020.

https://ec.europa.eu/info/funding-tenders...ortunities/portal/screen/myarea/projects

INFRASTAR
Training school

HOME COMMITTEES TRAINING SCHOOLS RESOURCES AND DOWNLOADS REGISTRATION AND FEES ABOUT NANTES

The 2nd Infrastar Training School is scheduled for 14-17 April 2020 at Ecole Centrale de Nantes in France!
APPLY HERE by February 11, 2020.
[Download the flyer](#)

INFRASTAR Training School

Skłodowska-Curie **INFRASTAR** Innovation and Networking for Fatigue and Reliability Analysis of Structures -

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/myarea/projects>

Agenda

- 09:30 - 09:40 Welcome talk **Odile Arbeit de Chalendar**, Special Adviser (University Gustave Eiffel @ Clora)
- 09:40 – 09:50 Introduction Dr **Odile Abraham**, Project Coordinator (University Gustave Eiffel – Ifsttar)
- 09:50 - 10:10 Keynote «**Funding opportunities: The MSCA programme from Horizon 2020 to Horizon Europe and beyond**», **Athina Zampara**, Project Officer (Research Executive Agency)
- 10:10 – 11:25 Panel discussion with experts « **Lowering the environmental impact of bridges and wind turbines by updating structural engineering practices** », Morten Søgaaard Andersen (DNV GL), Dr Dr Ernst Niederleithinger (BAM), Prof. John Dalsgaard Sørensen (AAU), Dr Marc Thiele (BAM), Prof. Ton Vrouwenvelder (TNO)
Moderator: Prof. **Eugen Brühwiler** (EPFL)
- 11:25 - 11:40 Coffee
- 11:40 - 12:45 **Posters** by the Infrastar ESRs and **demonstrations**
- 12:45 - 14:00 Lunch
-

Agenda

- 14:00 – 14:30 **Keynote on entrepreneurship and funding of innovation, Olivier Chassagne**, Policy Officer (DG GROW, European Commission)
- 14:30 - 15:30 Panel discussion « **Feedback from the 12 InfraStar ESRs** »
- 15:30 - 15:45 Coffee
- 15:45 – 16:45 Panel discussion « **Feedback from the InfraStar Consortium** », beneficiaries, partner organisations, advisory board
- 16:45 - 16:55 Conclusion

Have a great final workshop



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Stay tuned <http://infrastar.eu>



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