DETAILED PROGRAM

WEDNESDAY, JUNE 20th

Wednesday, June 20th 14.30 - 15.00	**Registration** *Lobby of the Torroja Auditorium*		
Workshops Wednesday, June 20th 15.00 - 18.00	**Workshop I** **Parametric design as a tool for structural engineering design and education** *Colloquium Room*	**Workshop II** **From Physical-to-Digital in structural engineering Classrooms** *Mies Classroom*	**Workshop III** **Structural contest as a self-learning tool** *Nervi Classroom*

THURSDAY, JUNE 21st

Thursday, June 21st 08.00 - 08.50	**Registration** *Lobby of the Torroja Auditorium*	
Thursday, June 21st 08.50 - 09.10	**Opening Ceremony** *Torroja Auditorium*	
Thursday, June 21st 09.10 - 09.30	**Keynote Lecture. Mike Schlaich** *Torroja Auditorium*	
Technical Session I Thursday, June 21st 10.30 - 11.40	**I. Multidisciplinary Education** *Torroja Auditorium*	
	Pedagogy through construction: a dialogue between engineering and architecture by means of manual fabrication of Textile Reinforced Concrete elements.	Patricia Guaita, Raffael Baur, Patrick Valeri and Miguel Fernández Ruiz
	Design project using CDIO concept on a housing architecture course	Xiaoxia Chen and Éric Bel
	Classroom – office project: integration of structure design with urban planning and transportation sciences	Beatriz López-Terradas Aparicio, Carlos Castañón Jiménez, Samir Awad Núñez, Francisco Javier González González and Raúl Rodríguez Escribano
	Creativity between architecture and structural engineering: educating collaborative practitioners of the future	Christianne M. Herr
	Form and Function: Thin Concrete Shells in an Undergraduate Interdisciplinary Design Studio	Edmond Saliklis and Clare Olsen
	Design and Construction of Energy Efficient Houses – a challenge for interdisciplinary activities	Valeriu Stoian, Dan Stoian, Daniel Dan, Silviana Brata, Simon Pescari and Cristina Tanasa
Thursday, June 21st 10.30 - 11.40	**Coffee Break** *Lobby of the Torroja Auditorium*	

Technical Session II Thursday, June 21st 12.10 - 13.20	**IIa. Teaching with Models (I)** *Torroja Auditorium*		**IIb. The Art of Teaching** *Nervi Classroom*	
	Physical Form-Finding: A Central Design Method in a Structural Engineering Studio Course	Edward M. Segal	What not to forget after graduating.	Alejandro Calle García, Mariano Vázquez Espí, Juan Rey Rey and Belen Orta
	Learning with hands	Jorge Bernabeu Larena	Is teaching the opposite of learning?	Juan Carlos Arroyo, Javier BartolomÉ, Ángel Amador and Jesús Gómez-Hermoso
	EEoSS: Experimental Explorations on Space and Structure	Juan José Castellón González and Pierluigi D'Acunto	Implementing the seven principles of good practice in education to a undergraduate engineering course	Carlos Ribas González, Antoni Cladera Bohigas and Antoni Cantó Amengual
	Didactics-based strategy for teaching and understanding structural criterion for architecture students	Jose Luis Encarnacion Miranda	Introducing Ethics for the structural engineers of the future.	Gimenez-Carbo Ester, Roig-Flores Marta and Serna Pedro
	From physical to digital in structural engineering classrooms	Rolando Chacón	Scenography by an architect: A teaching experience	Paula Villanueva Llauradó
	On the use of 3D printing in steel structures education	Rolando Chacon, Enrique Mirambell, Esther Real and Itsaso Arrayago	The complexity of the simple teaching	Laura Simón
Technical Session III Thursday, June 21st 13.20 - 14.30	**IIIa. Active Learning Methodologies (I)** *Torroja Auditorium*		**IIIb. Active Learning Methodologies (II)** *Nervi Classroom*	
	Travel and the Education of the Structural Engineer	Edward M. Segal and Powell Draper	A flipped-classroom web-based learning assistant for structural analysis	Juan Carlos Mosquera, Luis Cueto-Felgueroso, Ivan M Diaz, David Santillán, Beatriz Gonzalez Rodrigo and Fernando Suárez Guerra
	How to create a casual self-assessment and to foster active learning and socialization through a competitive mobile game app	Mar Miñano Núñez, Francisco Javier Montáns Leal and José Mª Benítez Baena	Incorporation of parametric design tools in the teaching of architecture studies	J.A. Vazquez-Rodriguez, D. Otero-Chans and J. Estevez-Cimadevila
	Using Youtube videos to improve classroom efficiency in structural engineering courses	Antoni Cladera, Ruben Santamarta and Carlos Ribas	Can Intuitive Interpretation be Taught in Structural Engineering Education?	Tianjian Ji
	Structural engineering education integration experiences with national science museums during the VII ACHE Conference in A Coruña	Manuel F. Herrador, Fermín González Blanco, Diego Carro-López and Sindy Seara-Paz	Learning use of tests on reduced models of arches: displacements needed for collapse	Joaquín Antuña, José Ignacio Hernando, Alejandro Calle and Antonio Aznar
	Dobooku Association: learning by doing common activities	Guillem Collell Mundet, Joaquín Pertierra Brasa and Rosa Grima López	Is it possible to teach how to draw diagrams of internal forces?	Antonio Aznar, José Ignacio Hernando, Andrea Vázquez and Jesús Ortiz
	Dobooku Workshops: learning by making design-thinking activities	Guillem Collell Mundet, Joaquín Pertierra Brasa and Rosa Grima López		
Thursday, June 21st 14.30 - 15.50	**Lunch** *restaurant & Garden*			

Technical Session IV Thursday, June 21st 15.50 - 17.10	**IV. Internet based Teaching (e.g. MOOCs, webminars)** *Torroja Auditorium*	
	"Internet+ technology" Education for the courses of Structural & Civil Engineering	Dejiang Wang, Shaofeng Liu and Zhiming Ye
	Using Structurae for teaching and learning	Nicolas Janberg
	The use of social networks and Blogging for the dissemination of structural engineering. The case of Estructurando.net.	Jose Antonio Agudelo Zapata and David Boixader Cambronero
	Community based knowledge, collaboration and learning: A benchmark of civil engineers against Software developers communities.	Javier Bartolome Alvarez, Juan Carlos Arroyo Portero and Álvaro Ortiz
	Innovative methodology for the international learning of structural engineering. Zigurat Global Institute of Technology	Carles Romea and Charles Kotzer
	Online open course for the multidisciplinary design of bridges	Jose Antonio Lozano-Galant, Santos Sánchez-Cambronero, Francisco Javier Castilla, Jorge Ley, Mario Jesus García and Vicente Romero de Ávila
	The Hybrid Teaching Practise of Structural Mechanics with MOOC in Chongqing University	Zhaohui Chen and Daquan Wang
	Teaching structures in the cloud: a MOOC experience	Alejandro Bernabeu, Jorge Conde-Conde and Juan Rey
Thursday, June 21st 17.10 - 17.40	**Coffee Break** *Lobby of the Torroja Auditorium*	
Thursday, June 21st 17.40 - 19.00	**Round Table Discussion** *Torroja Auditorium*	
Thursday, June 21st 20.30 - 23.00	**Torroja Museum Visit & Conference Dinner** *Eduardo Torroja's La Zarzuela Racecourse*	

FRIDAY, JUNE 22nd

Technical Session V Friday, June 22nd 09.10 - 10.20	**Va. Teaching with Models (II)** *Torroja Auditorium*		**Vb. Active Learning Methodologies (III)** *Nervi Classroom*	
	Active learning methodologies for structural dynamics	Jorge Conde-Conde and Valero Pascual	Project based learning in reinforced and prestressed concrete structures	Eva Oller
	Open source hardware and software to improve learning experience in structural dynamics	Valero Pascual and Jorge Conde-Conde	How to teach building structures using an automatic and continuous evaluation	Antonio Aznar, Alfonso Del Río, Andrea Vázquez and José Ignacio Hernando
	Learning dynamic analysis of structures using handy and affordable equipment. on the way of smart structures	Jaime H. Garcia Palacios, Iván M. Díaz, Juan Carlos Mosquera Feijoo, Francisco Tirado and José Manuel Soria	Using "drag and drop" questions in structure analysis	Antonio Aznar, José Ignacio Hernando, Andrea Vázquez and Joaquín Antuña
	Design and construction of a new Boundary Layer Wind Tunnel.	Antonio Navarro-Manso, Ricardo Uche García, Nicolás Vallina Pita, Eduardo Alvarez, Rodolfo Espina Valdés and Eva Martínez García	Learning focused on structural projects adapted to the university teaching mission	Jose David Rios, Hector Cifuentes and Pilar Ariza
	Design Become Reality: the power of scale model experimentation.	Antonio Navarro-Manso, Patricio José Martínez García, Alberto Galindo Muñoz, Eva Martínez García and Juan Carlos Santos Fernández	Cyberbridge: an interactive tool to promote active learning in structural engineering courses	Carlos G. Berrocal and Ignasi Fernández
	Experimental analysis and structures monitoring: an intense experience	Sindy Seara Paz, Javier Eiras López, Juan Luis Pérez Ordóñez, Iris González Taboada and Ismael Vieito Raña		
Technical Session VI Friday, June 22nd 10.20 - 11.30	**VIa. Conceptual Design and Philosophy of Structures** *Torroja Auditorium*		**VIb. New Perspectives for the Education of the Engineer (I)** *Nervi Classroom*	
	Innovation in teaching conceptual design of structures	Maria E. Moreyra Garlock and Juan Jose Jorquera-Lucerga	Experiences in the teaching of special concretes for Structural Engineering	Gemma Rodriguez de Sensale
	Transcendence in structural engineering	Manuel Biedma	Integrating Sustainability in Structural Engineering Education	Hector Estrada, Luke Lee and Mahdi Khazaeli
	The challenge of teaching conceptual design of structures: the legacy of Eduardo Torroja	Hugo Corres Peiretti and Leonardo Todisco	Internationalization of the knowledge on construction materials of structural engineers	Marta Roig-Flores, Ester Gimenez and Pedro Serna
	Thinking beyond the conventional... Introducing a new course on the conceptual design of singular structures	Ignacio Payá-Zaforteza, Carlos R. Sánchez-Carratalá and José Adam-Martínez	Experience in the teaching of flexo-torsional buckling.	Berardi Sensale Cozzano
	Constructing Equilibrium. A methodological approach to teach structural design in architecture	Maria Vrontissi, Juan José Castellón González, Pierluigi D'Acunto, Lluis Enrique Monzó and Joseph Schwartz	Considerations about syllabus of Civil Engineering Master Degrees in order to implement BIM project methodology	Angela Moreno Bazán, Marcos García Alberti, Alejandro Enfedaque Diaz, Antonio A. Arcos Alvarez and Jaime C. Gálvez Ruíz
	Resolving 7 Tensions in-between Design and Engineering Education: Cases for Reflexive Studio Practice	Salu Ylirisku and Günther H. Filz		
Friday, June 22nd 11.30 - 12.00	**Coffee Break** *Lobby of the Torroja Auditorium*			

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Friday, June 22nd 12.00 - 13.20	**Keynote Lecture. Chris Wise** *Torroja Auditorium*			
Technical Session VII Friday, June 22nd 13.20 - 14.30	**VII. Development of Transversal Skills** *Torroja Auditorium*			
	The Modern Structural Engineer	Dirk Rinze Visser and Stephan Wassermann-Fry		
	Structural Engineering Hubs - An Educational Approach to enhance Creativity in the Structural Engineering World	Philip Kalkbrenner		
	A road towards a better writing	Ignasi Fernandez, Carlos Gil Berrocal, Rasmus Rempling, Joosef Leppänen and Magnus Gustavsson		
	Will hard skills keep on being so important for the future engineers on the upcoming digitized world?	Xavier Font		
	Sketching and Modelling as Trans-disciplinary Engineering Languages	Andrew Phillips, Fernando Madrazo-Aguirre and Vladimir Marinov		
Friday, June 22nd 14.30 - 15.50	**Lunch** *restaurant & Garden*			
Technical Session VIII Friday, June 22nd 15.50 - 17.00	**VIIIa. Construction History and Cultural Heritage** *Torroja Auditorium*		**VIIIb. New Perspectives for the Education of the Engineer (II)** *Nervi Classroom*	
	Synergy of sustainable design and cultural heritage	Agnes Couvelas	Experiences in Teaching Maintenance Structural Engineering	Javier Leon, Hugo Corres Peiretti and Leonardo Todisco
	Tinkering with structural engineering history	Fernando Martinez-Abella, Diego Carro-Lopez, Gemma Rojo-Lopez and Belen Gonzalez-Fonteboa	Experiences in teaching simultaneously steel and concrete structures	Hugo Corres, Francisco Millanes, Javier Leon and Antonio Martinez
	Experiences after Teaching Analysis of Historical Masonry Structures	Javier Leon and Leonardo Todisco	The transversal teaching of the structures	Jesús Gómez-Hermoso and Juan Carlos Arroyo
	Eduardo Torroja´School / Structure = the Support of an Idea	Pepa Cassinello	Integrating disciplines: Master SEDUREC on safety and structural durability of concrete structures	Carmen Andrade, Jesús Rodríguez, Jose María Arrieta, Javier Sanchez and Alejandro Bernabeu
	Engineering skills assembling the structural basic principles with the local background	Marta Perez Escacho, Pablo Loscos Areoso and Carlos Bajo Pavía	Pressing and important issues when teaching building structures	Belén Orta, Joaquín Antuña, Alejandro Calle and José Luis De Miguel
	Practice in geometry and structures: masonry workshops for teaching historical constructions	David Mencías, Julián García and Carlos Martín		
Friday, June 22nd 17.00 - 17.20	**Closing Ceremony** *Torroja Auditorium*			
Friday, June 22nd 17.20 - 18.30	**Torroja Insitute Visit** *Lobby of the Torroja Auditorium*			