Erasmus+ SP Pilot Course

last Update: 15.09.2022

Integrated Lectures: Experimental testing based on impact and resistance: wind, fire and earthquake 2022/2023

No.	Date	Time	Room	Lecturer	Topic	Remarks
1	12.10.	15:15	hybrid	RH, IK	**Opening / Welcome** **Wind I:** Use of Wind Tunnel experiments and measurement strategies *[Models and experimental setups; Velocity measurements; Pressure measurements; Force measurements; Response measurements]*	*By RH*
2		17:00	hybrid	RH, IK	**Wind II:** Evaluation techniques (Processing of measurement signals) *[Statistical parameters in time and frequency domains; Energy spectra by Fourier Transformation; Critical velocities for different aerodynamic phenomena]*	
3,4	19.10.	15:15	online	LA, …	**Introduction:** Course and project / introduction participants / setup groups / breakout rooms	
5	26.10.	15:15	hybrid	RH, IK	**Wind III:** Galloping *[Phenomenon; Example of Galloping oscillations; Mitigation strategies]*	
6		17:00	hybrid	RH, IK	**Wind IV:** Vortex-Induced Vibration (VIV) *[Phenomenon; Example of VIV oscillations; Interference effects]*	
7	02.11.	15:15	hybrid	PVR	**Fire I:** Introduction to fire safety in buildings *[Phenomenon; Requirements from legislation; Standards for products characterization]*	
8		17:00	hybrid	NL	**Fire II:** Requirements for fire resistance tests to construction products *[Test design and preparation; Test conditions and procedure; Failure criteria]*	
9	09.11.	15:15	hybrid	NL	**Fire III:** Experimental practice in laboratory *[Phenomenon; Measurements; Tests observations]*	
10		17:00	hybrid	NL	**Fire IV:** Analysis and evaluation of the test results *[Fire resistance classification; Extended field of application]*	
11	16.11.	15:15	hybrid	*ZR, AB*	**Earthquake I:** Experimental mechanics – fundamentals *[dimensional analysis, similitude laws; physical models, transducers; data acquisition, processing, and interpretation]*	
12		17:00	hybrid	AB, ZR	**Earthquake II:** Remote access experiments in Earthquake Engineering *[shake table tests; design of specimen, instrumentation; test strategies, processing of the results, remote experiment]*	
13	23.11.	15:15	hybrid	RA, VeS, GJ	**Earthquake III:** Large scale shake table test experiments of RC and masonry buildings *[shake table tests; design of specimen, instrumentation; RC buildings, historical buildings, monuments, data acquisition]*	
14		17:00	hybrid	VIS, JB, KE	**Earthquake IV:** Experimental research in earthquake geotechnical engineering – element and model tests *[Dynamic triaxial tests; Simple shear tests; Dynamic soil properties; Liquefaction; Laminar container; Shaking table tests]*	

No.	Date	Time	Room	Lecturer	Topic	Remarks
15	30.11.	15:15	hybrid	LA, AU	**Simulation I**: Modelling of structures *[Introduction to SAP2000, definition of load cases, types of analysis]*	
16		17:00	hybrid	LA, AU	**Simulation II:** Assessment of numerical models *[model validation, assessment criteria, interpretation of results]*	
17, 18	07.12.	15:15	hybrid	**All**	**Project**: Interim project presentation *[groups will present the recent state of their project work]*	*Workshop*
19	14.12.	15:15	hybrid	DP, ???	**Codification I:** Damage to code compliance built buildings *[Modelling and interaction of infilled frames; construction details for structural infill walls; experimental and field verification; vulnerability of masonry and concrete buildings to eq.]*	
20		17:00	hybrid	RH	**Codification II:** Wind loads *[Characteristic values; Correlation of pressures and forces; Implementation into the Partial Safety Factors concept; Reliability]*	

LA – Lars Abrahamczyk
RA – Roberta Apostolska
VlS – Vlatko Sheshov
AU – Aanis Uzair
RH – Rüdiger Höffer
ZR – Zoran Rakicevic
JB – Julijana Bojadjieva
IK – Ika Kurniawati
AB – Aleksandra Bogdanovic
KE – Kemal Edip
PVR – Paulo Vila Real
VeS – Veronika Shendova
DP – Davorin Penava
NL – Nuno Lopes
GJ – Goran Jekic
??? – ... ...

Project work: Counceling of project work and online group meetings will be scheduled separately according to participants schedules!

March 23						
	Sat. / Sun				Arrival	
	Monday	09:00 - 17:00			Finalization of Project Presentation	
	Tuesday	09:00 - 17:00			Workshop Scientific Writing	
	Wed.	09:00 - 17:00			Excursion	
	Thursday	09:00 - 17:00			*Excursion*	
	Friday	09:00 - 17:00			Project presentation: *7-10 groups á 20 min*	
	Sat. / Sun.				Departure	