

**IASS 2007- TIMETABLE**

**Monday 3rd December**

**SALA C**

8.30 - 9.00	<b>Registration</b>			
9.00 - 9.30	<b>Opening Ceremony: prof. J. F. ABEL - IASS PRESIDENT</b>			
9.30 - 9.45	<b>Opening Ceremony: prof. E. SIVIERO - DCA HEAD</b>			
9.45 - 10.30	<b>Plenary Lecture 1 - Massimo MAJOWIECKI: Ethics &amp; Structural Reliability in Free Form Design (FFD)</b>			
10.30 - 11.15	<b>Plenary Lecture 2 - Mick EEKHOUT : Past and Future of Free Form Design</b>			
11.15 - 11.45	<b>Coffee break</b>			

	<b>SALA A</b> <i>topic 6</i> <i>chair: G. MAIER</i>	<b>SALA B</b> <i>topic 8</i> <i>chair: R. MOTRO</i>	<b>SALA D</b> <i>topic 4</i> <i>chair: M. MARINI</i>	<b>SALA E</b> <i>topic 3</i> <i>chair: S. PELLEGRINO</i>
11.45 - 12.15	<b>Opening Lecture</b> G. MAIER: <i>Diagnostic analyses of structures by global or local tests, simulations and parameter identifications</i>	<b>Opening Lecture</b> R. MOTRO: <i>Structural morphology and free form design</i>	<b>Opening Lecture</b> M. MARINI: <i>Optimization of structural cables for large observation wheels</i>	<b>Opening Lecture</b> S. PELLEGRINO: <i>Mapping two-way grids onto free-form surfaces</i>
12.15 - 12.30	Gellin S.: Finite element analysis of tensioned fabric cone structures	Wendland D.: Experimental construction of a free-form shell structure in masonry	Fujimoto M., Machinaga T., Kaname T., Imai K.: Experimental study on archlike tensegrity structure of trapezoidal 4-strut model composed of the wooden truss system and pc bar	Chaszar A., Coenders J.: Parametric and associative design strategies for shell and spatial structures
12.30 - 12.45	Borgart A., Chaszar A.: Computational methods for analysing and decomposing complex curved structures	Silvestri C., Dresp-Langley B., Motro R.: A problem solving approach to the design of free-form structures	Fujimoto M., Machinaga T., Kaname T., Imai K.: Experimental study on cylindrical roof tensegrity of trapezoidal 4-strut model composed of the wooden truss system and PC Bar	Shinji K., Taga K.: Structural Design of the three buildings in a campus, each having a lightly extending roof
12.45 - 13.00	Van De Straat R., Coenders J.: Optimisation of structural transfer zones in multi-use buildings	Tuczek F.: Emergent panelised shells	Habraken A.: Embracing space. Optimising a hyperbolic cable net for a structural independent transparent second skin	Inoue F.: A study of movable arch structure and its external panel mechanism by variable geometry truss
13.00 - 13.15	Carpinteri A., Puzzi S.: Design optimization of shell structures by genetic algorithms with efficient constraint handling	Sanchez-Alvarez J.: Geometry and the elemented construction approach in the design of free-form	Tamai H., Elnimeiri M.: Study on configuration of tensegrity dome and plan geometry	Fenu L., Madeddu T., Pusole P.: On the design of shells stiffened with ribs with fractal pattern
13.15 - 13.30		Smali A, Motro R.: Circular & spherical foldable/unfoldable tensegrity systems by finite mechanism activation		

**13.30 - 15.00 Lunch**

	<b>SALA A</b> <i>topic 6:</i> <i>chair: C. BORRI</i>	<b>SALA B</b> <i>topic 2</i> <i>chair: J. STRASKY</i>	<b>SALA D</b> <i>topic 7</i> <i>chair: R. J. DIETRICH</i>	<b>SALA E</b> <i>topic 12</i> <i>chair: C. GENTILE</i>
15.00 - 15.30	<b>Opening Lecture</b> C. BORRI: <i>Structural shape optimization of triangular shell</i>	<b>Opening Lecture</b> J. STRASKY: <i>New bridges</i>	<b>Opening Lecture</b> R. J. DIETRICH: <i>"No aesthetics without statics". Conceptual design and realisation of bridges and other buildings</i>	<b>Opening Lecture</b> C. GENTILE: <i>Experimental modal analysis in operational conditions of bridges and large structures</i>
15.30 - 15.45	Nakazawa S., Kato S., Hirano K.: Methodology to evaluate the effectiveness of retrofit proposal based on the dicounted cah flow method	Majowiecki M., Cosentino N., Costa C.: Wind effects and cables damping at the Adige cable stay bridge	Sánchez-Cuenca L.: A retractable acoustic screen	Zhang Q.L., Zhang S.W., Li Y.M., Wang Y.O.: Model experiment and analysis on form-finding of a cable net
15.45 - 16.00	Yamashita T., Kumagai T., Miyamura T., Ogawa T., Ohsaki M.: Application of multgrid method to three-dimensional incompressible viscous flow analysis around domes	Staerdahl J. W., Nielsen S. R. K., Sørensen N. N.: Aeroelastic Stability of suspension bridges using CFD	Shin C.H., Kim J.S.: Structural design of Geum-jeong cyoldrom	Strasky J., Kalab P.: Model test of the prestressed concrete membrane
16.00-16.15	Zhang J. Y., Ohsaki M.: Optimization approach to force identification of prestressed pin-jointed structures	Chen P.S.: Configuration and structural principle of an ancient Chinese wood bridge Hongqiao	Shaeffer R. E.: The life and works of Eero Saarinen	Takayama M., Agata T., Chiba Y., Imahori K.: The effect of ris span ratio and gradient of ridge to mechanical characteristics of HP gable shell
16.15 - 16.30	Kim J.Y., Choong K.K., Kwun T.J.: Determination of self equilibrium stress mode of cable dome structures	Park S., Choi S., Choi C.: Structural design of the new footbridge over the Singil-Yoido in Seoul	Bagneris M., Maurin B., Marty A., Motro R.: Pascalian forms for non standard architectural shape generation	Furukawa T., Miyake R.: System identification of multi degree of freedom system using variable pendulum sensor - concept and performance evaluation -

**16.30-17.00 Coffee break**

	<b>SALA A</b> <i>topic 6</i> <i>chair: C. BORRI / J. B. Obrębski</i>	<b>SALA B</b> <i>topic 2</i> <i>chair: J. STRASKY / E.SIVIERO</i>	<b>SALA D</b> <i>topic 7</i> <i>chair: R. J. DIETRICH / L. VEGH</i>	<b>SALA E</b> <i>topic 8</i> <i>chair: M. EEKHOUT</i>
17.00 - 17.15	Obrębski J. B.: Accuracy of designing process in the light of contempoarray knowledge	Fink J., Brandstötter R.: The Helix. Development of a helical footbridge structure	Balz M., Dürr H. : Urban space structures	Kamerling W.: Blobs and shells
17.15 - 17.30	Kirkegaard P. H., Klitgaard J.: Real time engineering analysis based on a generative components implementation	Peroni M.: A new type of suspension bridge structure	Bradshaw R. R.: Structural elegance	Gün O. Y.: Computational design tools for emergent geometries in architecture
17.30 - 17.45	Klitgaard J., Kirkegaard P. H.: Interactive construction digital design tool with real time analysis	Kleiser M.: Integrating function, force transfer and visual form – case studies in Vienna	Hedges K. E., Denzer A.: Conceptual complexity: how BIM shapes the introductory studio	Shepherd P., Hudson R.: Parametric definition of lansdowne road stadium
17.45 - 18.00	Guo L.: Wrinkling analysis of membrane structures due to out-of plane loading by using LS-DYNA	Siviero E, Zordan T., Briseghella B.: The IV bridge over the Grand Canal: from conceptual design to approach	Del Campo M., Manninger S.: Moments of transition	Barrow L., Alarayedh S.: Performative free form design - nature and beauty
18.00 - 18.15	Coenders J. L.: Generic goal seeker for parametric associative design	Chen A.: Design of Taizhou Bridge: a 3 pylons suspension bridge	Vegh L.: Concept and theory of a university text book on "environmentally compatible structures"	Lockeferer W.: Basic 'blob' architecture and the architectural fundamentals
18.15 - 18.30	Sarıyıldız S., Turrin M., Stouffs R.: Conceptual design of reconfigurable structures for passive solar strategies			

**19.00 - 22.00 Welcome cocktail - kindly offered by ArcelorMittal**

**Tuesday 4th December**

**SALA C**

09.30 - 10.15 **Plenary Lecture 3 - Jorg SCHLAICH: Recent Light Structures**

10.15 - 11.00 **Plenary Lecture 4 - Ingrid BILLE (Grimshaw-Architects - UK): From Waterloo to Garibaldi**

11.00 - 11.15 **General Manager ArcelorMittal - Pierre Bourrier**

11.15 - 11.45 **Coffee break**

	<b>SALA A</b> topic 8 chair: T. TARNAI / C. CIAVATTINI	<b>SALA B</b> topic 3 chair: N. BALDASSINI	<b>SALA D</b> topic 12 chair: J. SCHLAICH	<b>SALA E</b> topic 7 chair: F. MOLA
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11.45 - 12.15	<b>Opening Lecture</b> C. CIAVATTINI: Value engineering for the success of design	<b>Opening Lecture</b> N. BALDASSINI: RFR and the inspirational legacy of Peter Rice		<b>Opening Lecture</b> F. MOLA: The synergy between conceptual design and analysis in modern structural engineering
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12.15 - 12.30	Eekhout M., Visser R.: Composites & the renaissance of the shell	Piekarski P.: Spheroid geodesic domes	Louter P.C., Veer F.: Large span reinforced glass beams, prototype research	Baker W., Novak L., Jajich D., Beghini A.: Optimization tools for the conceptual design of structures
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12.30 - 12.45	Eekhout M., Visser R.: Blob-shells: design, development and research on composite stressed skin roofs for liquid design architecture	Jones P. L., Sabin J. E.: Nonlinear biosynthesis: visionary shell and spatial structures	Plagianakos T., Luchsinger R., Crettol R.: Static response of a spindle shaped tensarity column under compression	Akgün Y., Haase W., Sobek W.: Proposal for a new scissor-hinge structure to create transformable and adaptive roofs
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12.45 - 13.00	Tarnaj T., Krähling J., Kabai S.: Star polyhedra: from St Mark's basilica in Venice to Hungarian protestant churches	Sur, S.Y., Myungho J.: Analysis on the construction cost of spatial structures in Korea	Nishimura T.: A fundamental experiment and numerical analysis on the oscillations of a cylindrical column subjected to horizontal harmonic excitations	Gatti M. P.: The symbiosis between aesthetic and structural principles: architecture and technique
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13.00 - 14.30 **Lunch**

	<b>SALA A</b> topic 1 chair: M. MOALLERT	<b>SALA B</b> topic 4 chair: E. SIVIERO / Y. B. YANG	<b>SALA D</b> topic 10 chair: R. BERTERO	<b>SALA E</b> topic 7 chair: F. MOLA / N. BALDASSINI
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14.30 - 14.45	<b>Opening Lecture</b> M. MOALLERT: Deployed and retractable tensile structures		<b>Opening Lecture</b> R. BERTERO: Performance-based seismic design. State of the art for non-typical structures	Baldassini N.: 25 Years of evolution in structural glass technologies
14.45 - 15.00		Yang Y. B., Chen L. J., Lin C. W.: Vibrations of cables in cable-supported bridges caused by moving loads		Falk A., Samuelsson S.: Form finding and utility-based optimisation

15.00 - 15.15	Jeon J.H., Kim S. D., Park S.W., Cho B.W.: A study on the cutting pattern generation of membrane structures using triangular re-mesh	Urick B., Kostura Z., Morrow E.: Design and analysis integration for a cable net structure: a centralized database approach for BIM	Taniguchi Y., Gould P. L., Kurano M.: Earthquake input energy of double - layer cylindrical lattice roof	Ko K.W., Jang M., Lee J.B., Sur, S.Y.: Structural design and construction of An-Seong international soft tennis court
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15.15 - 15.30	Shon S.D., Kim N.S., Kim S.D.: A study on the smoothing pattern line for the cutting pattern generation of membrane structures	Janata V., Lukeš M., Gregor D., Jermoljev D.: Application of tendons in the structures of large span hangar in Mosnov, Czech Republic	Kerklaan R. A. G., Coenders J. L.: Geometrical modeling strategies for wind engineering	Olsson, K. G., Olsson P., Lindemann J., Sandberg G.: Form finding based on virtual load paths and the concept of stiffness
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15.30 - 15.45	Wehdorn-Roithmayr R.: Formfinder professional. Architectural formfinding software	Liapi K. A.: A tensegrity exhibition pavilion: from initial design conception to construction	Kwon S.J., Jeon J.H., Kim S.D.: A study on dynamic transient responses of composite laminated plates considering indentation	Teixidor C.: Hesperia tower's glazed atrium and dome - Barcelona, Spain
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15.45 - 16.00	Synold M., Schmidt T., Sobek W.: Translucent structural skins: vacuumatics and adaptivity	Nguyen A. D., Quirant J., Cevaer F., Dube J.F.: Study of mechanical behaviour and foldability of the pentagonal-based tensegrity ring	Majowiecki M., Cosentino N.: Dynamic aspects of the new braga stadium large span roof	Duerr H., Ihde A., Stephan S.: Architect-Engineer manufacturer, a necessary cooperation for designing building freeform (NURBS) surfaces and spaces.
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16.00 - 16.30 **Coffee break**

	<b>SALA A</b> topic 1 chair: M. MOALLERT	<b>SALA B</b> topic 12 chair: N.K. SRIVASTAVA	<b>SALA D</b> topic 10 chair: R. BERTERO	
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16.30 - 16.45	Zimmermann G., Grohmann M.: Free form design with pneumatic formwork membrane concrete grid shells (MCGS)	Fabbrocino G., Raineri C., Cosenza E.: Automated operational modal analysis solutions for continuous seismic monitoring	Kumagai T., Ogawa T., Takeuchi T., Sato E.: A prediction method of dynamic collapse behavior of single-layer latticed domes subjected to horizontal earthquake motions	
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16.45 - 17.00	Pauletti R. M.O., Bauer C. Moreira D., Dritthuber E. M. C.: Collapse and reconstruction of a large membrane structure in Brazil	Park K. Yoon S.: Testing method and mechanical properties of membrane	Han S.E., Koh H.S., Joo J.S., Ye J.H., Lee S.J.: Geometrically nonlinear dynamic analysis of cable domes by stiffly stable method	
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17.00 - 17.15	Micheletti A.: Geometrical form-finding of old and new tensegrity modules with orthogonal struts	Lee S., Lee C., Ju G.: Health monitoring of spatial structure by optical FBG sensor	Matsubara H., Ohmori H., Furukawa T.: Verification of seismic evaluation scheme of spatial structures by elastic time history analysis	
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17.15 - 19.00 **OPEN DISCUSSION: Free Form Design**  
chairs: Nicola Leonardi - "The Plan"  
Massimo Majowiecki

**Wednesday 5th December**

**SALA C**

09.30 - 10.15 **Plenary Lecture 5 - Giorgio DIANA: Behaviour of flexible structures excited by dynamic loads**

10.15-11.00 **Plenary Lecture 6 - Werner SOBEK: Adaptivity and Ultralightweight Structures**

11.00 - 11.30 **Coffee break**

	<b>SALA A</b> topic 6 chair: A. SAMARTIN	<b>SALA B</b> topic 10 chair: G. DIANA	<b>SALA D</b> topic 11 chair: S. RUSSO	<b>SALA E</b> topic 8 chair: W. SOBEK
11.30 - 11.45	Opening Lecture A. SAMARTIN: Analysis, reliability and optimization of reinforced concrete 2-D structures	Bettonvil F. C. M., Jägers A. P. L., Silepen G., Hammerschlag R. H.: Measurements on fast open foldable tent domes. Developments to extremely large sizes	Opening Lecture S. RUSSO: New materials: mechanical behaviour and prospects of employment	De Temmerman N.: Development of a novel deployable bar structure with foldable articulated joints
11.45 - 12.00		Vo T. P., Lee J.: Free vibration of thin-walled composite box beams using shear-deformable beam theory		Von Buelow P.: A geometric comparison of branching structures in tension and compression versus minimal paths
12.00 - 12.15	Foraboschi P.: Structural analysis and reinforced seismic upgrading of RC beams with vertical reinforced concrete cracks	Gould P. L., Huang W.: 3-D pushover analysis of a collapsed reinforced concrete chimney	Mashita K., Kawasaki K.: Strength of concrete cylindrical shells reinforced with composite carbon fiber	Luchsinger R. H., Cretfol R., Plagianakos T. S., Farahani J. N.: Tensarity: the new structure for a new architecture
12.15 - 12.30	Kato S., Niho Y.: A new proportioning method for members of simply-supported single layer cylindrical latticed roofs	Trombetti T., Silvestri S.: Use of genetic algorithms for the identification of optimal system of added viscous dampers for shear-type buildings	Wu M., Wang J., Liu J., Zhang Q.: Design of an experimental aluminium hall with ETFE membrane roofs	Kocaturk T.: An analysis of free-form design practice and its interdisciplinarity knowledge content
12.30 - 12.45	Almegaard H.: The curvature coordinate system	Trombetti T., Silvestri S.: Linking adjacent structural systems with viscous dampers for the mitigation of the seismic effects	Kawabata M.: Viscoplastic properties of ETFE film and structural behaviour of film cushion	Michalatos P., Kajima S.: Design in a non homogeneous and anisotropic space
12.45 - 13.00	Kimura T., Ohmori H., Hamada H.: Computational morphogenesis of free form shells considering both designer's preference and structural rationality	Bal I. E., Sadan O. B., Smyrou E., Gülay F. G.: Earthquake resistance of Beyazit II Mosque, Istanbul	Garrido R., Peña J., Carpio K., Fuentes M.: Morflex: Laminar structural system bamboo woven panels	Pronk A., Bullens T., Folmer T.: A feasible way to make freeform shell structures
13.00-13.15	Lee S.J., Bae J.E.: Topology optimization techniques considering dynamic characteristics of plate and shell structures with the use of three-dimensional solid finite element technology based on CATO algorithm	Takeuchi T., Kumagai T., Shirabe H., Ogawa T.: Seismic response evaluation of lattice roofs supported by multistory substructures	Mircea A. T.: Composite wall panels - not only safe and durable, but also energy efficient	Schroth M., Kloft H.: Results of geometrical tests on instrumented digital environment

13.15 - 14.45 **Lunch**

	<b>SALA A</b> topic 3 chair: M. BALZ	<b>SALA B</b> topic 1 chair: S.D. XUE	<b>SALA D</b> topic 7 chair: B.W. SMITH	<b>SALA E</b> topic 9 chair: V. GIONCU
14.45 - 15.00				Opening Lecture V. GIONCU: Local and global instabilities of space structures
15.00 - 15.15			Oxman R.: Virtual prototyping in design	
15.15 - 15.30	Liapi K. A.: Novel concepts of space structures for recreational and cultural events in the city: an educational approach	Xue S.D., Wang G.Y.: The fluid-structure interaction analysis of membrane structures under mean wind load	Borri C., Olmi G., Orlando M., Spinelli P.: A deployable steel roof structure for a 93 x 78 elliptical sport arena	Ghandi E., Abedi K.: Investigation into stability behaviour of flat tensegrity grids
15.30 - 15.45	Belis J., Verheghe B., De Beule M., Van Impe R.: Evaluation of glass domes using pyformex	Jin S.W., Ohmori H.: Development of measurement equipment of membrane stress using white noise sound wave - improvement of measurement equipment, verification experiment and practical measurement of actual suspension membrane structure-	Grohmann M., Bollinger K.: New structures for exhibition buildings	Abedi K., Shekasteband B.: Static stability behaviour of single curvature tensegrity systems
15.45 - 16.00	Van de Rotten P.: Consequences of free form design chances for fibre reinforced sandwich "shells"	Graef A., Chilton J., Eppacher C.: Generative scripting and formfinding in space grid systems	Sobek W., Lemaitre C.: Design principles for adaptive truss structures	Kato S., Eka S., Nakazawa S.: Buckling analysis of two-way single layer lattice dome with nodal eccentricity
16.00-16.15	Weller B., Reich S., Ebert J.: Spatial geometry of modular steel-glass space structures	Bletzinger K. U., Linhard J.: Recent advances and generalized aspects of numerical form finding and patterning methods	Giuliani M. E., Giuliani G. C.: Incremental launching of a wide span glazed roof	Kato S., Eka S., Nakazawa S.: Analysis based estimation of buckling strength of two-way single layer latticed domes with semi rigid connection

16.15 - 16.45 **Coffee break**

	<b>SALA A</b> topic 3 chair: S. KATO	<b>SALA B</b> topic 11 chair: W. SOBEK	<b>SALA D</b> topic 7 chair: B.W. SMITH	<b>SALA E</b> topic 9 chair: V. GIONCU
16.45 - 17.00	Grohmann M., Bollinger K., Hofmann A.: Station roofs for a new mountain railway in Innsbruck	Blandini L., Feirabend S., Sobek W.: Laminating, reinforcing and gluing – promising new technologies in glass architecture	Ma M., Xiao C., Xu Z.: Structural analysis of a touring tower in Hangzhou bay	Bagger A., Jönsson J., Wester T.: Investigation of stresses in faceted glass shell structures
17.00 - 17.15	Kim G.C., Lee K., Lee J.: Seismic demand and capacity evaluation of spatial structures subjected to earthquake loadings	Haase W., Sobek W.: Switchable glazing with large dynamic range for architectural applications	Ferran J.J., Redon M., Ferrer C., Ferrer C.M., Torregrosa J.B., Sanchez F.: Example of development of a modular structure in pseudo folded sheet applied to a warehouse of architecture and industrial engineering	Lee S.J., Han S.E., Noh S.Y., Kang N.W., Park J.S.: A study on development of control system of local buckling for circular tube brace
17.15 - 17.30	Zhang Y.G., Wang C., Tan Z.G., Wang L.: Study on forming process of the internal-prestressed reticulated space structure through posttensioning	Mocibob D., Crisinel M.: Structural behaviour of glass panels in fully-transparent pavilions	Weller B., Reich S., Ebert J.: Testing on space structures made of steel-glass modules	Zhang T., Zhang Y., Wu J.: Static and stability analysis of large span suspen-dome
17.30 - 17.45	Mendoza M.: Parametric analysis of the kinetic behaviour and geometry of angulated-scissor structures and their comparison with that of the retractable reciprocal frames structures.	Sundermann W., Trumpf H., Synold M., Sobek W.: Plastic materials: new approaches and applications	Ramage M. H., Lau W. W., Ochsendorf J. A.: Compound curves in thin-shell masonry: analysis and construction of new vaults in the UK	Song T., Liu F.: Stability study of the double-layer latticed shell Qingdao Gymnasium
17.45 - 18.00				Jung HM, Kim CM, Lee H., Jee SW: Buckling & behaviour of the single-layer latticed dome in erection process

20.00 - 24.00 **Gala Dinner**

Thursday 6th December

SALA C

Plenary Lecture 7 - Francesco DAL CO

09.30 - 10.15	Plenary Lecture 7 - Francesco DAL CO			
	<b>SALA A</b> topic 5 chair: A. DE ROSA / I. MUNGAN	<b>SALA B</b> topic 11 chair: M. GIULIANI	<b>SALA D</b> topic 7 chair: A. DOMINGO	
10.15-10.45	Opening Lecture A. DE ROSA: <i>Stereotomy as a tool of structural imagination: geometry and configuration brought the art of masonry</i>	Opening Lecture M. GIULIANI: <i>Getting the best from different materials: the new Barcelona Control Tower</i>	Opening Lecture A. DOMINGO: <i>Bridge over Júcar River in Spain</i>	
10.45 - 11.00	Takashima H.: FEM modeling and analysis for Engakujij Sharden as a historical symbolic wooden structure in Japan	Foraboschi P.: Laminated glass subjected to compressive forces	Bujakas V., Dmitriev V., Shaenko A.: Deployable radiation screen for large space telescope.	
11.00-11.15	Gouridis A.: Science, philosophy and ethics in structural architecture during late antiquity	Froli M., Lani L.: Towards ductile glass beams	Siviero E., Briseghella B., Zordan T., Di Bannardo U.: Structural optimization and construction of the San Donà bridge	

Coffee break

	<b>SALA A</b> topic 5 chair: I. MUNGAN	<b>SALA B</b> topic 11 chair: M. GIULIANI	<b>SALA D</b> topic 7 chair: A. DOMINGO	<b>SALA E</b> topic 4 chair: R. ASTUDILLO
11.45 - 12.00	Mungan I.: A structural concept to strengthen the roof of the Hagia Sophia	Rietbergen D.: Adjustable mould with freely curved working surface for architectural applications	Oliva-Salinas J. G.: The teaching of structures in architecture	Wolkowicz C., Ruth J., Stahr A.: Cable-strut systems: geometry and sensitivity
12.00-12.15	Popescu R., Popescu G.: Modern design for the structural analyses of the masonry buildings in the seismic area	Shahnoori S., Voorbij L.: Technological cooperation for a qualitative structure	Lázaro C., Domingo A., Kawaguchi M., Cadenas A., Palacios F.: Renovation of the bullring arena of Xàtiva (Spain)	Pandia Raj R., Guest S. D.: Form-finding of repetitive tensegrity structures
12.15-12.30	Moscarca M., Gioncu V.: Investigations of historical spatial building behaviour	Bechtold M.: A variable fabrication process – experiments in fibre-reinforced concrete	Bell G. R., Davies R. H.: Engineering-informed architecture in the United States	Zhang J.H., Zhang Y.G., Wu J.Z.: A new construction method and construction process analysis for cable dome
12.30-12.45	Cresciani M.: Pier Luigi Nervi, bridge designer	Alexa P., Mathe A., Ladar I.: Ductility of semirigid steel frames	Wang S., Zhang T., Wu J.: The construction technology of Changchun Five-circle Gymnasium	Micheletti A., Williams W. O.: Shape-change of tensegrity systems by controlling edge-lengths
12.45-13.00	Focacci F.: Fiber reinforced cementitious matrix (FRCM) materials to strengthen masonry vaults	Poelman W., Lelieveld C.: From nano to macro, the application of dynamic materials in architecture	Teuffel P., Ajdarpasic D.: Development of a shape morphing building envelope	Knippers J., Helbig T.: Smooth shapes and stable grids
13.00-13.15	Foraboschi P.: Seismic upgrading of masonry churches	Kamerling W.: The origins of shells and blobs		

Lunch

SALA C

Hangai Session OPEN CEREMONY  
K. KAWAGUCHI - M. TAKAYAMA

15.00-15.30	Hangai Session OPEN CEREMONY K. KAWAGUCHI - M. TAKAYAMA			
15.30-15.45	Plenary Lecture 8 - HANGAI PRIZE WINNING PAPER - P. BLOCK (Ochsendorf J.): <i>Thrust Network Analysis: A New Methodology For Three-Dimensional Equilibrium</i>			
15.45-16.00	Plenary Lecture 9 - HANGAI PRIZE WINNING PAPER - A. PUGNALE (M. Sassone): <i>Morphogenesis and Structural Optimization of Shell Structures with the aid of a genetic algorithm</i>			
16.00- 16.15	Plenary Lecture 10 - HANGAI PRIZE WINNING PAPER - C. DOUTHE: <i>Grid shell in composite materials: Towards wide span shelters</i>			
16.15-17.30	CLOSING CERIMONY: prof. J. F. ABEL - IASS PRESIDENT IASS Awards Presentations and General Meeting			