



TU1402 Training School 2018

Objective

The objective of the second COST TU1402 Training School is to explore methods and tools to implement a Value of Information analysis in structural engineering. Through the training school, the students will acquire knowledge and skills on the implementation of probabilistic modelling, structural reliability analysis and decision analysis by the use of Bayesian networks. All learning content will be taught alongside its implementation in a selected case study. A student who successfully has taken part in the course will be able to:

- Develop and apply probabilistic models of the relevant uncertainties in decision analyses, in structural reliability analyses and for measurement information modelling
- Perform Value of SHM Information and decision analyses

Dates and venue

26th to 28th of September 2018

Hotel Rotondo, City of Trogir, near Split, Croatia

Local organisers

Dominik Skokandic (dskokandic@grad.hr)

Dr. Mislav Stepniak (mstepinac@grad.hr)

Lecturers

Prof. Dr. Daniel Straub, Technical University of Munich, Germany

Prof. Dr. Jochen Köhler, Norwegian Technical University, Norway

Assoc. Prof. Dr. Sebastian Thöns, Danish Technical University, Denmark

Guest lecturer: Prof. Dr. Michael D. Todd, University of California, USA.

Who should attend?

Post-Graduate Students and professionals.

As the training school is focused on implementation of methods, the attendees should ideally have a solid background in relevant topics as e.g. Probability Theory, Uncertainty Representation, Reliability Theory, Decision Theory. If potential attendees feel unsecure about their skills, brief self-study is recommended prior to the training school. Reference to basic engineering-oriented literature is given at the end of this document. Further references can be given on request.

Application, scholarships and registrations

There are TU1402 scholarships with a support of maximum 400,00 Euro available. Please send a motivation letter, a short CV including the most relevant study transcript via email to Sebastian Thöns (sebt@byg.dtu.dk). The registration closes at the 15.08.2018.



Training School Plan

Day 1	Introduction to the example case
	Time Topics
	08.30-09:00 Introduction to the case and the available data
	09:00-10:00 Value of information concept & decisions
	10:30-12:00 Decisions, consequences and monitoring of the case study
	13:00-14:30 Introduction to Bayesian Networks and Influence Diagrams
	15:00-17:00 Representing the case study by an Influence Diagram
Day 2	Structural reliability and measurements
	Time Topics
	08.30-10:00 Modelling the quality of information
	10:30-12:00 Case study work
	13:00-14:30 Reliability analysis within the BN
	15:00-17:00 Case study work
	17:30-19:00 Guest lecture by Prof. Dr. Michael D. Todd on Structural Health Monitoring Systems and Analysis
	Training School Dinner
Day 3	Decision analyses
	Time Topics
	08.30-10:00 Sequential decision modelling
	10:30-12:00 Case study work
	13:00-17:00 Work on and presentation of own projects

Course evaluation

Course Diplomas are issued by COST TU1402 on the basis of (1) active course preparation, (2) active course participation and (3) a positive evaluation of the provided case study after the training school. 2.5 ECTS points will be awarded for the course.

Literature for preparation

- [1] Straub D. 2017 Lecture notes in Engineering Risk Assessment. Technische Universität München
- [2] Raiffa H, Schlaifer R. Applied statistical decision theory. Wiley classics library, Originally published: Harvard University, 1961. Republished: Wiley (2000)
- [3] Benjamin JR, Cornell CA. Probability, Statistics and Decision for Civil Engineers: McGraw-Hill New York; 1970.

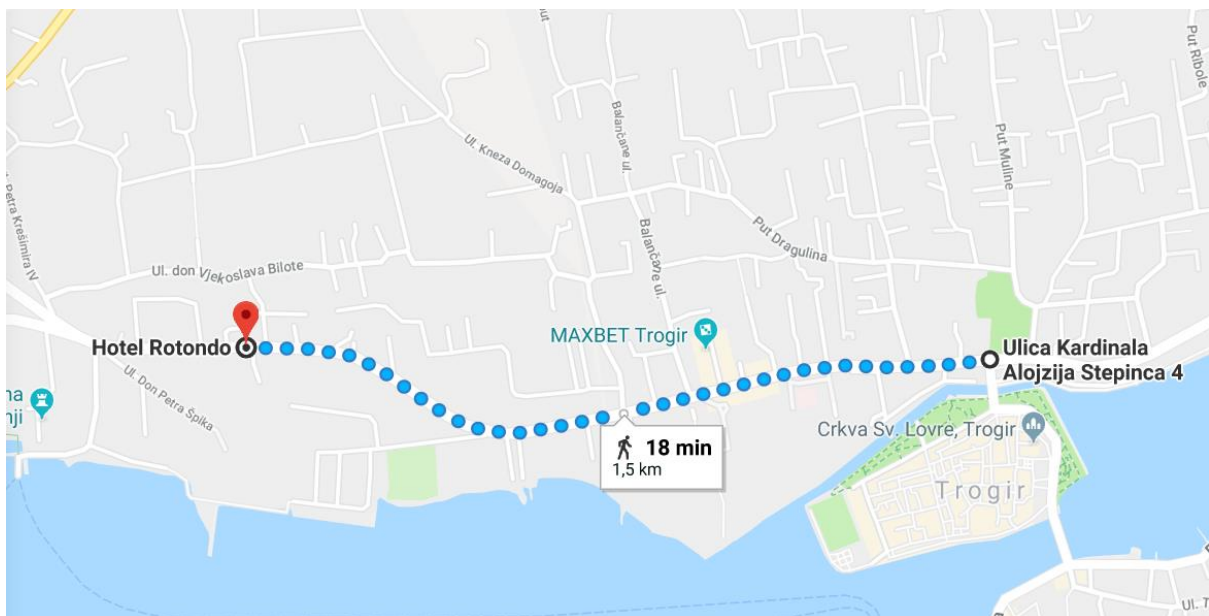


Travel and local transport information

Trogir is connected with major Europe cities through very well organized airline network. Airport Split is only 3km from Trogir. Most of the European airlines companies have daily connections with Split throughout summer period. There is a bus station next to the airport exit where regular bus line (No. 37) goes to Trogir city centre regularly. There is also shuttle bus that goes to Split after every international arrival on the airport.

Additional information about Split airport: <http://www.split-airport.hr/index.php?lang=en>

Getting from the airport to the venue is quite easy, just board the no. 37 bus which will take you to the Trogir city centre, and from there it is a short walk by the sea (15 min), or you can take a taxi which are located in the city centre.



Location

Trogir is situated in the centre of Dalmatia, on the eastern coastline of Adriatic Sea. The heart of Trogir is small islet lying between the gentle hills on the mainland and the coast of the Island of Čiovo. Small town of 12000 citizens is the centre of Trogir micro - region which covers about 250km². Trogir Riviera is assembled of 20 islands, islets, small counties and villages.



Trogir is one of the oldest and most exciting cities on the Croatian side of Adriatic coast, with 2300 years of tradition under the influence of old Greeks, Romans and Venetians. Because of all the palaces, churches, towers, fortress on a small island in Trogir is known by its nickname "THE STONE BEAUTY". Entire Old Trogir city core is under protection of UNESCO world heritage.

Additional information about Trogir can be found at:

<http://www.trogironline.com/>

<https://www.lonelyplanet.com/croatia/dalmatia/trogir>

<http://whc.unesco.org/en/list/810>

Accommodation and Venues

Training School will be held at the Hotel Rotondo, located closely to the centre, and you can reach it walking by the seaside. Lunch and coffee breaks for the participants will be organised every day in the hotel restaurant.



www.hotelrotondo.com





Accommodation can be organised in the same hotel, but there is limited number of rooms available so you can contact our local organisers Dominik Skokandić and Mislav Stepinac, for help with the booking (don't go through booking.com and similar pages).

Furthermore, there is number of hotels nearby, but please take into account that Trogir is very popular tourist destination, and that booking should be done on time. Some of the nearby hotels suitable for accommodation are:

Hotel Trogir

3 – star hotel located in the city centre

Sinjska ulica 8

21220 Trogir

www.trogirhotel.com

XII century heritage hotel

3 – star hotel located in the old city centre

Mornarska ulica 23

21220 Trogir

www.heritagehoteltrogir.com

Hotel Bavaria

3 – star hotel located a bit further away from the city centre

Hrvatskih žrtava 1337

21220 Seget

www.hotel-bavaria.hr

Additionally, there is very large number of private apartments, guesthouses and villas nearby, and you can always look for a best deal through one of many accommodation pages.

Attractions and recommendations for free time activities

Trogir Old town is an attraction by itself, with many churches from Roman age are complemented by the outstanding renaissance and baroque buildings from the Venetian period. The central part of the old town is St. Lawrence's Cathedral, built from 13th to 15th centuries. Cathedral is famous for its grand portal carved by master Radovan.

Next to the city walls is impressive Kamerlengo Castle built by the Venetians for safeguarding the old city. Nowadays it is used for summer happenings such as open air concerts, exhibitions etc.



There is over a 100 restaurants and bars in Trogir area, where characteristic Dalmatian coastal cuisine, based mainly on seafood, is served.

More info on Trogir attractions and activities offer:

http://www.trogironline.com/culinary_guide.html

<http://www.planetware.com/croatia/trogir-hr-da-t.htm>

<https://www.lonelyplanet.com/croatia/trogir/attractions/a/poi-sig/358790>