PRESS RELEASE
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IABSE Awards 2016

The International Association for Bridge and Structural Engineering (IABSE) is pleased to announce the IABSE Awards 2016. Prof. David A. Nethercot, President of IABSE, will present the Awards on occasion of the 19th Congress of IABSE which will be held from September 21-23, 2016.

Honorary Membership: Yozo Fujino, Emeritus Professor of the University of Tokyo and Distinguished Professor of Yokohama National University, and Riccardo Zandonini, Professor of University of Trento, have been awarded IABSE Honorary Membership “in high appreciation of their outstanding and dedicated services to the Association”.

Yozo Fujino is a world-famous expert in bridge dynamics, wind effects of structures, passive/active control technology and monitoring of bridges, with a special focus on long-span bridges. He has also played a leading role internationally in bridge engineering as the adviser to vibration problems and remedies on the Millennium Bridge in London, the Stonecutter Bridge in Hong Kong, the design of active control system to new Heathrow Airport Control Tower, the design and construction of the Padma Bridge in Bangladesh amongst others. For these international contributions he was awarded the Medal with Purple Ribbon by the Emperor of Japan (2007).

Yozo Fujino has been a Vice-President of IABSE from 2005-2013, a member of SED Editorial Board (2003-2011) and of WC1 on ‘Structural Performance, Safety and Analysis’ (1999-2005). Currently he is serving as a member of the SEI Advisory Board, the IABSE Foundation Council, and as the Chair of the Japanese Group of IABSE. He has been involved in many international conferences, in particular, the IABSE Nara Conference 2015, was a great success both scientifically and financially, under his leadership as the Chair of Organising and Scientific Committees. The IABSE Outstanding Paper Award 2014 in the Category Scientific Paper was presented to “Vibration Mechanisms and Controls of Long-Span Bridges: A Review” which he authored together with Dionysius Siringoringo (published in SEI 3/2013).

Riccardo Zandonini’s fields of expertise is the design of steel and composite steel/concrete structures dealing especially with buckling phenomena of frames, seismic behavior and design of steel connections and beam-to-column joints. He has carried out many national and European research projects realising large experiments in the laboratory built up under his special guidance. He is President of the National Committee for Composite Structures (UNI SC4), member of the National Committee for Steel Structures (UNI SC3) and member of the EC3 and EC4 Italian mirror groups. His interests for international cooperation were proved when being Vice-rector for international affairs of his university or as Chair of TC11 Composite constructions in ECCS (European Convention for Constructional Steelwork).

Riccardo Zandonini has been an active member since 1979: he served as Chair of Working Commission 2 ‘Steel and Timber Structures’ from 2003 to 2007, Vice Chair from 1999-2003 and as a Vice President of IABSE from 2007-2011. In this function and as member of a number of SC Committees including also the Advisory Committee of the Symposium in Venice 2010 he has always shown a talent to bring people together and bridge differences. He has been very engaged in the future development IABSE in recent time, e.g. by being member of the E-Learning Board and as member of the Strategy Group since 2015.

The IABSE Prize honours an IABSE Member early in his or her career for outstanding achievements in structural engineering. IABSE has awarded the IABSE Prize 2016 to Héctor Beade Pereda,
“in recognition of his contribution to the design of bridges improving the quality of the built environment, thanks to an enthusiastic and rigorous, aesthetically and structurally holistic approach to bridge design”.

Héctor Beade Pereda has always been committed to excellence in his designs, trying to harmonise, from the very early stages: functionality, structural coherence, aesthetics, durability and sustainability, respect of the history and culture of the site, environmental suitability, appropriate scale, buildability and economy.

Born in 1976 in A Coruña, Spain, Héctor Beade Pereda received his Civil Engineering degree (MEng) from University of A Coruña, Spain, in 2000. Over the course of his career, he has had the opportunity to be involved in every stage of the bridge-building process, from conception to construction. Apart from his frequent role as a conceptual and structural designer, Héctor’s extensive experience in diverse lines of bridge-related work has improved his designing skills, allowing him to design bridges that, with a fair economic investment, are structurally coherent, aesthetically pleasant, constructible and durable. Thanks to his global bridge expertise, he has been responsible for the conception of a number bridges, many of them competition winning designs and innovative solutions, always trying to meet all the project requirements while simultaneously adopting an aesthetically and structurally holistic approach to design. He is committed to excellence in all the work he undertakes, regardless of the magnitude of the challenge.

In addition to his involvement in a variety of bridge projects ranging from small footbridges to world-record high speed rail viaducts, Héctor has also been part of the design team of some remarkable unconventional building proposals and has had the chance to personally collaborate with prestigious architects such as Pritzker Prize-winner Rafael Moneo. Some of the relevant projects Héctor has been involved in are: Almonte High Speed Railway Viaduct in Caceres; Zorrotzaurre Bridge in Bilbao; Third Millennium Bridge Zaragoza (Spain), Ios Noriaa Footbridge in Logrono, Metropol Parasol in Seville, Expo 2008 Bridge Pavilion in Zaragoza (Spain) and St. Elmo Breakwater Footbridge in Valletta Grand Harbour (Malta).

The Outstanding Paper Award (OPA) The Outstanding Paper Award is remitted each year to the author(s) of a paper published in the preceding year’s issues of the IABSE quarterly Journal Structural Engineering International (SEI), encouraging and rewarding contributions of the highest quality. The Award is presented in the categories ‘Scientific Paper’ and ‘Technical Report’.

The Outstanding Paper Award in the category ‘Scientific Paper’ has been awarded to “Design of Soil–Steel Composite Bridges”, by Lars Pettersson, Esra Bayoglu Flener and Håkan Sundquist, Sweden, SEI 2/2015 (May), pp. 159-172.


The Outstanding Structure Award (OStrA) recognises the most remarkable, innovative, creative or otherwise stimulating structure completed within the last few years. IABSE presents the Outstanding Structure Award to the Shanghai Tower, China. The Outstanding Structure Award Committee chaired by Paul Lüchinger, Switzerland, made the following statement:

“With the Shanghai Tower the town’s skyline gains a new outstanding landmark. The innovative structural interaction of the double-skin curtain wall ushers in a future generation of design concepts for high-rise buildings.”

Shanghai Tower is situated in Shanghai’s Lujiacui Finance and Trade Zone, adjacent to the Jin Mao Tower and Shanghai World Financial Centre, which has a Gross Floor Area (GFA) of approximately 580,000 m2. Its structure height is 583.4m, and total height is 632m, which is the first 600m+ multi-
function skyscraper in China. Important targets for the Shanghai Tower were energy saving, low-carbon consumption trying to build the entire project into a green, environment friendly, multi-functional vertical city.

The main challenges were the soft foundation with deep excavation in congested CBD core area; the cooperative work between the curtain wall support system and main structure with special connection details; and the control on the effect of construction on curtain wall system during the design and construction process. The twisting and taper outer curtain wall system which is separated from the main structure is a significant feature of the building and was a great challenge. The inner skin is circular, while the outer skin is round triangle shaped in plan which twists and tapers along the vertical direction. The spatial separation between the two skins creates a sky lobby every 12 to 15 floors within each of zones. The separated double-skin curtain wall makes the outer exterior curtain wall design relatively independent from the main structure, and increases the freedom of the skin geometry design. The shape of the outer exterior curtain wall is designed as aerodynamic configurations to reduce wind load. Wind tunnel tests indicate that comparing to general square taper shape, the twisting and taper shape of Shanghai Tower can reduce 24% wind load, and equivalent body coefficient along-wind is only 0.95, resulting in good economic benefits.

**The Finalist:** The Outstanding Structure Award Committee also selected the Finalist: The Viaduct over the River Ulla, Spain. It constitutes the most important intervention in the high speed railway line between the cities of A Coruña and Pontevedra, in Galicia, in the northwest of Spain. The design and construction of the viaduct has been a great engineering challenge due to the important environmental constraints, the huge dimensions of the steel segments, and the restrictions established for the three different constructive processes: incremental balanced cantilevers, vertical lifting of complete spans, and incremental launching. All these constraints led to a very transparent continuous composite steel-concrete truss girder deck, looking for the maximum integration into a very beautiful landscape, with 1620 m length and three outstanding main spans (225+240+225 m), which leads to beat the previous world record established in 1993 by the Nantenbach Bridge Germany.

**The International Association for Bridge and Structural Engineering (IABSE)** founded in 1929, operates on a worldwide basis and deals with all aspects of planning, design, construction, maintenance and repair of civil engineering structures. The mission of IABSE is to exchange knowledge and to advance the practice of structural engineering worldwide in the service of the profession and society. To fulfil its mission, IABSE organises conferences and publishes a high quality journal, Structural Engineering International (SEI); publishes books reflecting the work of its Technical Groups; creates Working Groups, as required by new needs and technological progress; offers activities within National Groups of IABSE; supports Young Engineers with a programme, and presents annual Awards in recognition of outstanding achievements in structural engineering.

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