

ARRIVAL | SUNDAY AUGUST 25

Time	Location	Course/Event
14.30 – 19.30 h	Hall of the Casa de E.	Informal get together
19.30 – 20.30 h	Dinner, Canteen of the Casa de E.	

DAY 1 | MONDAY AUGUST 26

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 h	Course Opening	
9.30 – 10.00 h	Historic masonry architecture: geometry and equilibrium	S. Huerta
10.00 – 10.30 h	New tools for masonry reviving the old approach	M. Angelillo
10.30 – 11.00 h	Historic masonry structures facing earthquakes	G. de Felice (online)
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Introduction to Field Work Presentation of the case studies	A.Gerges, F. Rodrigue
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field work Visit to case studies.	Teachers and Tutors
16.30 – 17.00 h	Coffee Break in the City Centre	
17.00 – 18.15 h	Field work Visit to case studies.	Teachers and Tutors
18.15 – 19.30 h	Basic Theory Material masonry. Heyman's principles of limit analysis. Equilibrium and thrust lines. Arches. Cracks. Collapse of arches.	S. Huerta
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Lecture The Theory of Survey 1	A. Bortot, P. Fuentes, R. Guerra

DAY 2 | TUESDAY AUGUST 27

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 10.30 h	Introductory Lecture The art of Masonry Construction	J. Ochsendorf
10.30 – 11.00 h	Coffee Break	
11.00 – 13.00 h	Basic Theory Equilibrium and thrust lines. Arches. Cracks. Collapse of arches. Limit analysis, safety. Buttresses. Case Study: The Church of Guimarei.	S. Huerta
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Lecture Digital Drawing 1	A. Bortot, P. Fuentes, R. Guerra
16.30 – 17.00 h	Coffee Break	
17.00 – 19.30 h	Field work Visit to case studies.	Teachers and Tutors
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 3 | WEDNESDAY AUGUST 28

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Basic Theory The Gothic Structure. Flying buttresses and cross vaults. Case Study: The stability of the Cathedral of Palma de Mallorca	S. Huerta
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Basic Theory Towers & Spires. Rose windows. Flat vaults. Case Studies: The Towers of the Obradoiro (Cathedral of Santiago de Compostela), Flat vaults of the Convent of Lluçmajor	S. Huerta
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Lecture Digital Drawing 2	A. Bortot, P. Fuentes, R. Guerra
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Lecture Case Studies: post-seismic interventions in Mexico	F. Orozco
18.15 – 19.30 h	Lecture Case Studies: Seismic analysis of the church of S.Maria Maggiore in Tuscania	P. Meriggi
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 4 | THURSDAY AUGUST 29

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Heyman's No Tension continua. Limit Analysis and energy The Safe and the Kinematic approaches	M. Angelillo A. Iannuzzo
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Advanced Theory Vaults and domes. The membrane Equilibrium Analysis (MEA)	M. Angelillo A. Montanino
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on digital restitution and drawing	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Invited Lecture Discrete Element Modelling: modeling masonry with 3DEC	José Lemos
18.15 – 19.30 h	Lecture TBA	Vittorio Paris
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Invited Lecture Dynamics of rocking structures	Nicola Nodargi

DAY 5 | FRIDAY AUGUST 30

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Rigid Blocks for masonry. Numerical approximations: PRD, CDF	M. Angelillo A. Iannuzzo
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Advanced Theory The “force” approach: Identifying singular stresses with a computer: CASS Lumped Force Networks	M. Angelillo A. Montanino
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Invited Lecture Modeling masonry with 3DEC - Application topics	José Lemos
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Computational Masonry through COMPAS Discrete Element Modelling and compas_3dec	A. Dell’Endice (Block Res. Group)
18.15 – 19.30 h	Computational Masonry through COMPAS Digital Graphic Statics, TNA & TNO	A. Dell’Endice (Block Res. Group)
19.30 – 20.30 h	Dinner	
21.00 – 22.00 h	Lecture Tile vaulting: actual possible uses both in restauration and new buildings	E. Redondo C. Martin

DAY 6 | SATURDAY AUGUST 31

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 13.00 h	Tile vaulting workshop	C. Martin, E. Redondo
13.00 – 14.30 h	Lunch	
14.30 – 19.00 h	Visit Segovia Historical City Center	Teachers and Tutors
19.30 – 20.30 h	Dinner	

DAY 7 | SUNDAY SEPTEMBER 1

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 13.00 h	Tile vaulting workshop	C. Martin, E. Redondo
13.00 – 19.30 h	Free Afternoon: Picnic Lunch	
19.30 – 20.30 h	Dinner	

DAY 8 | MONDAY SEPTEMBER 2

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Centrifuge testing Doing unilateral with a Computer: Applications to the Case Studies	A. Iannuzzo A. Gerges
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Advanced Theory Seismic assessment	G. De Felice M. Sangirardi
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Field Work Group work on structural analysis	Teachers and Tutors
18.15 – 19.30 h	Lecture (online) TBA	Philippe Block
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 9 | TUESDAY SEPTEMBER 3

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Blocky Structures: Applications to the Case Studies	A. Iannuzzo A. Montanino
11.00 – 11.30 h	Coffee Break	
9.30 – 11.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
11.30 – 13.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on Structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Field Work Group work on Structural Analysis	Teachers and Tutors
18.15 – 19.30 h	Invited Lecture Architecture on architecture. Lanterns on domes among building, collapses and renovations in the historic Neapolitan construction site	Valentina Russo
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 10 | WEDNESDAY SEPTEMBER 4

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Seismic assessment and retrofitting	G. de Felice
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on Structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Field Work Group work on Structural Analysis	Teachers and Tutors
18.15 – 19.30 h	Invited Lecture Tile vaults in Naples. Construction, experimentations and circulation of technical knowledge in the 19th century	Lia Romano
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 11 | THURSDAY SEPTEMBER 5

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Advanced Theory Experiments and Applications to Case Studies	G. de Felice
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on Structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Field Work Group work on Structural Analysis	Teachers and Tutors
18.15 – 19.30 h	Invited Lecture (online) Seismic Analysis of Masonry	M. DeJong
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Invited Lecture Masonry Structures: which tools should we use?	A. Fraddosio

DAY 12 | FRIDAY SEPTEMBER 6

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Field Work Group work on Structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 18.15 h	Field Work Group work on Structural Analysis	Teachers and Tutors
18.15 – 19.30 h	Invited Lecture TBA	Alejandra Albuerne
19.30 – 20.30 h	Dinner	
20.30 – 22.00 h	Field work Group work on case studies	

DAY 13 | SATURDAY SEPTEMBER 7

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.30 – 11.00 h	Field Work Group work on Structural Analysis	Teachers and Tutors
11.00 – 11.30 h	Coffee Break	
11.30 – 13.00 h	Students' Final Presentations Group work on Structural Analysis	Teachers and Tutors
13.00 – 14.00 h	Lunch	
15.00 – 16.30 h	Students' Final Presentations Group work on Structural Analysis	Teachers and Tutors
16.30 – 17.00 h	Coffee Break	
17.00 – 19.00 h	Tile vaulting workshop Vault tested to collapse. "Rubble beer party" (to dispose the resulting materials)	C. Martin, E. Redondo
20.00 – 23.00 h	Social Dinner	

DEPARTURE | SUNDAY SEPTEMBER 8

Time	Course/Event	Teachers/Lecturers
8.30 – 9.15 h	Breakfast	
9.00 – 13.00 h	Farewell and Departures	