



EUROSTRUCT

EUROPEAN ASSOCIATION ON
QUALITY CONTROL OF BRIDGES AND STRUCTURES

TRAINING SCHOOL PADOVA

1 September – 3 September, 2021

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EUROPEAN ASSOCIATION ON
QUALITY CONTROL OF BRIDGES AND STRUCTURES

DATE OF EVENT
1–3 September 2021

University of Padova
Padova, Italy

ACTION CONTACTS

EuroStruct

Local organizer
Action websites

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CONTENTS

1.	Introduction	4
1.1.	About	4
2.	Programme	6
2.1.	Day #1	6
2.2.	Day #2	7
2.3.	Day #3	7

1. INTRODUCTION

1.1. ABOUT

The objective of the EUROSTRUCT Training School Padova is the exchange of knowledge and experience in quality control, to encourage awareness and responsibility of structural engineers towards the needs of society, and to encourage actions necessary for progress of quality control in bridges and structures.

The school aims at teaching the most recent developments on performance indicators and performance goals, focusing on the training on some contemporary topics around this field.

In this training school participants will be familiarized with some contemporary topics and will introduce them to a range of bridge management, inspection, performance indicators and assessment approaches along with a clear idea around the different aspects of risk. The summer school will provide targeted training for doctoral researchers in these topics, including hands-on problem-solving sessions. Participants will be able to use the knowledge and training for their research and are expected in future to influence how they interact with and contribute to the risk and management aspects of roadway bridges.

The event is organised by the EuroStruct association and University of Padova, Department of Civil, Environment and Architectural Engineering.

Venue: University of Padova, Padova, Italy
 Time: 1 – 3 September 2021
 Capacity: 10-25 trainees
 Fee: 350 € per person

Local Organizer	Co-Organizer
Mariano Angelo Zanini <i>University of Padova, Department of Civil, Environment and Architectural Engineering Padova, Italy</i>	José Matos <i>University of Minho, School of Engineering, Civil Engineering Department, Guimarães, Portugal</i>
Flora Faleschini <i>University of Padova, Department of Civil, Environment and Architectural Engineering Padova, Italy</i>	Irina Stipanovic <i>University of Twente, Faculty of Engineering Technology, Enschede, Netherlands</i>
	Amir Kedar <i>Kedmor Engineers Ltd. Ramat Gan, Israel</i>

Trainers list of experts:

- Prof. José Matos, Department of Civil Engineering, School of Engineering, University of Minho, Portugal
- Prof. Joan Ramon Casas, Department of Civil and Environmental Engineering, Polytechnic University of Catalonia, Spain
- Dr. Irina Stipanović, Faculty of Engineering Technology, University of Twente, Netherlands
- Eng. Amir Kedar, Kedmor Engineers, Israel
- Dr. Roland Kromanis, Faculty of Engineering Technology, University of Twente, Netherlands
- Dr. Mariano Angelo Zanini, University of Padova, Department of Civil, Environment and Architectural Engineering, Padova, Italy
- Dr. Flora Faleschini, University of Padova, Department of Civil, Environment and Architectural Engineering, Padova, Italy

This workshop tries to harmonize a common decision-making framework through practical examples acknowledging the differences that may exist for practical implementation. The hands-on approach of the case studies and methodologies are expected to create an in-depth understanding around decision-making approaches for bridges and promote a healthy discussion around the needs, approaches and interpretation of information obtained from individual bridges and bridge networks. Rationalizing the process of arriving at safe and efficient management of bridge assets will also be focused on in this training school.

The training school attempts to:

- Provide practical and modern tools and impart them on the trainees
- Act as a formal platform for dialogue, discussion and consensus-development of bridge networks for trainees with diverse technical and experiential backgrounds
- Increasing the impact of research on policy makers, regulatory bodies and national decision makers as well as the private sector.

The training school addresses the core value of EUROSTRUCT by promoting tangible and meaningful interaction among engineers, owners, inspectors and researchers to arrive at an EU-wide approach for managing the performance and safety of its bridges and the connection of such approaches to how such maintenance and management is carried out at a global level.

2. PROGRAMME

NOTE: All times are as per CET Time.

2.1. DAY #1

Wednesday, September 1st, 2021

09:00 – 09:30 *Registration*

09:30 – 09:45 Introduction and welcoming
by Jose Matos and Mariano Angelo Zanini

09:45 – 10:30 Introduction to performance-based assessment of bridges
Detailed Program

- COST Action TU 1406 - General issues, Motivation and Main Objectives and Need for a Quality Control Plan for European bridges
 - Key outcomes from the Action
 - Motivation of the Training School
- by Joan Ramon Casas and Irina Stipanovic*

Learning Outcomes

Capabilities associated with performance indicators and performance-based assessment of existing highway bridges:

- i. Characterization of performance indicators*
- ii. Definition of performance indicators*
- iii. Characterization of performance indicators for the structural assessment and maintenance planning;*
- iv. From performance indicators to KPI.*

Bibliography (i) COST TU1406 Reports; (ii) Summary of COST Action Final Meeting Panel Discussions
by Amir Kedar

10:15 – 11:00 Quality Control for Bridges

- Hierarchical levels of data
- Presentation of COST TU1406 Quality Control Framework
- Understanding data at a stock level
- Interpretation and analyses

by Amir Kedar

11:00 – 11:15 *Coffee break*

11:15 – 12:00 Dividing into groups (max. 4 groups) and presenting the Bridge Case Studies
by Trainers

12:00 – 13:00 *Lunch break*

13:00 – 14:00 Preparing for Bridge Case Studies
by Participants + Trainers

14:00 – 16:00 Implementation of Bridge Case Studies for each group
by Participants + Trainers

2.2. DAY #2

Thursday, September 2nd, 2021

09:00 – 12:30	Implementation of Bridge Case Studies for each group <i>by Participants + Trainers</i>
12:30 – 13:30	<i>Lunch</i>
13:30 – 14:00	Local expert lecture on Bridge Management Practice in Italy The future of bridge inspection and management: the "Autostrade per l'Italia & Movyon" strategy <i>by Marzia Malavisi</i>
14:00 – 16:00	Implementation of Bridge Case Studies for each group <i>by Participants + Trainers</i>
16:00 – 16:15	<i>Coffee Break</i>
16:15 – 17:00	Analyses of case studies Implementation: Interpretation of Results <i>by Participants + Trainers</i>

2.3. DAY #3

Friday, September 3rd, 2021

08:30 – 9:45	Preparation of workgroup report & live discussion <i>by Participants + Trainers</i>
09:45 – 10:00	<i>Coffee Break</i>
10:00 – 12:30	Workgroup presentations & discussions <i>by Participants + Trainers</i>
12:30 – 13:00	<i>Snack Break</i>
13:00 – 14:00	Summary and conclusions. Submittal of workgroup reports <i>by Trainers</i>

Trainees will be requested to provide their reports at the end of the entire session or mail them over the next day.



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