COST TU1402: Quantifying the Value of Structural Health Monitoring



5th Workshop Opening Presentation

Sebastian Thöns

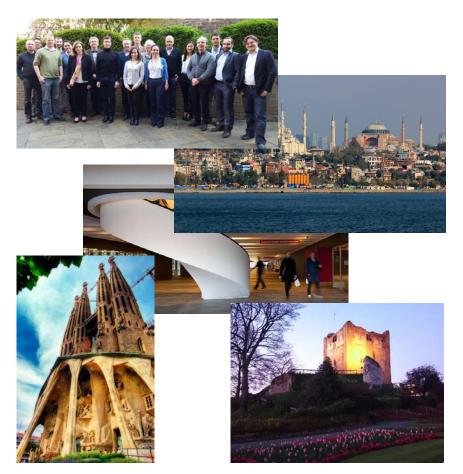


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Introduction



We have started in 2015 and we have built a large network across Europe.



3rd and 4th Workshop, Barcelona, Spain and Guildford, UK

- 42/23 participants (researchers, structural engineers, SHM engineers and infrastructure operators and owners) from 21/14 countries
- Presentations, audio and videos records from Barcelona Workshop online (http://www.cost-tu1402.eu)
 - Username: COST_TU1402_user
 - Password: KRuw6k



3rd and 4th Workshop, Barcelona, Spain and Guildford, UK

Achievements

- Progress of active WGs in relation to Memorandum of Understanding
- Coordination and development of factsheets in WG1 (5), WG2 (12), WG3 (7)
- Workshop report of the 3rd and 4th Workshop soon available on file sharing



Short Term Scientific Missions (STSMs)

- Mr. Dominik Skokandić: Application of Bridge Weigh-in-Motion measurements in assessment of existing road bridges
 - Host: Slovenian National Building and Civil Engineering Institute (ZAG), Mr. Ales Znidaric (ales.znidaric@zag.si)
- Dr. Simona Miraglia: Value of Information in System Resilience Modelling
 - Host: School of Engineering, The University of Newcastle, Australia, Prof. Mark Stewart (mark.stewart@newcastle.edu.au)
- Dr. Boutros El Hajj: The potential added value of heterogeneous databases for maintenance of infrastructures in case of a limited number of monitored structures with imperfect sensors
 - Host: Dept. of Civil Engineering, Trinity College Dublin, Prof. Alan O'Connor (alan.oconnor@tcd.ie)



Short Term Scientific Missions (STSMs)

- Dr. Krzysztof Radzicki: Strategies of structural health thermal monitoring of dams and levees
 - Host: Irstea National Research Institute of Science and Technology for Environment and Agriculture, Prof. Stephane Bonelli (stephane.bonelli@irstea.fr)



Short Term Scientific Missions (STSMs): outlook

- More budget foreseen in the Work and Budget Plan for 2016 and 2017
- STSM session for coordination and presentation of strategy



Dissemination

- 1. European Workshop on Structural Health Monitoring (EWSHM 2016) with session "Health monitoring and structural performance assessment":
 - 15 papers
 - 5th to 8th July 2016 in Bilbao, Spain
- 2. Conference and COST TU1402 Workshop: Materials, Systems and Structures in Civil Engineering (MSSCE 2016)
 - 7 papers
 - 23rd August 2016, Lyngby, Copenhagen, Denmark



Dissemination: outlook

- 12th International Conference on Structural Safety & Reliability (ICOSSAR 2017) with mini symposium on "Value of information in structural health monitoring"
 - 6th to 10th August 2017 in Vienna, Austria
- International Workshop on Structural Health Monitoring (IWSHM)
 - September 2017 in Stanford, USA
- Action brochure and flyer under development.

Innovation Committee activities

- 1. STSM strategy contribution
- 2. We will create a LinkedIn Group





COST Action TU1402: Key deliverables

- 1. Dedicated dissemination activities.
 - E.g.: workshops, special sessions at international conferences, training courses, scientific missions
- 2. A well-developed homepage.
 - Activity documentation with videos, presentations and reports
- 3. A library of tools and algorithms.
- 4. A chapter to the Probabilistic Model Code of the JCSS.
 - Documentation the scientific framework and approaches
- 5. A guideline on the quantification of the value and optimization of SHM.
 - Detailed examples
 - For practising engineers



COST Action TU1402: Scientific Program

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Task 1: Theoretical Framework																
а	Clarification of the theory															
b	Formulation of the theory for applications															
С	Communication of the theory															
M1	Dissemination															
Task	2: SHM Strategies and Structural Performance															
а	SHM and structural performance categorisation															
b	SHM information modelling platform															
M2	Dissemination															
Task	3: Methods and Tools									_						
	Databases and modelling toolboxes for engineers and															
а	researchers															
b	Advancement of algorithms for efficient computation															
M3	Dissemination															



COST Action TU1402: Scientific Program

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Task	4: Case Studies Portfolio														
а	Selection of case studies														
b	Case study calculation and documentation														
M4	Dissemination														
Task	5: Development of Guidelines														
а	Chapter of JCSS Probabilistic Model Code (PMC)														
b	Guideline on the quantification of the value and optimization of														
	SHM														
M5	Dissemination of guidelines														
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We are here

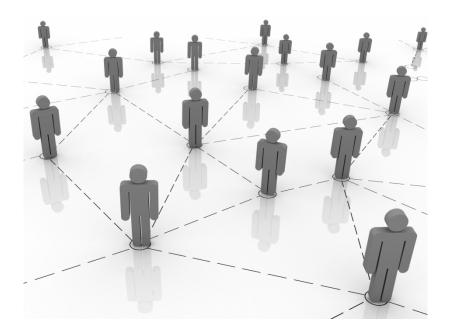


COST Action TU1402: Reporting deadlines

- Intermediate Report: 13.11.2016
- Final Report: Month 48



Network and budget



- 130 participants from 27 countries
- Budget approx. constant



New Work and Budget plan for 05/2016 to 04/2017

- Meetings
 - 5th Workshop, 24. and 25.08.2016, DTU, Denmark
 - Workshop on "The Value of Structural Health Monitoring for the reliable Bridge Management"
 - 02. and 03.03.2017, Zagreb, Croatia
 - Local organiser: Ana Mandic
 - Steering Committee Meeting
- STSMs
 - Budget for about 5 STSMs
- Training Schools
 - Budget for one training school

We will support and adjust good ideas such as e.g.: mini workshops!



Summary

We have started in 2015 and are still in the first half of the project.

We have built a large network across Europe.

We have started to work together!

Now we should impact together.

COST TU1402: Quantifying the Value of Structural Health Monitoring



Thank you for your attention.

Let us have a good workshop.