



2nd *fib* Congress

**June 5-8, 2006
Naples - Italy**

FINAL PROGRAM



5 June 2006, Monday

OPENING CEREMONY – 5 June, 9:00-10:30 – Auditorium

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| Welcome to participants by E. Cosenza, Chairman of Organizing Committee G. Trombetti, Rector of University of Naples Federico II A. Balducci, Chairman of High Council for Public Works R. Russo Iervolino, Mayor of Naples A. Bassolino, Governor of Campania District |
| Opening of the congress and awarding of Freyssinet Medals by Giuseppe Mancini, <i>fib</i> President |

PLENARY 1 – 5 June, 11:00-13:00 – Auditorium

Chair: J. Walraven Co-Chair: G. Macchi

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| J. Forbes, <i>fib</i> Honorary President | <i>fib</i> Award for Outstanding Structures 2006 | 11:00 |
| H.R. Ganz | Post-Tensioning – Revisited | 12:00 |
| M. Virlogeux | The Future of Concrete | 12:30 |

SESSION 13.1 – 5 June, 14:30-16:00 – Sala Grecia

Chair: C.R. Alimchandani, Co-Chair: G. Rosati

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|------|---|---|----------|-------|
| 0092 | Rebentrost, M. | Australian Experience with Ductal: An Ultra-high Performance Concrete | Concrete | 14:30 |
| 0103 | Brooke, N. Megget, L. Ingham, J. Keyte, L. McSaveney, L. South, W. | Assessing the Seismic Performance of “Green Concrete” Interior Beam-Column Joints | | 14:45 |
| 0201 | Thomas, T. Ramaswamy, A. | Bond Shear Strength of Reinforcing Bars in Concrete | | 15:00 |
| 0439 | Alimchandani, C.R. Patwardhan, S.N. | 165 m Tall Natural Draught Cooling Tower in Cyclone Prone Coastal Area of India | | 15:15 |
| 0558 | Como, M. Luciano, R. | A New Multi-Axial Failure Criterion for the Concrete | | 15:30 |
| 0971 | Rigueira, J. Taengua, E.G. Bonilla, M. Serna, P. | A Study on the Robustness of a SCC Dosage | | 15:45 |

SESSION 10.1 – 5 June, 14:30-16:00 – Sala Italia

Chair: T. Hansen, Co-Chair: L. Ascione

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|------|--|--|---|-------|
| 0075 | Ferreira, D.R.S.M. Barros, J.A.O. | Confinement Efficacy of Partially and Fully Wrapped CFRP Systems in RC Column Prototypes | FRP reinforcement for new and existing structures | 14:30 |
| 0131 | Karabinis, A.I. Rousakis, T.C. | FRP Confining Effects on Steel Reinforced Concrete Square Sections Subjected to Axial Load | | 14:45 |
| 0251 | Bardaro, D. Corvaglia, P. Manni, O. Modarelli, R. Primo, T. Micelli, F. | Experimental and numerical study of the behaviour of solid and hollow-core FRP-confined concrete columns | | 15:00 |
| 0535 | Eid, R. Roy, N. Paultre, P. | Behaviour of Circular Reinforced Concrete Columns Confined with Transverse Steel Reinforcement and Fiber-Reinforced Composite Sheets | | 15:15 |
| 0650 | Colajanni, P. Spinella, N. Papia, M. | A Handy Stress-Strain Law For FRP-Confined Concrete | | 15:30 |
| 0962 | Sharma, U.K. Bhargava, P. Kaushik, S.K. | Concentrically Loaded Steel Fiber Reinforced High Strength Concrete Short Columns | | 15:45 |

SESSION 3.1 – 5 June, 14:30-16:00 – Sala Turchia

Chair: J.F. Klein, Co-Chair: G. Russo

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|------|---|---|----------------------|-------|
| 0257 | Isabella-Valenzi, P. Grimaldi, A. Cervenka, V. | 3D Finite Element Analysis of Anchorage Zones in Post-Tensioned Concrete Girder | Modelling and design | 14:30 |
| 0315 | Noguchi, H. Kashiwazaki, T. | 3-D FEM Analysis of Seismic Performance Evaluation of RC Columns Subjected to Reversed Cyclic Shear | | 14:45 |
| 0341 | Navarro-Gregori, J. Miguel-Sosa, P. Fernández-Prada, M.A. | A Theoretical Model to Analyse Reinforced and Prestressed Elements under Combined Loading | | 15:00 |
| 0488 | Barrera, A.C. Bonet, J.L. Romero, M.L. Fernández, M.A. Miguel, P.F. | Analysis of Ductility in Normal Strength Concrete (NSC) and High Strength Concrete (HSC) Columns | | 15:15 |
| 0592 | Recupero, A. | A Proposal for a General N-M-V Design Method | | 15:30 |
| 0631 | Grünberg, J. Kosmahl, M. Böckmann, J. | A Numerical Model for the Stress Development of Early-age Concrete | | 15:45 |

SESSION 8.1 – 5 June, 14:30-16:00 – Sala Egitto

Chair: S. Pantazopoulou, Co-Chair: A. Masi

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|------|---|--|---|-------|
| 0052 | Chiodi, L. Stroscio, R. | A Performance-Based Design Approach for Viaduct Seismic Design | Seismic design of new concrete structures | 14:30 |
| 0246 | Flansbjerg, M. | Composite Action in CFT Columns under Normal Conditions and in Case of Fire | | 14:45 |
| 0424 | Igrec, T. | Concept and Design of Bridges made of Prefabricated Concrete Girders in Croatian Seismic Area, According to New European Regulations | | 15:00 |
| 0587 | Restrepo, J.I. Preti, M. | A Two-level Displacement-based Design Methodology for Structural Wall Buildings | | 15:15 |
| 0889 | Imai, K. Korenaga, T. Takiguchi, K. | A Method for Analyzing Flexural Rotation at the Base of Reinforced Concrete Members | | 15:30 |
| 0989 | Madan, A. | Active Control of Building Structures Using Feature-Sensitive Neural Networks | | 15:45 |

SESSION 15.1 – 5 June, 14:30-16:00 – Sala Libia

Chair: P. Jaeger, Co-Chair: A.L. Materazzi

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|------|--|---|-----------------------------------|-------|
| 0295 | Hasegawa, T. Ohkubo, T. Koga, J. Senbu, O. | A Prediction Method of Carbonation of Concrete with Finishing Materials Applied to the Surface Considering their Vapor Permeability | Durability of concrete structures | 14:30 |
| 0339 | Dalen, S.M. van Bouwmeester, W.J. Koenders, E.A.B. Rooij, M.R. de | An Experimental Evaluation of the RCM-method | | 14:45 |
| 0452 | Lindvall, A. Tang, L. | A Procedure for Verification of Models Used to Predict Chloride Ingress into Concrete | | 15:00 |
| 0550 | Radic, J. Bleiziffer, J. Tkalcic, D. | Bridge Management Systems | | 15:15 |
| 0764 | Badoz, C. Francisco, P. Rougeau, P. | A Performance Test to Estimate Durability of Concrete Products Exposed to Chemical Attacks | | 15:30 |
| 0838 | Borsa, M. Guerrini, G.L. Mensitieri, G. Turriziani, R. | A Methodology for Service Life Evaluation of Marine Concrete Structures | | 15:45 |

SESSION 9.1 – 5 June, 14:30-16:00 – Sala Algeria

Chair: S. Ikeda, Co-Chair: A. Prota

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|------|--|---|---|-------|
| 0298 | Fukai, S. | Analytical Study on the Seismic Behavior of Prestressed Concrete Frames Using a Multiple-Spring Model | Seismic evaluation of concrete structures | 14:30 |
| 0376 | Hayashi, K. Osada, K. Nojima, S. Maeda, H. Ikeda, S. | Anchoring Behavior of Reinforcing Bars for Strengthening of Reinforced Concrete Piers | | 14:45 |
| 0387 | Dan, S. Bob, C. Iures, L. | Assessment and Redesign of RC Existing Structures in Seismic Regions | | 15:00 |
| 0446 | Syntzirma, D.V. Pantazopoulou, S.J. | Assessment of Deformability of R.C. Members with Substandard Details | | 15:15 |
| 0521 | Albanesi, T. Nuti, C. Paolacci, F. Santini, S. | Cyclic Tests of Existing R.C. Columns Repaired or Retrofitted by Mean of Jacketing Technique | | 15:30 |
| 0542 | Rodríguez, M.E. Hoyos, L.P. | Column Deformation Capacity Considering Buckling of Reinforcement in RC Columns Subjected to Cyclic Lateral Loads | | 15:45 |

SESSION 1.1 – 5 June, 14:30-15:45 – Sala Roma

Chair: T.O. Olsen, Co-Chair: M. Menegotto

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|------|--|--|--|-------|
| 0066 | Xiao, N. Dong, S. | Concentrate on Practical Application of CUBIC System | Large projects and innovative structures | 14:30 |
| 0108 | Giuriani, G. Gubana, A. | Box Basement Structures in Seismic Resistant Buildings | | 14:45 |
| 0436 | Joglekar, S.G. Bapat, S.G. Shrivastava, A. Paul, M.K. | Design, Load Testing & Monitoring of Prestressed Concrete Containment Using High Performance Concrete for 540 MWe PHWR Nuclear Power Corporation at Tarapur, India | | 15:00 |
| 0563 | Olsen, T.O. | Concrete Structures for the Oil and Gas Industry | | 15:15 |
| 0583 | Furtado, R. Oliveira, R. Moás, L.P. | Casa da Música, Porto, Portugal | | 15:30 |

SESSION 20.1 - 5 June, 14:30-15:45 – Sala Albania

Chair: T. Subbarao, Co-Chair: G. Manfredi

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|------|---|--|--|-------|
| 0209 | Karydis, G. | Advanced Strengthening Systems for Conserving 20 th Century Concrete Heritage: The ethical justification of utilizing Fibre Reinforced Polymer (FRP) Composites | Preservation of structural concrete heritage | 14:30 |
| 0674 | Siviero, E. Zampini, I. (Zanchettin A.) | Italian Bridge Designers in XX ^o Century | | 14:45 |
| 0704 | Bertolini, L. Carsana, M. Redaelli, E. | Conservation of Historical Reinforced Concrete Structures by Means of Electrochemical Realkalisation | | 15:00 |
| 0716 | Macchi, G. | Criteria for the Choice of Concrete Works to Be Preserved | | 15:15 |
| 0814 | Napoli, P. Ceretto, W. Orza, C. | Assessment and Functional Requalification of a Building by Pier Luigi Nervi | | 15:30 |

SESSION 13.2 – 5 June, 16:30-18:30 – Sala Grecia

Chair: S. Helland, Co-Chair: M. Como

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|------|--|---|----------|-------|
| 0038 | Collepari, M. Valente, M. | Durable, Shrinkage-Free and Colourable Self-Compacting Concrete | Concrete | 16:30 |
| 0312 | Chowdhury, S.H. | Damping Characteristics of Concrete Beams Reinforced with Polymer Fibres | | 16:45 |
| 0353 | Pistolesi, C. Maltese, C. Lolli, A. Bravo, A. Cerulli, T. Salvioni, D. Squinzi, M. | Dimensional Changes of Shrinkage Compensating Self Levelling Mortars (SCSLM) at Different Temperatures and in Connection with Variable Restraint Steel Bars | | 17:00 |
| 0364 | Ambro, S.Z. Burtscher, S.L. Kollegger, J. | Concrete with Aggregate from UHPC Elements | | 17:15 |
| 0448 | Braam, C.R. Koenders, E.A.B. Breugel, K. Van | Early-Age Shrinkage and Strength Development of Ultra High Strength Concrete | | 17:30 |
| 0805 | Mola, F. Cattaneo, S. Giussani, F. Rosati, G. | Bond Strengths and Failure Modes in Self-Compacting Concrete | | 17:45 |
| 0845 | Mazzotti, C. Savoia, M. Ceccoli, C. | Creep and Shrinkage of Self Compacting Concrete | | 18:00 |
| 0907 | Zandy, Y. | Effect of Mixture Composition on Washout Resistance of Highly Flowable Underwater Concrete | | 18:15 |

SESSION 10.2 – 5 June, 16:30-18:15 – Sala Italia

Chair: S. Matthys, Co-Chair: M. Savoia

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|------|--|---|---|-------|
| 0322 | Yi, W.-H. Kang, D.-E Woo, H.-S. Choi, K.-S. Yoo, Y.-C. Keung-Hwan, K. | A Study on Bond Mechanism of Fiber Reinforced Polymer Bonded to Concrete | FRP reinforcement for new and existing structures | 16:30 |
| 0629 | Boschetto, G. Pellegrino, C. Tinazzi, D. Modena, C. | Bond Behaviour between FRP Sheets and Concrete: an Experimental Study | | 16:45 |
| 0658 | Kishi, N. Zhang, G.F. Sawada, S. Mikami, H. | Flexural Behavior of RC Beams Externally Bonded with AFRP Sheet on Tension and Side Surfaces | | 17:00 |
| 0735 | Faella, C. Martinelli, E. Nigro, E. | Formulation and Validation of a Theoretical Model for Intermediate Debonding in FRP Strengthened RC Beams | | 17:15 |
| 0793 | Ceroni, F. Pecce, M. | Monotonic and Cyclic Performance of RC Beams Strengthened with FRP Sheets | | 17:30 |
| 0835 | De Lorenzis, L. Teng, J.G. Zhang, L. | Interfacial Stress Analysis of Curved Members Bonded with a Thin Soffit Plate | | 17:45 |
| 0993 | Faella, C. Martinelli, E. Nigro, E. | Intermediate Debonding in FRP Strengthened RC Beams: a Parametric Analysis | | 18:00 |

SESSION 3.2 – 5 June, 16:30-18:30 – Sala Turchia

Chair: M.W. Braestrup, Co-Chair: P.G. Malerba

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|------|--|---|----------------------|-------|
| 0050 | Clyde, D.H. | Lower Bound Flat Plate Moment Fields | 7 | 16:30 |
| 0245 | Braestrup, M.W. | Plastic Analysis and Design of Structural Concrete | | 16:45 |
| 0501 | Bonataki, E. Tassios, T. | Crack Behaviour of Axially Loaded and Flexural Partially Prestressed Concrete Members under Monotonic and Cyclic Actions | Modelling and design | 17:00 |
| 0529 | Suzuki, M. Akiyama, M. Matsuzaki, H. Dang, T.H. | Concentric Loading Test of RC Columns with Normal- and High-Strength Materials and Averaged Stress-Strain Model for Confined Concrete Considering Compressive Fracture Energy | | 17:15 |
| 0695 | Gherssi, A. Muratore, M. | Analytical Formulation of M-N Domain for Rectangular R.C. Cross Sections with Asymmetrical Reinforcement | | 17:30 |
| 0902 | Rots, J.G. Belletti, B. Invernizzi, S. | Simplified Saw-Tooth Softening Model for Reinforced Concrete Structures | | 17:45 |
| 0775 | Sorelli, L.G. Meda, A. Plizzari, G.A. | Design Aspects for SFRC Slabs on Grade | | 18:00 |
| 0904 | Nassif, H. Ozkul, O. Malhas, F. | Behavior of Concrete Beams Prestressed with Unbonded Tendons | | 18:15 |

SESSION 8.2 – 5 June, 16:30-18:30 – Sala Egitto

Chair: M.N. Fardis, Co-Chair: M. Dolce

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|------|--|--|---|-------|
| 0237 | Arslan, G. | Design of Reinforced Concrete Frame Elements Subjected to Cyclic Loading Using the Efficiency Factor | Seismic design of new concrete structures | 16:30 |
| 0240 | Biskinis, D. Fardis, M.N. | Effective Stiffness, Lateral Resistance and Cyclic Deformation Capacity of Bridge Piers | | 16:45 |
| 0258 | Russo, G. Martell, M. Mitri, D. Pancino, F. | Displacement Ductility of Multistory RC Structural Walls | | 17:00 |
| 0326 | Athanatopoulou, A.M. Avramidis, I.E. | Effects of Seismic Directivity on Structural Response | | 17:15 |
| 0331 | Panagiotakos, T.B. Bardakis, V. Fardis, M.N. | Displacement-Based Seismic Design Procedure for Concrete Bridges with Monolithic Connection between Deck and Piers | | 17:30 |
| 0357 | Rosignoli, D. (M. Bäuml) | Development of Ductile Cement Based Materials for Seismic Resistant Reinforced Structures | | 17:45 |
| 0696 | Salvatore, W. Buratti, G. Maffei, B. Valentini, R. | Dual-phase Steel Reinforcement for High-Ductile Concrete Structures | | 18:00 |
| 0747 | Bartelletti, R. Beconcini, M.L. Formichi, P. Albanesi, T. Nutì, C. | Ductility Behaviour of Joints in Reinforced Concrete Frames under Seismic Loading | | 18:15 |

SESSION 15.2 – 5 June, 16:30-18:00– Sala Libia

Chair: M. Hisada, Co-Chair: A. Di Tommaso

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|------|---|--|-----------------------------------|-------|
| 0259 | Cordero, M. Aparicio A.C. Ramos G. | Corrosion Study of Prestressed Concrete Specimens | Durability of concrete structures | 16:30 |
| 0279 | Kato, E. Iwanami, M. Yokota, H. | Deterioration in Ductility of RC Beams with Corroded Reinforcement | | 16:45 |
| 0346 | Hisada, M. Watanabe, H. Kitayama, R. Kasai, Y. Suzuki, M. | Comparative Study on the Accelerated Chloride Ion Penetration Test for Concrete | | 17:00 |
| 0361 | Hudoba, I. Grešlik, P. | Design Concept of Durability and Lifetime of the Precast Concrete Containers for Radioactive Waste Storing | | 17:15 |
| 0810 | Attanayake, U. Aktan, H.M. | Durability Performance of Concrete Bridge Components | | 17:30 |
| 0663 | Bertagnoli, G. Mancini, G. Tondolo, F. | Bond Deterioration Due to Corrosion and Actual Bearing Capacity | | 17:45 |

SESSION 9.2 – 5 June, 16:30-18:15 – Sala Algeria

Chair: S.N. Bousias, Co-Chair: R. Realfonzo

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|------|---|--|---|-------|
| 0045 | Bardakis, V. Tassios, T. | Estimation of behaviour factors of existing RC structures, by means of linear methods | Seismic evaluation of concrete structures | 16:30 |
| 0222 | Greifenhagen, C. Lestuzzi, P. | Failure modes and deformation capacity of lightly reinforced concrete shear walls | | 16:45 |
| 0262 | Bousias, S.N. Spathis, A.-L. Fardis, M.N. | FRP-retrofitting and seismic response of torsionally unbalanced two-storey buildings | | 17:00 |
| 0549 | Timosidis, D. Pantazopoulou, S. | Evaluation of Experimental Database of Bridge Monolithic Joints through Analytical Models | | 17:15 |
| 0585 | Dolce, M. Masi, A. Ferrini, M. | Estimation of the Actual In-Place Concrete Strength in Assessing Existing RC Structures | | 17:30 |
| 0605 | Maruta, M. Sanada, A. | Dynamic Loading Test on Prestressed Concrete Beams with Varied Bond Characteristics of Main Bars | | 17:45 |
| 0689 | Farkas, Gy. Völgyi, I. | Dynamic Behaviour of Prestressed Concrete Columns | | 18:00 |

SESSION 14.1 – 5 June, 16:30-18:15 – Sala Roma

Chair: P. Brenni, Co-Chair: P. Colajanni

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|------|---|---|--|-------|
| 0356 | Suntharavadeivel, T.G. Aravinthan, T. | Effect of Existing Cracks in Concrete Bridge Members Strengthened by External Post-tensioning | Reinforcing and prestressing materials and systems | 16:30 |
| 0359 | Yamaguchi, M. Nojima, S. Tsuji, Y. Yamaguchi, T. | A Study on Rheology Test Methods of Grout for Prestressed Concrete | | 16:45 |
| 0379 | Maekawa, T. Ichiki, T. Niki, T. | Development of Ultra-high Strength Prestressing Strand | | 17:00 |
| 0400 | Hegger, J. Voss, S. | Design Methods for Textile Reinforced Concrete under Bending and Shear Loading | | 17:15 |
| 0526 | Oshiro, T. Izumo, J. Tsutsumi, T. Takase, S. | Application of Fluid Analysis to PC grout for the Performance Design | | 17:30 |
| 0790 | Horvatits, J. Kollegger, J. (Burtscher S.) | External CFRP-Tendons with a New Anchorage System for Bridge Strengthening in Austria | | 17:45 |
| 0836 | Bournand, Y. | A Damping System for Long Stay Cable Test Results of the VSL Friction Damper | | 18:00 |

SESSION 19.1 - 5 June, 16:30-18:15 – Sala Albania

Chair: J. Cagley, Co-Chair: G. Plizzari

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|------|---|--|--|-------|
| 0195 | Tandon, M. | Architectural and Environmental Friendly Design for Urban Bridges | Architectural and environmental design | 16:30 |
| 0317 | Kawai, K. Sugiyama, T. Kobayashi, K. Sano, S. | Case Studies on Environmental Design of Concrete Structures | | 16:45 |
| 0751 | Cooper, T.R. Kimura, T. | A Unique Box Girder Shape – Design of a Triangular Precast Post Tensioned Concrete Box Girder | | 17:00 |
| 0762 | Gjerde, M. | Concrete in Modernist Housing in New Zealand 1930S-1970S | | 17:15 |
| 0958 | Cagley, J. | The Katzen Arts Center at American University in Washington, DC | | 17:30 |
| 0959 | Bottini, A. Malerba, P.G. Salvatoni, G. | The New Teatro Alla Scala | | 17:45 |
| 0996 | Cosenza, E. Cozzolino, L. Pianese, D. Fabbrocino, G. Acanfora, M. | Concrete Structures for Mitigation of Debris-Flow Hazard in the Montoro Inferiore Area, Southern Italy | | 18:00 |

6 June 2006, Tuesday

SESSION 13.3 – 6 June, 9:00-10:15 – Sala Grecia

Chair: **P. Marti**, Co-Chair: **L. Cedolin**

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|------|--|---|----------|-------|
| 0382 | Castro, C. Miguel, P. Fernández-Prada, M.A. Martí, J. | Experimental Test Results of Passive Reinforcement Anchorage in Compression-Compression-Tension Nodes | Concrete | 9:00 |
| 0384 | Rinaldi, Z. Grimaldi, A. Iori, F. | Experimental Evaluation of the Influence of Fibers Content on the Tensile Behaviour of Concrete | | 9:15 |
| 0534 | White, A.J. Newtson, C.M. | Effects of Mixture Proportions on Concrete Shrinkage | | 9:30 |
| 0648 | Kyriazopoulos, A. Anastasiadis, C. Triantis, D. Stavrakas, I. | Experimental Pressure Stimulated Currents (PSC) Recordings on Cement Mortar under Mechanical Stress | | 9:45 |
| 0656 | Kurihashi, Y. Taguchi, F. Kishi, N. Mikami, H. | Experimental Study on Static and Dynamic Response Behavior of PVA Short-fiber Mixed RC Slab | | 10:00 |

SESSION 10.3 – 6 June, 9:00-10:15 – Sala Albania

Chair: **C. Czaderski**, Co-Chair: **C. Modena**

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|------|--|--|---|-------|
| 0049 | Meng, L. Tao, X. Xu, F. Guan, J. | Experimental Study on the Flexural Ductility for Partially Prestressed Concrete Beams with FRP Tendons | FRP reinforcement for new and existing structures | 9:00 |
| 0154 | De Pauw, B. Van Bogaert, Ph. De Backer, H. Outtier, A. | Efficiency-assessment of CFRP-laminate reinforcement of partly deficient post-tensioned fly-over | | 9:15 |
| 0228 | Czaderski, C. Meier, U. | Long-Term Behaviour of CFRP Strips for Post-Strengthening | | 9:30 |
| 0887 | Hosni, A. Abdelrahman, A.A. Sayed-Ahmed, E.Y. Alhlaby, N.A. | CFRP Strengthening of Prestressed-Precast Hollow Core Slabs to Resist Negative Moments | | 9:45 |
| 0922 | Wu, Z. Yang, S. Zheng, J. | An Analytical Prediction on RC Beams Retrofitted with Prestressed CFRP Plates or Sheets | | 10:00 |

SESSION 3.3 – 6 June, 9:00-10:15 – Sala Turchia

Chair: **R.I. Gilbert**, Co-Chair: **A. D'Ambrisi**

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|------|---|---|----------------------|-------|
| 0023 | Gilbert, R.I. | Ductility of Reinforced Concrete Slabs – the Effects of Strain Localization | Modelling and design | 9:00 |
| 0170 | Bui, K.D. Niwa, J. | Evaluation of Ultimate Stress in Beams Prestressed with External Tendons | | 9:15 |
| 0255 | Kotsoglou, A. Pantazopoulou, S. | Dynamic Response of Short Integral Concrete Bridges Considering Soil – Structure Interaction and Embankment Flexibility | | 9:30 |
| 0646 | Ansourian, P. Ranzi, G. Gara, F. Leoni, G. | Displacement-based Formulations for the Partial Interaction Analysis of Composite Beams Accounting for Time Effects | | 9:45 |
| 0923 | Spizzuoco, M. Serino, G. | Design Indications for Non-linear Viscous Devices Applied to R.C. Structures | | 10:00 |

SESSION 8.3 – 6 June, 9:00-10:00 – Sala Egitto

Chair: S. Pampanin, Co-Chair: M. Mezzi

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|------|---|--|---|------|
| 0079 | Takatsu, H. Kimura, H. Kambayashi, A. Ishikawa, Y. | Experimental Study of Steel Fiber-Reinforced Ultra High-Strength Concrete Columns | Seismic design of new concrete structures | 9:00 |
| 0467 | Bontempi, F. Sgambi, L. Santoboni, G. | Effects of the Spatial Variability of the Ground Motion on the Structural Response of a Concrete Prestressed Cable-Stayed-Bridge | | 9:15 |
| 0574 | Etienne, D. Regallet, D. Jaeger, J.M. Bue, M. | Finite Element Calculations for Seismic Dimensioning of the LMJ Structures | | 9:30 |
| 0852 | Pampanin, S. Amaris, A. Palermo, A. | Implementation and Testing of Advanced Solutions for Jointed Ductile Seismic Resisting Frames | | 9:45 |

PRIMARY 1 – 6 June, 9:00-10:30 – Auditorium

Chair: S. Ikeda Co-Chair: L. Sanpaolesi

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| C. Viggiani | Tower of Pisa: a challenge for geotechnical engineering | 9:00 |
| M. Tandon | Viaducts of Delhi Metro | 9:30 |
| J.G. Teng | Recent Progress in Understanding and Modelling the Behaviour of FRP-Strengthened RC Structures | 10:00 |

SESSION 13.4 – 6 June, 11:00-12:45 – Sala Grecia

Chair: P. Rossi, Co-Chair: M.A. Chiorino

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|------|---|---|----------|-------|
| 0024 | Laskar, A.I. Talukdar, S. | Field Rheometer to Measure the Rheological Properties of High Performance Concrete: State of the Art | Concrete | 11:00 |
| 0040 | Rossi, P. Parant, E. | Mechanical behaviours of an Ultra-High Performance Fibre Reinforced Cement Composite submitted to severe loading conditions and an aggressive environment | | 11:15 |
| 0270 | Kohoutkova, A. | Flexural Behaviour and Crack Control of Reinforced Concrete Beams with Fibres | | 11:30 |
| 0396 | Lohaus, L. Anders, S. | High-Cycle Fatigue of Ultra-High Performance Concrete – Fatigue Strength and Damage Development | | 11:45 |
| 0451 | Zheng, L. Yuan, Y. | Experiments on Mechanical Properties of Rubber Concrete | | 12:00 |
| 0819 | Angotti, F. Galano, L. Maio, M. Vignoli, A. | Fatigue Behaviour of Self-Compacting Concrete under Uniaxial Compression Cyclic Loading | | 12:15 |
| 0826 | Boscato, G. Bullo, S. Di Marco, R. Russo, S. | Experimental Assessment of Flexural Behaviour of Self-Compacting Concrete Prefabricated Beams | | 12:30 |

SESSION 10.4 – 6 June, 11:00-13:00 – Sala Albania

Chair: J.A.O. Barros, Co-Chair: G.M. Verderame

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| 0074 | Dias, S.J.E. Barros, J.A.O. | NSM CFRP Laminates for the Shear Strengthening of T Section RC Beams | FRP reinforcement for new and existing structures | 11:00 |
| 0151 | Valerio, P. Ibell, T.J. Darby, A.P. | Shear Strengthening of Prestressed Concrete Bridges Using Embedded FRP Bars | | 11:15 |
| 0219 | Kwak, K.H. Jang, H.S. Yang, D.O. | Prediction of Deflection of Hybrid FRP Rod using Neural Networks | | 11:30 |
| 0344 | Novidis, D. Pantazopoulou, S. | Experimental Study of Short NSM – FRP & Steel Bar Anchorages | | 11:45 |
| 0398 | Moon, D. Sim, J. Ju, M. Oh, H. | The Experimental Study of Deformed GFRP Rod for Bond to Concrete | | 12:00 |
| 0697 | Casadei, P. Galati, N. Boschetto, G. Tan, K.Y. Nanni, A. Galecki, G. | Strengthening of Impacted Prestressed Concrete Bridge I-Girder Using Prestressed Near Surface Mounted C-FRP Bars | | 12:15 |
| 0832 | De Lorenzis, L. Galati, D. | Effect of Construction Details on the Bond Performance of NSM FRP Bars in Concrete | | 12:30 |
| 0833 | De Lorenzis, L. Rizzo, A. | Behavior and Capacity of RC Beams Strengthened in Shear with NSM FRP Reinforcement | | 12:45 |

SESSION 3.4 – 6 June, 11:00-12:45 – Sala Turchia

Chair: S.J. Foster, Co-Chair: M. De Stefano

| | | | | |
|------|--|---|----------------------|-------|
| 0300 | Dabbagh, H. Foster, S.J. | Fixed Cracked Membrane Model for FE Analysis of RC Structures | Modelling and design | 11:00 |
| 0562 | De Stefano, M. Marilli, F. Nudo, R. | Experimental Investigation on RC Shear Elements under Cyclic Loads | | 11:15 |
| 0628 | Perea, C. Payá, I. Yepes, V. González, F. | Heuristic Optimization of Reinforced Concrete Road Bridges and Frames | | 11:30 |
| 0638 | Almeida Filho, F.M. De Nardin, S. El Debs, A.L.H.C. El Debs, M.K. | Experimental and Numerical Analysis of Pull-out Tests Using High-Strength Self-Compacting Concrete (HSSCC) and High-Strength Ordinary Concrete (HSOC) | | 11:45 |
| 0788 | Campione, G. La Mendola, L. Mangiavillano, M.L. | Flexural Behavior of Fibrous Reinforced Concrete Corbels | | 12:00 |
| 0903 | Ng, C.K. Wong, W.J. Marini, L. | Finite Section Analysis of RC Beams Prestressed with External Tendons at Ultimate Limit State | | 12:15 |
| 0936 | Rak, N. | Forecasting of Stress-Strain Relationship Parameters of Concrete under Axial Compression on the Basis of Structural-Mechanical Model of Concrete | | 12:30 |

SESSION 8.4 – 6 June, 11:00-13:00 – Sala Egitto

Chair: A. Ghali, Co-Chair: A. Goretti

| | | | | |
|------|--|---|---|-------|
| 0078 | Hsu, T.T.C. Mo, Y.L. Zhong, J. Laskar, A. | Performance-Based Design of RC Shear Walls using Cyclic Softened Membrane Model | Seismic design of new concrete structures | 11:00 |
| 0282 | Pandey, G.R. Mutsuyoshi, H. Maki, T. | Mitigating Seismic Damage of RC Structures – A New Approach | | 11:15 |
| 0464 | Ghali, A. Gayed, R.B. | Punching Shear in Seismic Design | | 11:30 |
| 0577 | D'Ambrisi, A. Mezzi, M. | Probabilistic Estimate of the Non Linear Seismic Response of RC Structures | | 11:45 |
| 0633 | D'Ambrisi, A. De Stefano, M. □anganelli, M. | Prediction of Local Inelastic Demands for R/C Frames Designed According to Eurocode 8 | | 12:00 |
| 0651 | Dal Lago, A. | Pandal [®] : Structural System for Frames Prefabricated at Inserted Joints | | 12:15 |
| 0666 | Mazza, F. Vulcano, A. | Nonlinear Dynamic Response of R.C. Framed Structures Subjected to Near-Source Ground Motions: Effects of the Vertical Component | | 12:30 |
| 0855 | Biondini, F. Toniolo, G. | Probabilistic Calibration of Behaviour Factor for Concrete Frames | | 12:45 |

SESSION 15.3 – 6 June, 11:00-13:00 – Sala Libia

Chair: Helland S. Co-Chair: G. Plizzari

| | | | | |
|------|--|--|-----------------------------------|-------|
| 0012 | Shang, Z. Li, W. Ohno, Y. Li, Z. | Flexural □behaviour of Reinforced Concrete Composite Beams With Precast Element Cracked Due To Construction Load (Long-term Flexural Behavior) | Durability of concrete structures | 11:00 |
| 0951 | Faridafshin, F. Mousavi, M.E. Ramezaniapour, A.A. | Concrete Durability at Highly Severe Environment of Urmia Lake | | 11:15 |
| 0055 | Mishutin, A. Mishutin, N. | Improvement the Durability of Concrete Thin-Walled Constructions of Floating and Coastal Hydrotechnical Structures | | 11:30 |
| 0107 | Sorensen, M.G. | Durable concrete using Controlled Permeability Formwork | | 11:45 |
| 0134 | Atienza, J.M. Ruiz-Hervias, J. Caballero, L. Elices, M. | Improving the stress corrosion susceptibility of prestressing steel wires | | 12:00 |
| 0216 | Tkalcic, D. Banic, D. Banic, Z. | Furnishing details for durable concrete structures – Croatian experience | | 12:15 |
| 0303 | Tsuji, M. Sawamoto, T. | Effects of Slack of Concrete Components Caused by Bleeding Water, Sustaining Tensile Stress and Crack on Anisotropic Chloride Diffusion | | 12:30 |
| 0723 | Al Far, A. Kahhaleh, K. Al Hadid, T. | Evaluation of Effective Repair Systems for Reinforced | | 12:45 |

SESSION 9.3 – 6 June, 11:00-13:00 – Sala Algeria

Chair: T. Tassios, Co-Chair: C. Faella

| | | | | |
|------|---|--|---|-------|
| 0110 | Sakashita, M. Kono, S. Watanabe, F. Tanaka, H. | Lateral Force Resisting Mechanism of a Multi-story Shear Wall and Peripheral Members | Seismic evaluation of concrete structures | 11:00 |
| 0220 | Cardone, D. Cavaliere, G.P. Dolce, M. | Nonlinear Static Methods for the Prediction of the Seismic Response of R/C Framed Structures: Comparison with Experimental Results | | 11:15 |
| 0388 | Šoltész, J. Binder, I. Ecker, M. | Rehabilitation of Industrial Structures in the NPP Bohunice in Slovakia Due to Increased Site Seismic Hazard | | 11:30 |
| 0432 | Della Corte, G. Mazzolani, F.M. | Full-Scale Tests of Advanced Seismic Upgrading Techniques for RC Structures | | 11:45 |
| 0433 | Della Corte, G. Mazzolani, F.M. | Full-Scale Lateral-Loading Tests of a Real Masonry-Infilled RC Building | | 12:00 |
| 0661 | Ferraioli, M. Avossa, A.M. Malangone, P. | Performance-based Assessment of R.C. Buildings Strengthened with Steel Braces | | 12:15 |
| 0822 | Rapinat, F. Deschamps, D. Lecinq, B. | Repairing and Strengthening of a Viaduct after a Major Earthquake | | 12:30 |
| 0990 | Saetta, A. Scotta, R. Tesser, L. Vitaliani, R. | Non-linear Analysis of Reinforced Concrete Structures with a Fibres Two-Parameters Damage Model | | 12:45 |

SESSION 14.2 – 6 June, 11:00-13:00 – Sala Roma

Chair: C.P. Pantelides, Co-Chair: G. Mancini

| | | | | |
|------|---|--|--|-------|
| 0035 | Pantelides, C.P. Saxey, B.W. Reaveley, L.D. | Monitoring of Post-Tensioned Concrete Spliced Girder Bridge | Reinforcing and prestressing materials and systems | 11:00 |
| 0125 | Ichioka, Y. Kono, S. Watanabe, F. Nishiyama, M. Arakane, S. | Seismic Behavior of Precast Prestressed Concrete Members with Graded Composite Strands | | 11:15 |
| 0310 | Asai, H. Nojima, S. Osada, K. Ikeda, S. | Shear Strength of Concrete Brackets for Anchorage of External Tendons in the Strengthening of an Existing Girder | | 11:30 |
| 0358 | Yamagiwa, T. Niki, T. Touda, Y. | New Development of Low Relaxation Epoxy Coated Prestressing Strand | | 11:45 |
| 0399 | Hegger, J. Niewels, J. | Processing of a Carbon Textile as Concrete Reinforcement | | 12:00 |
| 0665 | Chekanovych, M. | Self-Regulating Prestressing System | | 12:15 |
| 0900 | Chandoga, M. Bilčík, J. Čerňanský, L. | Rehabilitation of 150 m ENO Nováky Chimney | | 12:30 |
| 0155 | Van Bogaert, Ph. | Anchoring of Cables for Single Pylon Extradosed Post-tensioned Concrete Bridge | | 12:45 |

SESSION 18.1 – 6 June, 11:00-13:00 – Sala Venezia

Chair: G. Mancini, Co-Chair: P. Fantilli

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|------|--|--|---|-------|
| 0133 | De Nicolo, B. Mistretta, F. Pani, L. | Experimental Investigation on the Performance Properties of Concrete Made with 100% Recycled Aggregate | Sustainability (recycling, life cycle assessment, dismantling and demolition) | 11:00 |
| 0149 | Amiri, A. Arya, C. Vassie, P.R. | Evaluating the Sustainability of Concrete Bridge Beams | | 11:15 |
| 0221 | Kabayama, K. Araki, H. | Damping Characteristics of RC Columns Containing Coal Ash Subjected to Strong Motions | | 11:30 |
| 0402 | Sim, J. Park, C. Park, S. | Application of Recycled Aggregate in Spun-Concrete | | 11:45 |
| 0469 | Bogliolo, R. | Environmental Product Declaration for Concrete | | 12:00 |
| 0580 | Morohashi, N. Sakurada, T. | A Study on the Bond Splitting Strength of Recycled Aggregate Concrete Beams | | 12:15 |
| 0739 | Topcu, I.B. Yuksel, I. Bilir, T. Ozkan, O. | Effects of Blast Furnace Slag and Bottom Ash to Concrete Durability | | 12:30 |
| 0761 | Sato, Y. Okuyama, H. Konno, K. Katsura, O. Taguchi, F. | Durability of Concrete Using Recycled Coarse Aggregates Produced by Wet Separation Method | 12:45 | |

NATIONAL REPORTS – 6 June, 11:00-13:00 – Sala Italia

| Session | Speakers |
|--------------|-------------------------|
| Reports from | Chair: A. van der Horst |
| Italy | Menegotto |
| Switzerland | Brenni |
| France | Fuzier |
| Germany | Curbach |
| Hungary | Balázs |
| Netherlands | Walraven |
| Poland | Ajdukiewicz |

SESSION 13.5 – 6 June, 14:30-15:45 – Sala Grecia

Chair: J.P. Fuzier, Co-Chair: M. Valente

| | | | | |
|------|---|---|----------|-------|
| 0174 | De Nicolo, B. Pani, L. Mistretta, F. | Profit of medium-low strength Self Compacting Concrete | Concrete | 14:30 |
| 0447 | Schmidt, M. Teichmann, T. | New Developments in Ultra High Performance Concrete – Non Corrosive PVA-fibres and Glueing of Structural Elements | | 14:45 |
| 0484 | Cerulli, T. Clemente, P. Ferrari, G. Gamba, M. Salvioni, D. Surico, F. | Nanostructural Superplasticizers and Ultimate Developments in Concrete Technology | | 15:00 |
| 0963 | Amen, D.K.H. Al-Lashi, R.S. Al-Rawi, R.S. | Prediction Model for the Final Shrinkage of Concrete Using Artificial Neural Network | | 15:15 |
| 0992 | Drochytka, R. Matulová, P. Chabr, J. Petranek, V. | Possibilities of Waste Raw Materials Application in Grouting Materials | | 15:30 |

SESSION 10.5 – 6 June, 14:30-16:00 – Sala Albania

Chair: A. Weber, Co-Chair: G. Monti

| | | | | |
|------|--|---|---|-------|
| 0266 | Górski M. Krzywoń R. | Research and Design Method of CFRP Strengthened RC Members Subjected to Torsion | FRP reinforcement for new and existing structures | 14:30 |
| 0337 | Barbieri, A. Focacci, F. Di Tommaso, A. | AFRP Connector to Prevent Brittle Debonding in FRP Strengthened RC Beams | | 14:45 |
| 0360 | Yoshitake, I. Inamori, A. Hamada, S. Hisabe, N. | Pure Shearing Behaviour of Concrete Element with Carbon Fiber Sheet | | 15:00 |
| 0655 | Taguchi, F. Kurihashi, Y. Mikami, H. Kishi, N. | An Applicability of Retrofitting Method Combined with AFRPm and PVA Short-fiber Mixed Shotcrete on Prototype RC Girders | | 15:15 |
| 0780 | Burtscher, S.L. | Composite Wedge System for Prestressing of CFRP | | 15:30 |
| 0849 | Capozucca, R. | Comparison at Short and Long Term of Static-dynamic Response of RC Beams Strengthened by CFRP | | 15:45 |

SESSION 3.5 – 6 June, 14:30-16:00 – Sala Turchia

Chair: P. Marti, Co-Chair: P. Riva

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|------|---|--|----------------------|-------|
| 0081 | Karatzas, V. Karatzas, E. | Investigation of the Seismic Behaviour of Structures Based on a Multi Member Model Elastically Connected with Spring Constants | Modelling and design | 14:30 |
| 0138 | Shayanfar, M.A. Safiey, A. Ghalehnovi, M. | Investigation of corrosion effects on bond-slip and tensile strength of reinforced concrete members | | 14:45 |
| 0206 | Tastani, S.P. Pantazopoulou, S.J. | Limit state model for bond of machined steel bars: experimental results | | 15:00 |
| 0460 | Micelli, F. La Tegola, A. | Influence of FRP Strengthening on Ductility of RC Elements under Compressive and Flexural Loads | | 15:15 |
| 0475 | Vitone, A. Palmisano, F. Vitone, C. | Load Path Method (LPM) in Detailing Design | | 15:30 |
| 0699 | Vaz Rodrigues, R. Muttoni, A. Olivier, O. | Large Scale Tests on Bridge Slabs Cantilevers Subjected to Traffic Loads | | 15:45 |

SESSION 8.5 – 6 June, 14:30-16:00 – Sala Egitto

Chair: R. Elgehausen, Co-Chair: A. Vulcano

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|------|--|--|---|-------|
| 0041 | Elgehausen, R. Hoehler, M.S. | Reassessment of Seismic Ductility Criteria for Fastenings Based on New Experimental Data | Seismic design of new concrete structures | 14:30 |
| 0188 | Dimova, S.L. Negro, P. Pinto, A. | Seismic Behaviour of the Column – Foundation Connection of Pre-cast Industrial RC Frames | | 14:45 |
| 0292 | Li, B. Xiang, W.Z. | Seismic Performance of Reinforced Concrete Structural Walls with Limited Transverse Reinforcement | | 15:00 |
| 0299 | MacPherson, C. Mander, J. Bull, D. | Seismic Performance of a Precast Concrete Hollowcore Floor Super-Assemblage | | 15:15 |
| 0785 | Ceravolo, R. Demarie, G.V. Giordano, L. Sabia, D. | Seismic Design and Analysis of Tall Bridge Piers | | 15:30 |
| 0851 | Palermo, A. Pampanin, S. Marriott, D. | Quasi-static Tests of Seismic Resistant Bridge Piers with Hybrid Connections: Comparison with Monolithic Solutions | | 15:45 |

SESSION 15.4 – 6 June, 14:30-16:00 – Sala Libia

Chair: J.R. Casas, Co-Chair: L. Bertolini

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|------|--|--|-----------------------------------|-------|
| 0018 | Swatekititham, S. | Life-span Simulation for RC Structures under Japan Oceanography | Durability of concrete structures | 14:30 |
| 0139 | Fiscina, D. Mantegazza, G. | Industrial concrete floor covering the radiant cooling/ heating system, placed on the gangway of the main axis of the New Milan Fair | | 14:45 |
| 0193 | Minh, H. Mutsuyoshi, H. Taniguchi, H. Niitani, K. | Influence of Insufficient Grout Conditions on Corrosion of Post-Tensioned Concrete Bridges | | 15:00 |
| 0227 | Mutsuyoshi, H. De Silva, S. Witchukreangkrai, E. | Influence of Prestressing on Shear Crack Width of Partially Prestressed Concrete Beams | | 15:15 |
| 0268 | Miniotaitte, R. | Influence of Sorption Moistening in Research of Moisture Deformations of Concrete | | 15:30 |
| 0703 | Bertolini, L. Carsana, M. Redaelli, E. | Influence of Mineral Additions on Durability of Self Compacting Concrete (SCC) | | 15:45 |

SESSION 9.4 – 6 June, 14:30-16:00 – Sala Algeria

Chair: A.J. Kappos, Co-Chair: L. Di Sarno

| | | | | |
|------|--|--|---|-------|
| 0085 | Calvi, G.M. Bolognini, D. Nascimbene, R. | Seismic design of precast RC structures: state of the art and construction practise in the Italian context | Seismic evaluation of concrete structures | 14:30 |
| 0090 | Stojanović, N. Koković, V. Ignjatović, I. Alendar, V. Terzić, V. | Seismic Evaluation of "Pile Dwelling" Type of Vertical Expansion of Old Buildings | | 14:45 |
| 0229 | Motavalli, M. Beigi, B. | Seismic Assessment and Retrofitting Proposal of the Tallest Hotel in Tehran | | 15:00 |
| 0591 | Bechtoula, H. Sakashita, M. Kono, S. Fumio, W. | Seismic Design Proposal Based on a Study on RC Columns and Frame Sub-assembly | | 15:15 |
| 0642 | Mergos, P. Kappos, A.J. | Seismic Assessment of R/C Structures Using a Distributed Shear and Flexural Flexibility Model with Shear-Flexure Interaction | | 15:30 |
| 0950 | Thermou, G.E. Pantazopoulou, S.J. Elnashai, A.S. | Retrofit Design Methodology for Response Modification of Substandard RC Buildings | | 15:45 |

SESSION 1.2 – 6 June, 14:30-16:00 – Sala Roma

Chair: S. Pérez-Fadón, Co-Chair: R. Di Marco

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|------|--|--|--|-------|
| 0071 | You Q. Zhang X. Li Z. Peng Y. | Sutong Bridge Project and Researches on Key Technologies | Large projects and innovative structures | 14:30 |
| 0113 | Bonasso, R. Traini, G. Della Vedova, M. | High-Speed Railway Prestressed Concrete Bridges | | 14:45 |
| 0208 | Jungwirth, D. Heiler, H. Nützel, O. Brand, W. | Experience during the first application of the new <i>fib</i> Stay Cable Recommendation 2005 on the Ziegelgraben Bridge to the Isle of Rügen/Germany | | 15:00 |
| 0717 | Macchi, G. Macchi, S. | Modena Viaducts – A Large Application of an Innovative Technique for High Speed Railways | | 15:15 |
| 0720 | Harrison, A. | Non-linear Soil and Structure Bridge Foundation Seismic Analysis for the New Benicia-Martinez Bridge from Design through Construction Using FBPIer | | 15:30 |
| 0928 | Pérez-Fadón, S. Herrero, J.E. Sánchez, J.J. Sánchez, M. | Los Tilos Arch on La Palma Island | | 15:45 |

SESSION 20.2 - 6 June, 14:30-16:00 – Sala Venezia

Chair: G. Macchi, Co-Chair: M. Mezzina

| | | | | |
|------|---|--|--|-------|
| 0013 | Bostenaru, M. | Regression Based Criteria Determining for Preservation Strategies of Early RC Buildings | Preservation of structural concrete heritage | 14:30 |
| 0097 | Mezzina, M. Uva, G. | R.C. Technology in Italy at the Beginning of 20th Century: a Historical Journey Through the Work of Porcheddu Society | | 14:45 |
| 0707 | Kryvosheyev, P. | Reinforced Concrete Used for Reconstruction, Restoration and Renewal of Important Public Buildings and Architecture Monuments of Ukraine | | 15:00 |
| 0848 | Figeys, W. Schueremans, L. Van Gemert, D. Brosens, K. | Preservation of the RC-monument 'Vuurmolen' (1902) at Overijse, Belgium | | 15:15 |
| 0888 | Chiorino, C. | Structural Concrete Architectural Heritage, Problems and Strategies for Documentation and Conservation. The Case Study of Turin | | 15:30 |
| 0997 | Cosenza, E. Fabbrocino, G. Manfredi, G. Parretti, R. Prota, A. Verderame, G.M. | Seismic Assessment and Retrofitting of the Tower of the Nations | | 15:45 |

NATIONAL REPORTS – 6 June, 11:00-13:00 – Sala Italia

| Session | Speakers |
|---------------------|---------------------------------|
| Reports from | Chair: C.R. Alimchandani |
| Croatia | Tkalcic |
| Czech Republic | Vitek |
| Denmark | Braestrup |
| Japan | Koshiishi |
| USA | D'Arcy |
| Slovakia | Chandoga |

SESSION 13.6 – 6 June, 16:30-18:30 – Sala Grecia

Chair: T.A. Hammer, Co-Chair: A. Vignoli

| | | | | |
|------|--|---|----------|-------|
| 0044 | Hammer, T.A. | Superlight Low Viscous Concrete | Concrete | 16:30 |
| 0187 | Jankovic, K. Bojovic, D. | Some Experiences in Production of SCC with Materials Available on SCG Market | | 16:45 |
| 0470 | Borroni, M. | Self Compacting Concrete for High Performance Structures | | 17:00 |
| 0625 | Ortiz, J. Aguado, A. Agullo, L. Garcia, T. | Ready Mix Concrete Optimization for Hot Weather Climates | | 17:15 |
| 0626 | Chung, W.Y.M. Lam, E.S.S. Wu, B. Wong Y.L. | Stress-strain Behavior of Concrete with Non-Seismic Detailing | | 17:30 |
| 0627 | Sakue, J. Okamoto, K. Ouchi, M. | Reappearance of Change of Flowability of Self-Compacting Concrete Due to Pumping | | 17:45 |
| 0818 | Angotti, F. Galano, L. Maio, M. Vignoli, A. | Structural Behaviour of HSC and SCC Slender Columns: Experimental Tests and Comparison with Simplified Design Methods | | 18:00 |
| 0929 | Girshtel, G. (Nemchynov Y.) | Prospects on Castled Concretes with Modifying Admixtures Using for Pavement Construction | | 18:15 |

SESSION 10.6 – 6 June, 16:30-18:30 – Sala Albania

Chair: S.A. Sheikh, Co-Chair: L. De Lorenzis

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|------|---|--|---|-------|
| 0048 | Ilki, A. Bedirhanoglu, I. Demir, C. Kumbasar, N. | Prediction of the Behavior of FRP Confined RC Columns under Axial Load and Flexure | FRP reinforcement for new and existing structures | 16:30 |
| 0180 | de Diego, A. Arteaga, A. Recuero, A. López-Hombrados, C. | Strengthening of Square RC Columns Using Fibre Reinforced Polymers | | 16:45 |
| 0264 | Monti, G. Alessandri, S. | Assessment of RC Columns Under Combined Biaxial Bending and Axial Load | | 17:00 |
| 0543 | Sheikh, S.A. | Upgrade of Concrete Columns with Fiber Reinforced Polymers | | 17:15 |
| 0740 | Iihoshi, C. Tanaka, H. Sato, Y. Fukuyama, H. | Seismic Behavior of Concrete Columns Reinforced with Polyacetal-Fiber Filaments | | 17:30 |
| 0865 | Ferracuti, B. Savoia, M. | Seismic Retrofitting of RC Frames by FRP Wrapping: a Numerical Study | | 17:45 |
| 0871 | Boscatto, G. Russo, S. | Concrete-Filled GFRP Hollow Profiles Subjected to Axial Load | | 18:00 |
| 0915 | Lignola, G.P. Prota, A. Manfredi, G. Cosenza, E. | Flexural Behaviour of RC Hollow Columns Confined with CFRP | | 18:15 |

SESSION 3.6 – 6 June, 16:30-18:45 – Sala Turchia

Chair: T. Triantafillou, Co-Chair: A. Ghersi

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|------|---|---|----------------------|-------|
| 0173 | Yang, X.-S. Lees, J.M. Morley, C.T. | Nonlinear Analysis of the Fracture of Repaired Reinforced Concrete Beams under Time-Dependent Loading | 7 | 16:30 |
| 0260 | Oyamada, R.N. Silva, I.M. Yamasaki, A.A. Ishitani, H. Shimizu, R.I. | Long-term prestressing losses, forces and deflections analysis: An actual application | Modelling and design | 16:45 |
| 0332 | Moretti, M. Tassios, T. | Modelling of Elements with Low Shear Ratio | | 17:00 |
| 0456 | Bairan, J.M. Mari, A.R. | On Cyclic 3D Shear-Bending Coupled Loading of RC Frame Elements Using an Advanced Cross-Section Model | | 17:15 |
| 0493 | Lourenço, M. Almeida, J. Nunes, N. | Nonlinear Behaviour of Concrete Discontinuity Regions | | 17:30 |
| 0500 | Bonataki, E. Tassios, T. | Local Bond Behaviour of Prestressed Tendons under Monotonic and Cyclic Actions | | 17:45 |
| 0612 | Cedolin, L. Eccheli, S. Roveda, M. Cusatis, G. | On the Failure Envelope of Reinforced Concrete Cross Sections Subjected to Biaxial Bending and Axial Load: an Analytical Solution | | 18:00 |
| 0817 | Yankelevsky, D.Z. Abutbul, A.D. | One Dimensional Tension Stiffening in Reinforced Concrete Incorporating Tensile Splitting | | 18:15 |
| 0912 | Hansen, T. Nielsen, M.P. | The Diagonal Compression Field Method Using Circular Fans | | 18:30 |

SESSION 2.1 – 6 June, 16:30-18:45 – Sala Egitto

Chair: J.L. Vitek, Co-Chair: M. Mezzina

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|------|--|---|-------------------------|-------|
| 0089 | Murugan, I. Natarajan C. Rajaraman, A. | Critical Analysis of Design and Construction of Thiruvalluvar Statue, 133 Ft (40 M) High in Mid Sea in Kanyakumari (Cape Comorin), Tamilnadu, India | Design and construction | 16:30 |
| 0214 | Miyawaki, T. Fujihara, H. Ushiroshoji, S. Shoji, A. | Design and construction of the Shitsumi Ohashi bridge | | 16:45 |
| 0284 | Muramatsu, A. Komuro, T. Nishiyama, M. | An Evaluation Method of Flexural Strength of Super High Strength Concrete Columns Using Stress Block | | 17:00 |
| 0323 | Chiodi, L. | Conceptual Design and Construction of a Fully Precast, Semi-Integral Viaduct | | 17:15 |
| 0616 | Okamoto, H. Oda, I. Ichinomiya, T. | Construction of the Akihabara Public Deck Using Low-autogenous-shrinkage Ultra-high-strength Concrete | | 17:30 |
| 0677 | Saito, K. Homma, A. Sato, T. | A Time-dependent Analysis Applied to the Superstructure Design of the Uchimaki Viaduct | | 17:45 |
| 0684 | Kobiellak, S. Piekarz, R. | A Simple Method for Approximate Analysis of Cracking Effect on Lateral Stiffness of Reinforced Concrete Framed-Tube Structures | | 18:00 |
| 0842 | Sjetnan, B. (Johansen, S.) | CryoTank – An Innovative Design for LNG Storage Tanks Utilizing Pre-stressed Concrete and State-of-the Art Slip-forming Techniques (www.cryotank.no) | | 18:15 |
| 0885 | Vitek, J.L. Stráský, J. Brož, R. | Bridge over the Rybný Creek | | 18:30 |

SESSION 15.5 – 6 June, 16:30-18:30 – Sala Libia

Chair: H. Schmidt, Co-Chair: M. Di Prisco

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|------|---|--|-----------------------------------|-------|
| 0057 | Bai, L. Xu, A. | Research on Durability Design of concrete Bridge in China | Durability of concrete structures | 16:30 |
| 0080 | Salas, R.M. Schokker, A.J. West, J.S. Breen, J.E. Kreger, M.E. | Long-Term Corrosion Testing and Durability Design of Bonded Post-Tensioned Concrete Elements | | 16:45 |
| 0106 | Mietz, J. Burkert, A. Burkert, A. Eich, G. | Long-term Behaviour of Corrosion Protection Materials for Prestressed Systems | | 17:00 |
| 0192 | Kokubo, S. Shima, H. | Probabilistic Prediction to Estimate Budget of Concrete Bridges under Chloride Attack | | 17:15 |
| 0316 | Sakoi, Y. Horiguchi, T. | Loading Effects on Chloride Penetration of Fiber Reinforced Concrete | | 17:30 |
| 0345 | Nakamura, E. Kitayama, R. Watanabe, H. Hisada, M. Tsukahara, M. | Performance Evaluation of Repair Materials Based on Shrinkage Properties | | 17:45 |
| 0599 | Kato, Y. Uomoto, T. | Modeling of Material Diffusivity in Concrete Considering with Heterogeneous Property of Concrete | | 18:00 |
| 0617 | Pustka, D. Marek, P. | Probabilistic Durability Assessment of Concrete Structure Using SBRA Method | | 18:15 |

SESSION 9.5 – 6 June, 16:30-18:30 – Sala Algeria

Chair: M.N. Fardis, Co-Chair: G. Toniolo

| | | | | |
|------|--|--|---|-------|
| 0116 | Kono, S. Watanabe, F. | Seismic Performance of RC Structures Strengthened with Precast Prestressed Concrete Braces | Seismic evaluation of concrete structures | 16:30 |
| 0210 | Inoue, S. Tanabe, A. | Seismic Performance Improvement of Reinforced Concrete Columns by Partial Prestressing | | 16:45 |
| 0241 | Kosmopoulos, A. Fardis, M.N. | Seismic Evaluation of Strongly Irregular and Torsionally Unbalanced Concrete Buildings | | 17:00 |
| 0566 | Kramar, M. Fischinger, M. Isaković, T. | Seismic Vulnerability of the EC8 Designed Columns in Industrial Buildings | | 17:15 |
| 0685 | Russo, G. Somma, G. | Shear Strength of Exterior Beam-column Joints under Seismic Loading | | 17:30 |
| 0687 | Labbé, P. Chauvel D. Gallitre, E. | Seismic Evaluation of Existing Nuclear Power Plants, Application in France of the IAEA Approach | | 17:45 |
| 0883 | Calderoni, B. Cordasco, E.A. Lenza, P. | Vulnerability and Assessment of Existing R.C. Building in Seismic Areas | | 18:00 |
| 0985 | Dolce, M. Cardone, D. Moroni, C. Nigro, D. Ponzo, F.C. Santarsiero, G. De Canio, G. Ranieri, N. Renzi, E. Goretti, A. Nicoletti, M. Spina, D. Lamonaca, B. Marnetto, R. | SICURO and TREMA Projects: the Seismic Performance of R/C Frames Seismically Upgraded with Different Systems | | 18:15 |

SESSION 14.3 – 6 June, 16:30-18:15 – Sala Roma

Chair: A. Chabert, Co-Chair: F. Mola

| | | | | |
|------|--|---|--|-------|
| 0015 | Weiland, S. Ortlepp, R. Curbach, M. | Strengthening of predeformed slabs with textile reinforced concrete | Reinforcing and prestressing materials and systems | 16:30 |
| 0114 | Della Vedova, M. Evangelista, L. Petrangeli, M.P. Prevedini, C. | The stays of the cable-stayed bridge over Po River: design, testing and technological choices | | 16:45 |
| 0380 | Osada, K. Fujioka, A. Nojima, S. Ikeda, S. | Strengthening of Deteriorated Prestressed Concrete Bridges with Additional Prestressing | | 17:00 |
| 0420 | Bianchi, F. Collina, V. | The Use of Unbonded Post-Tensioning for Construction of High Performance Structures | | 17:15 |
| 0490 | Martí, J.R. Arbeláez, C.A. Serna, P. Castro, C. | Transmission and Anchorage Lengths in Prestressed Concrete Specimens | | 17:30 |
| 0850 | Franchi, A. Migliacci, A. Crespi, P. Bennani, A. | Stainless Steel Rebars under Cyclic Loadings | | 17:45 |
| 0862 | Häussler, C. | Time and Cost-Effective Solutions for Concrete Construction | | 18:00 |

SESSION 18.2 - 6 June, 16:30-18:30 – Sala Venezia

Chair: K. Pilakoutas, Co-Chair: G. Campione

| | | | | |
|------|--|--|---|-------|
| 0076 | Ajdkiewicz, A. | Sustainability of Concrete Structures – Research and Practice in Poland | Sustainability (recycling, life cycle assessment, dismantling and demolition) | 16:30 |
| 0112 | Neocleous, K. Pilakoutas, K. Waldron, P. | From Used Tyres to Concrete Fibre Reinforcement | | 16:45 |
| 0213 | Kato, Y. Ichioka, T. Kobayashi, R. | The characteristics of the flexural strength of concrete with high volume fly ash | | 17:00 |
| 0290 | Hamada, S. Fujioka, Y. Kukino, S. | Study on Approach to Risk Cost for RC Bridge Slab under Fatigue Loading | | 17:15 |
| 0483 | Surico, F. Lolli, A. Scattolin, M. Negro, M. Zeno, L. Scanferla, P. Pellay, R. | High Performance Concrete for Environmental Applications: a New Solidification/Stabilisation Process for the Remediation of Contaminated Soils | | 17:30 |
| 0884 | Yamada, K. Kato, E. Sato, A. Ishiyama, S. | Recycling of Wasted Bottle Glass Cullet as Fine Aggregate | | 17:45 |
| 0908 | Moulinier, F. Guiraud, P. | Stainless Steel Concrete Re-enforcement Bars, an Essential Contribution to the Sustainable Development | | 18:00 |
| 0968 | Cioffi, R. Colangelo, F. Marroccoli, M. Vaccaro, R. | Properties of Concrete Containing Demolition Wastes Produced in Southern Italy | | 18:15 |

NATIONAL REPORTS – 6 June, 16:30-18:30 – Sala Italia

| Session | Speakers |
|----------------------------------|---|
| Reports from | Chair : S. Helland |
| Belarus | Petsold |
| Ukraine | Krivosheyev |
| Austria | - |
| Iran | - |
| Russia | - |
| AICAP, AITEC, ATECAP, ASSOBTETON | Menegotto Curcio Bolondi Dassori |

7 June 2006, Wednesday

SESSION 13.7 – 7 June, 9:00-10:15 – Sala Grecia

Chair: **P. Lenkei**, Co-Chair: **F. Biondini**

| | | | | |
|------|---|---|----------|-------|
| 0094 | Izumo, K. | Temperature Effect on Autogenous Shrinkage Strain of Mortar Using Blast Furnace Slag | Concrete | 9:00 |
| 0857 | Biondini, F. Nero, A. | Nonlinear Analysis of Concrete Structures Exposed to Fire | | 9:15 |
| 0970 | Rigueira, J. Bonilla, M. Taengua, E. Payá, J. Serna, P. | Test Methods to Differentiate and Evaluate the Admixtures Effectiveness on Self-compacting Concrete | | 9:30 |
| 0977 | Bagheri, A.R. Alibabaie, M. Zanghane, H. | The Effect of Aggregate Type on Mechanical Properties of Ultra High Strength Concrete RPC | | 9:45 |
| 0983 | Libessart, L. Djelal, C. De Caro, P. Dubois, I. | The Effects of Release Agents on the Formwork/Concrete Interface | | 10:00 |

SESSION 10.7 – 7 June, 9:00-10:30 – Sala Albania

Chair: **K.W. Neale**, Co-Chair: **A. Benedetti**

| | | | | |
|------|---|---|---|-------|
| 0283 | Lau, D.T.B. Pam, H.J. | Ductility Improvement of RCFRP Flexural Members | FRP reinforcement for new and existing structures | 9:00 |
| 0370 | Ombres, L. Spadea, G. | Structural Behaviour of RC Continuous Beams Externally Strengthened with Bonded FRP Sheets | | 9:15 |
| 0385 | Coccia, S. Ianniruberto, U. Rinaldi, Z. | FRP Reinforcement at Sagging and Hogging Zones in Continuous Beams: Influence on Redistribution of Moment | | 9:30 |
| 0510 | Monti, G. Liotta, M.A. | Pretension of Externally Bonded FRP Sheets for Flexural Reinforcement of RC Beams: Methods and Design Equations | | 9:45 |
| 0603 | Elsayed, W.E. Ebead, U.A. Neale, K.W. | Analysis of FRP-Strengthened Two-Way Slabs | | 10:00 |
| 0966 | Alkhrdaji, T. Thomas, J. | Status of FRP Applications for Strengthening Concrete in the United States: a Contractor's Perspective | | 10:15 |

SESSION 3.7 – 7 June, 9:00-10:30 – Sala Turchia

Chair: **Sato Y.**, Co-Chair: **U. Ianniruberto**

| | | | | |
|------|--|---|----------------------|-------|
| 0136 | Marinković, S. Alendar, V. | Punching Failure Mechanisms at Edge Columns - Experimental and Numerical Investigation | Modelling and design | 9:00 |
| 0311 | Wolinski, Sz. | Probabilistic Design of Concrete Structures Using Strut and Tie Method | | 9:15 |
| 0567 | Fillo, L. Bartók, A. Halvoník, J. Rojko, L. | Punching of Prestressed and Fibre Reinforced Concrete Slabs – Comparison of Mechanical Models and Test Results | | 9:30 |
| 0636 | Pansuk, W. Sato, Y. Ueda, T. | Shear Resisting Mechanism of Reinforced and Prestressed Concrete T-beams with Stirrups | | 9:45 |
| 0789 | Campione, G. Fossetti, M. Papia, M. | Simplified Analytical Model for Compressed High-Strength Columns Confined by Transverse Steel and Longitudinal Bars | | 10:00 |
| 0964 | Shmukler, V.S. Kakshar S.M.F. | Rationalization of Trailing Wall Parameters | | 10:15 |

SESSION 8.6 – 7 June, 9:00-10:00 – Sala Egitto

Chair: Rodriguez M., Co-Chair: A. Lupoi

| | | | | |
|------|---|--|--|------|
| 0242 | Pagani, C. Zambelli, S. | Structural frame for multi-storey precast buildings | Seismic design of new concrete structures | 9:00 |
| 0390 | Lupoi, A. | Seismic Response of Isolated Bridges Accounting for Spatial Variability of Ground Motion | | 9:15 |
| 0511 | Panagiotou, M. Restrepo, J.I. Englekirk, R.E. | Shake Table Test of a Full Scale Reinforced Concrete Wall Building | | 9:30 |
| 0634 | D'Ambrisi, A. De Stefano, M. Tanganelli, M. | Inelastic Response of RC Frames under Different Modeling Assumptions | | 9:45 |

PRIMARY 2 – 7 June, 9:00-10:30 – Auditorium

Chair: M.N. Fardis Co-Chair: G. Mancini

| | | |
|-------------|--|-------|
| J. Cagley | Togetheress Wins | 9:00 |
| A. Nanni | Innovation in Structural Engineering: Strengthening with Composites and Field Load Testing | 9:30 |
| J. Yamazaki | Methodical Prestressed Concrete Bridges In the Last Decade | 10:00 |

SESSION 17.1 – 7 June, 11:00-13:00 – Sala Grecia

Chair: S. Matthews, Co-Chair: L. Ombres

| | | | | |
|------|--|--|---|-------|
| 0098 | Uva, G. Porco, F. Porco, G. | Application of ND Protocols to R.C. Structures built at the Beginning of 20 th Century. The Assessment of a "Porcheddu Society"'s Structure in the City of Bari | Monitoring, maintenance, repair, residual life and failures | 11:00 |
| 0111 | Maksymowicz, M. Bień, J. Cruz, P.J.S. | Assessment of load capacity of railway RC slab spans with reinforcement losses | | 11:15 |
| 0347 | Kitano, Y. Watanabe, H. Hisada, M. Tezuka, M. Tokumitu, S. | A Study on the Macro-cell Corrosion Due to the Remaining Chloride in Repaired RC Beam | | 11:30 |
| 0350 | Malisardi, L. Bernardini, L. Romagnolo, M. (Meliani M.) | An Evaluation of the Future Useful Life of an Italian Motorway Bridge, Taking into Account the Special Maintenance Measures Taken during 45 Years of Life | | 11:45 |
| 0373 | Nakamura, S. Fujita, M. Nakata, Y. Ito, R. Watanabe, H. | Analytical Study on the Prestressed Concrete Girder Removing Deterioration Parts by Salt-Attack | | 12:00 |
| 0504 | Peyton, S. Sanders, C. Hale, W.M. Wang, K. Wilhite, L.J. | Automated Assessment of Bridge Deck Cracking with Digital Highway Data Vehicle (DHDV) | | 12:15 |
| 0608 | Matthews, S. | CONREPNET: Performance-Based Approach to Remediation of Reinforced Concrete Structures: an Overview | | 12:30 |
| 0609 | Matthews, S. | Concrete Structure Management – The Owners' Guide: an Introduction to a Guide to Good Practice by FIB TG 5.3 | | 12:45 |

SESSION 10.8 – 7 June, 11:00-13:00– Sala Albania

Chair: T.C. Triantafillou, Co-Chair: M. Pecce

| | | | | |
|------|---|--|---|-------|
| 0065 | Rangelova, F. Panichkov, D. | FRP Wrapping the Masonry Wall – Experimental Strengthening Assessment | FRP reinforcement for new and existing structures | 11:00 |
| 0308 | Binici, B. Özcebe, G. | FRP Retrofit of Infill Walls in Reinforced Concrete Frames for Seismic Resistance | | 11:15 |
| 0430 | Papanicolaou, C.G. Triantafillou, T.C. | Textile-Reinforced Cementitious or Polymeric Materials for Strengthening of Concrete Structures | | 11:30 |
| 0641 | Antoniades, K. Kappos, A. Salonikios, T. | Inelastic Response Characteristics of Repaired R/C Walls Strengthened with FRPs | | 11:45 |
| 0715 | Mufti, A.A. Bakht, B. Banthia, N. Benmokrane, B. Desgagné, G. Eden, R. Erki, M.-A. Karbhari, V. Kroman, J. Lai, D. Machida, A. Neale, K. Tadros, G. Täljsten, B. | New CHBDC Design Provisions for Fibre Reinforced Structures | | 12:00 |
| 0795 | Nigro, E. Manfredi, G. Cosenza, E. Zappoli, M. | Effects of High Temperature on the Performances of RC Bridge Decks Strengthened with Externally Bonded FRP Reinforcement | | 12:15 |
| 0967 | Massicotte, B. | Code Implementation of SFRC as Structural Material: Application to the Design of Bridge Decks | | 12:30 |
| 0980 | Shokri Majolan, A. Nourivand, A. Abbasi, S. | Impact Resistance of Single-span Concrete Frames Reinforced by Polypropylene Fibers | | 12:45 |

SESSION 3.8 – 7 June, 11:00-12:45 – Sala Turchia

Chair: E. Bentz, Co-Chair: A. Vignoli

| | | | | |
|------|---|--|----------------------|-------|
| 0141 | Surovtsev, V. Shershnev, A. | Specific behaviour of non-typical prestressed reinforced concrete slab superstructures | Modelling and design | 11:00 |
| 0191 | Chiorino, M.A. Sassone, M. | Stress redistributions in concrete structures after changes in the statical scheme: a comparison between theoretical and approximate solutions | | 11:15 |
| 0309 | Binici, B. | Stress-Strain Model for Concrete with Active and Passive Confinement | | 11:30 |
| 0318 | Ichinomiya, T. Hishiki, Y. Ohno, T. Morita, Y. | Structural Performance of Members Using Ultra-High-Strength Concrete with Low Shrinkage | | 11:45 |
| 0404 | Mitrofanov, V. Pogrebnoy, V. Dovzhenko, O. | Strength of Concrete Elements Under Shear Action According to the Theory of Plasticity and Tests | | 12:00 |
| 0537 | Bentz, E.C. Collins, M.P. | Simplified Form of the Modified Compression Field Theory (MCFT) for the Analysis of Beams | | 12:15 |
| 0767 | Minelli, F. Plizzari, G.A. | Steel Fibers as Shear Reinforcement for Beams | | 12:30 |

SESSION 2.2 – 7 June, 11:00-13:00 – Sala Egitto

Chair: K. Bergmeister, Co-Chair: F.M. Mazzolani

| | | | | |
|------|--|---|-------------------------|-------|
| 0198 | Tatsuki, S. Tsuyoshi, T. Matsumoto, K. Ooba, M. | Design of Three Span Continuous Prestressed Concrete Arch Bridge | Design and construction | 11:00 |
| 0289 | Petrov, C. | Interface Between Designer, Contractor and Owner in Design-Build Project – Innovation and Realization | | 11:15 |
| 0383 | Cao, Z. Lu, G. Zou, L. | Finite Element Analysis and Experimental Study of a Viaduct with Arc-shape Bottom Wide Box Girder under Vertical Load | | 11:30 |
| 0425 | Chiaia, B. Fantilli, A.P. Vallini, P. Kalamaras, G. | Fiber Reinforced Concrete for Massive Structures: the Case of Craviale Tunnel | | 11:45 |
| 0437 | Alimchandani, C.R. Bhide, D.A. Mitra, S. | Design of an RCC Arch Bridge Across River Beas with Segmental Construction at Ramshilla, Himachal Pradesh, India | | 12:00 |
| 0030 | Giuliani M.E. | The New Control Tower of The Malaga Airport (Spain) | | 12:15 |
| 0820 | Hoffmann, S. Bergmeister, K. | Innovative Expansion Joints for the Rion – Antirion Main Bridge | | 12:30 |
| 0974 | Magureanu, C. Heghes, B. | Experimental Study on Ductility Reinforced Concrete Beams Using High Strength Concrete | | 12:45 |

SESSION 15.6 – 7 June, 11:00-12:45 – Sala Libia

Chair: T. Miyagawa, Co-Chair: S. Russo

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|------|--|--|-----------------------------------|-------|
| 0186 | Ungricht, H. Hunkeler, F. Böhni, H. | Water and chloride penetration into concrete – influence of exposure conditions and concrete quality | Durability of concrete structures | 11:00 |
| 0199 | Amino, T. Habuchi, T. Moriwake, A. Kato, E. Yokota, H. | Study on Deterioration Prediction Method of RC Structures due to Chloride Attack considering Uncertainties in Deterioration Parameters (considering the Variations in Deterioration Factors) | | 11:15 |
| 0428 | Cherif, S. Coulet, D. Berthe, N. Carreau, C. | Tangiers New Harbour (Morocco) | | 11:30 |
| 0463 | Mendonça, J.T. | Service Life Design in Concrete Bridges | | 11:45 |
| 0507 | Sanders, C. Peyton, S. Hale, W. | Survey of Arkansas Bridge Decks and the Effect of Mixture Proportions on Concrete Performance | | 12:00 |
| 0545 | Kobayashi, K. | The Seismic Behavior of RC Member Suffering from Chloride-Induced Corrosion | | 12:15 |
| 0939 | Briseghella, B. Siviero, E. Zordan, T. (Zanchettin A.) | Retrofitting Techniques for Short and Medium Span Bridges | | 12:30 |

SESSION 6.1 – 7 June, 11:00-12:30 – Sala Algeria

Chair: H. Corres-Peiretti, Co-Chair: M. Menegotto

| | | | | |
|------|--|--|----------------|-------|
| 0177 | Monaco, P. Fiore, A. | Failure Limit Conditions of Prestressed Composite Sections | Prefabrication | 11:00 |
| 0185 | Psycharis, I.N. Mouzakis, H.P. Carydis, P.G. | Experimental Investigation of the Seismic Behaviour of Prefabricated RC Structures | | 11:15 |
| 0394 | El Debs, M.K. El Debs, A.L.H.C. Miotto, A.M. | Experimental Analysis of Beam-to-Column Connection with Semi-Rigid Behavior of Precast Concrete Structures | | 11:30 |
| 0700 | Ferrara, L. Mola, E. Negro, P. | Cyclic Test on a Full Scale Prototype of R/C Precast One Storey Industrial Building | | 11:45 |
| 0776 | Gatti, A. Mantegazza, G. Meda, A. Minelli, F. Plizzari, G.A. | Fiber Reinforced Concrete for Duct Elements: a Preliminary Experimental Study | | 12:00 |
| 0947 | Lúcio, V. Castilho, S. | Behaviour of Hollow Core Slabs under Point Loads | | 12:15 |

SESSION 16.1 – 7 June, 11:00-12:45 – Sala Roma

Chair: R. Elgehausen, Co-Chair: P. Franchin

| | | | | |
|------|--|---|----------------|-------|
| 0196 | Kato, H. Kusunoki, K. Mukai, T. Teshigawara, M. | Experimental Study on Structural Performance of Full-Scale RC Walls of an Existing Building | Prefabrication | 11:00 |
| 0330 | Koteš, P. Vičan, J. | Experiences with Reliability-Based Evaluation of Existing Concrete Bridges in Slovakia | | 11:15 |
| 0594 | Casadei, P. DeLuca, A. Serafini, R. Agneloni, E. | Assessment of Concrete Structures through In-Situ Load Testing: An Italian Prospective | | 11:30 |
| 0607 | Matthews, S. | Full-scale Structural Performance Tests upon Three Large Panel System (LPS) Buildings in the UK | | 11:45 |
| 0678 | Lenkei, P. | Concrete Structures and the Probable Climate Change | | 12:00 |
| 0698 | Elgehausen, R. Simons, I. Kretschmar, M. | Behaviour of Post-installed Rebars under Reversed Cyclic Loading | | 12:15 |
| 0724 | Nemchynov, Yu. Kryvosheyev, P. Sydorenko, M. Bambura, A. Kurash, Yu. Orbelin, S. Khavkin, A. Maryenkov, N. Voznesensky, L. Poshyvach, V. Tkachenko, I. Kundryutsky, Yu. Ametov, Yu. Tarasyuk, V. Bogdan, V. Kozeletsky, P. Shcherbyn, V. Klyuchnykov, A. Rudko, V. Baty, V. Shenderovych, V. Malahov, Yu. Vasyagin, R. Lukina, L. | Chernobyl NPP "Shelter" Object. Strengthening of Unstable Building Structures | | 12:30 |

***fib* COMMISSION REPORTS – 7 June, 11:00-13:00 – Sala Italia**

| Session | Speakers |
|--|---------------------|
| Reports from | |
| Comm. 1: Structures including presentation of <i>fib</i> Bulletins 31 “Post-tensioning in buildings” and 33 “ Design of footbridges”, publ. in 2005 | Klein |
| Comm. 3: Environmental aspects of design and construction | Sakai |
| Comm. 4. Modelling of structural behaviour and design including report on results of modelling competition | Marti |
| Comm. 5: Service life design including presentation of <i>fib</i> Bulletins 33 “Durability of post-tensioning tendons” published 2005 and 34 “Model Code for service life design”, published 2006 | Rostam/ Matthews |

SESSION 17.2 - 7 June, 14:30-15:45 – SalaGrecia

Chair: J.A. Figueiras, Co-Chair: P. Croce

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|------|--|---|---|-------|
| 0305 | Nishi, H. Manabe, H. Suzuki, T. Sugioka, K. | Countermeasure against Subsidence in Central Hinge on PC Bridge Using External Cables | Monitoring, maintenance, repair, residual life and failures | 14:30 |
| 0411 | Kuzume, K. Mori, M. Miyagawa, T. | Evaluation of Concrete Structures Damaged by Alkali-Aggregate Reaction Using Non-Destructive Method | | 14:45 |
| 0523 | Aprile, A. Capuani, D. Benedetti, A. Frassine, R. | Damage of Concrete and Bonding of FRP Reinforcement | | 15:00 |
| 0620 | Sousa, H. Matos, J.C. Figueiras, J.A. | Development of an Embedded Sensor Holder for Concrete Structures Monitoring | | 15:15 |
| 0781 | Wawrusiewicz, A. | Evaluation of the State of Concrete Structures by Multi Mapping | | 15:30 |

SESSION 10.9 – 7 June, 14:30-16:00 – Sala Albania

Chair: S.J. Foster, Co-Chair: M.A. Aiello

| | | | | |
|------|---|--|---|-------|
| 0028 | Kilpatrick, A.E. Dawborn, R. | Flexural Shear Capacity of High Strength Concrete Slabs Reinforced With Longitudinal GFRP Bars | FRP reinforcement for new and existing structures | 14:30 |
| 0091 | Vintzileou, E. | Shear Strengthening of RC Beams by means of CFRPs | | 14:45 |
| 0162 | Hassan Dirar, S.M.O. Hoult, N.A. Morley, C.T. Lees, J.M. | Shear Strengthening of Pre-cracked Reinforced Concrete Beams Using CFRP Straps | | 15:00 |
| 0342 | Smith, S.T. Otoom, O.F.A. Foster, S.J. | Finite Element Modelling of RC Beams Strengthened in Shear with FRP Composites | | 15:15 |
| 0799 | Rasulo, A. Imbimbo, M. | The Influence of Transverse Steel and FRP Configurations on the Shear Behaviour of RC Beams | | 15:30 |
| 0973 | Jayaprakash, J. Abdul Aziz, A.A. Abang Abdullah, A.A. Ashrafov, A.A. | Shear Resistance of Reinforced Concrete Beams with Bi-Directional Carbon Fibre Fabric Strips | | 15:45 |

SESSION 3.9 – 7 June, 14:30-16:00 – Sala Turchia

Chair: J. Camara, Co-Chair: M. Sassone

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|------|--|---|----------------------|-------|
| 0183 | Camara, J. Luís, R. | Structural Response and Design Criteria for Imposed Deformations Superimposed to Vertical Loads | Modelling and design | 14:30 |
| 0232 | Debernardi, P.G. Guiglia, M. Taliano, M. | The Influence of Shear on the Deflection of R.C. Beams | | 14:45 |
| 0286 | Hong, S.G. Jang, S.K. | Strut-and-tie Models for Deformation | | 15:00 |
| 0362 | Murray, K.A. Cleland, D.J. Gilbert, S.G. | The Development of a Prediction Method for the Ultimate Load Capacity of Reinforced Concrete Flat Slabs in the Vicinity of Edge Columns | | 15:15 |
| 0513 | Kuchma, D.A. Sun, S. Hawkins, N.M. | Shear Design and Behavior of High-Strength Concrete Bridge Girders | | 15:30 |
| 0824 | Belletti, B. di Prisco, M. Dozio, D. | Thin-webbed Open Cross-section Roof Elements: Modelling of Second Order Effects up to Failure | | 15:45 |

SESSION 2.3 – 7 June, 14:30-16:00 – Sala Egitto

Chair: J. Walraven, Co-Chair: A. Meda

| | | | | |
|------|---|--|-------------------------|-------|
| 0031 | Giuliani, M.E. | One Step Further: The Barcelona New Control Tower | Design and construction | 14:30 |
| 0118 | Della Vedova, M. Evangelista, L. Prevedini, C. Averardi, F. Zoratto, N. | Piacenza Viaduct on the high-speed railway line Milano-Bologna: innovative solutions for prestressed concrete deck design and construction | | 14:45 |
| 0126 | Ozaka, Y. | New Technique to Construct PC Grade-Separated Structure under Living Road or Railway | | 15:00 |
| 0288 | Wang, N. Yang, J. Chen, G. Yuan, X. | Prestressed Concrete Structure Design of TCL Industry Research Building | | 15:15 |
| 0551 | Radic, J. Djukan, P. Zderic, Z. | New Croatian Highway Structures | | 15:30 |
| 0581 | Sesar, P. Igreg, T. Banic, Z. | Optimization of Column Cross Section on Highway Bridge | | 15:45 |

SESSION 5.1 – 7 June, 14:30-16:00 – Sala Libia

Chair: M. Braestrup, Co-Chair: E. Nigro

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|------|--|--|---------------------------------|-------|
| 0027 | Zhao, G. Li, Y. | Bond Capacity of Steel Reinforced Concrete Composite Short Columns | Composite and hybrid structures | 14:30 |
| 0082 | Matsui, T. Ebina, T. Tamura, S. Ogawa, M. | A vibration characteristic and a main girder rigidity evaluation method of PC box girder with a corrugated steel plate web | | 14:45 |
| 0128 | Fauzan Kuramoto, H. | Behavior of Engineering Wood Encased Concrete-Steel Composite Columns under Combined Axial Load and Lateral Load Reversals | | 15:00 |
| 0168 | Marracci, L. Viallon, J.-P. | A Cable Stayed Bridge in the Calm Morning Country: The Masan Bridge (South Korea) | | 15:15 |
| 0413 | Staquet, S. Espion, B. Detandt, H. | Analysis of Time-Dependent Effects in a Continuous Two-Span Railway Bridge with Precast Prestressed Composite Decks | | 15:30 |
| 0557 | Halvonik, J. Borzovič, V. Fillo, L. | An Experimental Investigation of Composite Continuous Girders | | 15:45 |

SESSION 6.2 – 7 June, 14:30-15:45 – Sala Algeria

Chair: J.C. Dotreppe, Co-Chair: G. Magliulo

| | | | | |
|------|--|--|----------------|-------|
| 0163 | Han, M.Y. Ahn, J.S. | Load Bearing Capacity of A Newly Developed Continuous IPC Girder Bridge | Prefabrication | 14:30 |
| 0495 | Moravcik, M. Zigo, J. | Numerical and Experimental Load Test of the Precast Prestressed Girder | | 14:45 |
| 0506 | Tuleasca, L. Cuciureanu, A. | Precast Beams and Column Connected with Cast-in-Place Steel Fibre Concrete | | 15:00 |
| 0555 | Dotreppe, J.-C. Colinet, G. Kaiser, F. | Influence of the Deformability of Connections in the Analysis of Precast Concrete Frames | | 15:15 |
| 0949 | Camara, J. Hipólito, A. | Precast Bridges: Design for Time Dependant Effects | | 15:30 |

SESSION 1.3 – 7 June, 14:30-15:30 – Sala Roma

Chair: M. Tandon, Co-Chair: F. Palmisano

| | | | | |
|------|--|---|--|-------|
| 0129 | Gu W. Zhang A. | Theoretical Analysis Of Roof Temperature Field For The Overlong Jointless Structures Of RC High-Rise Building | Large projects and innovative structures | 14:30 |
| 0148 | Furtado, R. Quinaz, C. Bastos, R. | The New Braga Municipal Stadium, Braga, Portugal | | 14:45 |
| 0269 | Adão da Fonseca, A. Millanes Mato, F. Bastos, R. Matute Rubio, L. | The Infant Henrique Bridge over the River Douro, in Porto, Portugal | | 15:00 |
| 0434 | Alimchandani, C.R. Sircar, A.G. Jain, M. | Design and Construction of 33km Long, 3.25m Diameter Circular Pipeline in Pre-stressed and Reinforced Cement Concrete for 270 Cusec Discharge | | 15:15 |

***fib* COMMISSION REPORTS – 7 June, 14:30-16:00 – Sala Italia**

| Session | Speakers |
|---|-----------|
| Reports from | |
| Comm. 6: Prefabrication including brief presentation of <i>fib</i> Bulletins 29 "Precast concrete brifges", publ. in 2004 | Menegotto |
| Comm. 7: Seismic Design including brief presentation of <i>fib</i> Bulletins 35 "Retrofitting of concrete structures by externally bonded FRP", publ. in 2006 | Pinto |
| Comm. 8. Concrete | Muller |
| Comm. 9. Reinforcing and prestressing materials and systems including brief presentation of <i>fib</i> Bulletins 30 "Acceptance of stay cables", publ. in 2005 | Ganz |
| Comm. 2: Safety and performance concepts | Taerwe |

SESSION 17.3 – 7 June, 16:30-18:15 – Sala Grecia

Chair: B. Pielstick, Co-Chair: A. Aprile

| | | | | |
|------|--|--|---|-------|
| 0083 | Del Grosso, A. Lanata, F. | Health Monitoring of R.C. Structures: a Comparison of Static and Dynamic Approaches via Benchmarking | Monitoring, maintenance, repair, residual life and failures | 16:30 |
| 0182 | Hamoush, S. Shivakumar, K. | Full-Field Measurement to Qualify the Structural Response of Repaired Elements | | 16:45 |
| 0253 | Pernica, G. Glazer, R. Chan, G. Wiseman, A. | Monitoring the Behaviour of a CFRP-Wrapped Outdoor Concrete Column | | 17:00 |
| 0614 | Glišić, B. Inaudi, D. | Monitoring of Early and Very Early Age Deformation of Concrete Using Fiber Optic Sensors | | 17:15 |
| 0621 | Matos, J.C. Henriques, A.A. Figueiras, J.A. Casas, J.R. García, O.D. Vehí, J. | Long Term Assessment of Concrete Structures | | 17:30 |
| 0722 | de Rooij, M.R. Breugel, K. Van Polder, R.B. | Maintenance Strategy Based on Durability Evaluation | | 17:45 |
| 0899 | Fabo, P. Jarosevic, A. Chandoga, M. | Measurement of Forces in the Cable Stays of the Apollo Bridge | | 18:00 |

SESSION 10.10 – 7 June, 16:30-18:30 – Sala Albania

Chair: A. Nanni, Co-Chair: F. Ceroni

| | | | | |
|------|---|--|---|-------|
| 0738 | Faella, C. Realfonzo, R. Rizzano, G. | Experimental Behaviour of R/C Columns Confined by FRP | FRP reinforcement for new and existing structures | 16:30 |
| 0455 | Corvaglia, P. Nenna, S. Feo, A. Pugliese, L. Clemente, R. Tundo, A. Micelli, F. | Durability of FRP-Confined Concrete Subjected to Severe Conditions | | 16:45 |
| 0369 | Aiello, M.A. Ombres, L. | Stiffness and Ductility of Continuous Reinforced Concrete Beams Strengthened with Externally Bonded FRP Sheets | | 17:00 |
| 0693 | Derkowski, W. Dyduch, K. | Fatigue Life Model of RC Cross-Section Strengthened with CFRP Laminates | | 17:15 |
| 0726 | Leone, M. Aiello, M.-A. Matthys, S. | The Influence of Service Temperature on Bond between FRP Reinforcement and Concrete | | 17:30 |
| 0812 | Al Chami, G. Thériault, M. Neale, K.W. | Long-Term Creep Performance of CFRP-Strengthened Concrete Elements | | 17:45 |
| 0854 | Manni, O. Modarelli, R. Pascali, L. Vivaldi, S. | Behaviour of Shrinkage Compensating Concrete encased in FRP Tubes | | 18:00 |
| 0927 | Prusty, B.G. | Structural Performance of Glass-Reinforced Polymer Panels Under Elevated Temperatures | | 18:15 |

SESSION 4.1 – 7 June, 16:30-18:15 – Sala Turchia

Chair: H.R. Ganz, Co-Chair: C. Prevedini

| | | | | |
|------|---|--|---------------------------------------|-------|
| 0019 | Burdette, E.G. Howard, S.C. Deatherage, J.H. Goodpasture, D.W. | Behavior Of Prestressed Concrete Piles Supporting Integral Abutments | Underground and foundation structures | 16:30 |
| 0072 | Wu, S. Xu, L. Zhang, X. | Design and Construction of Pile-group Foundation for Main Pylon, Sutong Bridge | | 16:45 |
| 0153 | De Corte, W. Van Bogaert, Ph. De Backer, H. | Effectiveness of post-tensioned roof beams and thrust force compensation applied to an underground structure | | 17:00 |
| 0254 | Sapronov, O. | Establishing of Inter-Repair Intervals for Utility Tunnels with Regard to Sustaining Structures at the Specified Reliability Level | | 17:15 |
| 0377 | Molins, C. Marí, A.R. | In Situ Test of the SFRC Segmental Tunnel Lining of the Subway Line 9 in Barcelona | | 17:30 |
| 0401 | Hegger, J. Ricker, M. | Experimental Investigations on the Punching Behaviour of RC Footings | | 17:45 |
| 0877 | Fenu, L. Madama, G. | Laterally Loaded R/C Bored Piles with Minimum Horizontal Top Displacement | | 18:00 |

SESSION 2.4 – 7 June, 16:30-18:30 – Sala Egitto

Chair: G.L. Balazs, Co-Chair: M. Pecce

| | | | | |
|------|---|--|-------------------------|-------|
| 0039 | Damiani, A. | Two large interconnection structures on the Milan-Bologna High Speed Railway. Design calculation and construction procedures | Design and construction | 16:30 |
| 0105 | Sivaleepunth, C. Niwa, J. Bui, D.K. Tamura, S. Hamada, Y. | Significant Parameters for Evaluating the Tendon Stress of Externally Prestressed Concrete Beams | | 16:45 |
| 0117 | Petrangeli, M.P. Traini, G. Evangelista, L. Della Vedova, M. | The Cable-Stayed Bridge over Po River: Design and Construction | | 17:00 |
| 0960 | Biondini, F. Malerba, C. Malerba, P.G. Mantegazza, G. | Inspection, Monitoring and Structural Repair of the Certosa Cable Stayed Fly Over | | 17:15 |
| 0281 | Tani, M. Nishiyama, M. | Tensile Force Evaluation of Unbonded PT Bars in Precast Concrete Columns | | 17:30 |
| 0512 | Šafář, R. Elbel, J. Štěřba, K. Peřina, J. Duřka, J. Klimeř, P. Podlipný, V. | Railway Viaduct in Prague | | 17:45 |
| 0796 | Furlanetto, G. Ferretti Torricelli, L. Marchiondelli, A. | The New Reno Bridge on the A1 Milan-Naples Motorway | | 18:00 |
| 0975 | Almeida, P.A.O. Stucchi, F.R. Barros de Sá, A. Onishi, M. | Stressing with Real Time Load (SRTL) to Installation the Stay Cable in the Brasilia Bridge | | 18:15 |

SESSION 5.2 – 7 June, 16:30-18:15 – Sala Libia

Chair: A. Ghali, Co-Chair: W. Salvatore

| | | | | |
|------|---|---|---------------------------------|-------|
| 0304 | Murata, H. Niwa, J. Chigira, E. Katagiri, M. | Proposal of Composite PC Members with UFC Web Panel | Composite and hybrid structures | 16:30 |
| 0197 | Tanaka, Y. Musya, H. Fukuura, N. Ooshima, K. | Design of Perfobond Strip Applied for Reactive Powder Concrete Bridge | | 16:45 |
| 0207 | Higashida, N. Yasuzato, T. Horiguchi, M. Shiratani, H. Oshima, K. | Launching Nose with Corrugated Steel Webs and Chords of Ultra High Performance Fiber Reinforced Concrete – Torisaki River Bridge | | 17:00 |
| 0215 | Terada, N. Kamihigashi, Y. Tsumijima, T. Yanai, S. Ikeda, S. | Load-carrying Capacity of the Hybrid Stay-cable Anchor Structure – Experimental Investigations of Yahagigawa Bridge of the New Tomei Expressway | | 17:15 |
| 0261 | Weißbach, M. | Hybrid Sandwich Arches – A Useful Application for Bridges | | 17:30 |
| 0676 | Ansourian, P. Ranzi, G. Bradford, M.A. | Closed-form Solutions for the Time-Dependent Behaviour of Prestressed Composite Beams with Partial Interaction | | 17:45 |
| 0905 | Aoki, k. Nakamura, A. Morohashi, A. Kasuga, A. | Corrugated Steel Web Bridge with Ribs and Struts. Design and Construction of The Katsurashima Viaduct | | 18:00 |

SESSION 6.3 – 7 June, 16:30-18:30 – Sala Algeria

Chair: M. Tandon, Co-Chair: G. Fabbrocino

| | | | | |
|------|---|--|----------------|-------|
| 0194 | Tandon, M. | Small Segments Employed for Flyover of Delhi | Prefabrication | 16:30 |
| 0768 | Cominoli, L. Plizzari, G.A. | SFRC Precast Slabs | | 16:45 |
| 0769 | Cominoli, L. Riva, P. Plizzari, G.A. Failla, C. Manzoni, M. | Precast Panels in Steel Fibre Reinforced Concrete | | 17:00 |
| 0825 | Dharap, V.M. Joshi, G.P. | Prefabrication – Only Solution for Fast Track Construction | | 17:15 |
| 0879 | Antonucci, R. Balducci, F. Castellano, M.G. Donà F. | Pre-casted RC Buildings with Buckling Restrained Braces: the Example of the New Building of the Faculty of Engineering in Ancona | | 17:30 |
| 0945 | Vambersky, J.N.J.A. | Precast Concrete in High-rise Building Structures | | 17:45 |
| 0946 | Bassan, M. Menegotto, M. Moriconi, G. | Precast Structural Concrete with Recycled Aggregates | | 18:00 |
| 0948 | Fernández-Ordóñez, D. | Prefabrication for Affordable Housing | | 18:15 |

SESSION 16.2 – 7 June, 16:30-18:15 – Sala Roma

Chair: P.E. Pinto, Co-Chair: F. Bontempi

| | | | | |
|------|---|--|--|-------|
| 0955 | Klein, J.-F. Bernard, O. | Reliability-Centered Maintenance (RCM): an Efficient Decision Support Tool for Management of Existing Prestressed Concrete Bridges | Safety of concrete structures (new construction, assessment) | 16:30 |
| 0109 | Müllers, I. Vogel, T. | Robustness of Reinforced Concrete Structures Subjected to Column Failure | | 16:45 |
| 0301 | Morikawa, H. Okamoto, S. Kishi, S. | Optimal Strengthening of RC Bridges with Degradation in Safety due to Chloride Induced Deterioration | | 17:00 |
| 0429 | Franchin P. Pinto, P.E. Schotanus, M.IJ. | Probabilistic Assessment of Earthquake Losses and Safety for Existing Structures | | 17:15 |
| 0596 | Masetti, F. Galati, N. Nehil, T. Nanni, A. | In-situ Load Test: a Case Study | | 17:30 |
| 0664 | Allaix, D.L. Carbone, V.I. Mancini, G. | Model Uncertainties Effect Evaluation by Probabilistic Approach | | 17:45 |
| 0909 | Cervenka, V. (Cervenka J.) | Safety Assessment in Non-linear Analysis of Concrete Structures | | 18:00 |

***fib* COMMISSION REPORTS – 7 June, 16:30-18:00 – Sala Italia**

| Session | Speakers |
|------------------------|---------------|
| Reports from | |
| SAG 5: New Model Code | Walraven |
| SAG 2: Short Courses | Balázs |
| SAG 4: Fastenings | Eligehausen |
| Comm. 10: Construction | Van der Horst |

8 June 2006, Thursday

PLENARY 2 – 8 June, 9:00-10:30 – Auditorium

Chair: J.P. Fuzier Co-Chair: E. Cosenza

| | | |
|-------------|---|-------|
| P.E. Pinto | Seismic Assessment of Concrete Bridges | 9:00 |
| M.T. Brotto | Safeguarding Venice and its lagoon: mobile barriers to regulate tides in the lagoon | 9:30 |
| G. Manfredi | Seismic strengthening with advanced materials: present and future perspectives | 10:00 |

SESSION 17.4 - 8 June, 11:00-12:45 – Sala Grecia

Chair: H. Falkner, Co-Chair: M. Contaldo

| | | | | |
|------|---|---|---|-------|
| 0069 | Falkner, H. Henke, V. | Non Destructive Bridge Supervision – Traffic and Dynamic Influences | Monitoring, maintenance, repair, residual life and failures | 11:00 |
| 0127 | Contaldo, M. | Repair of a Viaduct and of an Arch Bridge | | 11:15 |
| 0224 | Randl, N. de Smet, C.A.M. | Strengthening and Repair of Concrete Structures | | 11:30 |
| 0334 | Nakamura, M. Hamada, Y. Tamaki, K. Taniguchi, H. Watanabe, H. | Removal of Deteriorated Concrete of the Prestressed Concrete Girder Damaged by Salt-Attack | | 11:45 |
| 0714 | Brigante, M. | Structural Analysis of Single and Multi-Cracked Concrete Elements: a Deterministic Macroscopic Approach | | 12:00 |
| 0744 | Caterino, N. Iervolino, I. Manfredi, G. Cosenza, E. | Selection of the "Best" Seismic Upgrading Solution for a RC Building by MCDM | | 12:15 |
| 0934 | Kazachok, V. Shilov, A. | The Normative Documents System for Buildings and Their Structures Inspection and for Their Technical State Evaluation in the Republic of Belarus (RB) | | 12:30 |

SESSION 10.11 – 8 June, 11:00-13:00 – Sala Italia

Chair: A. Nanni, Co-Chair: L. Feo

| | | | | |
|------|--|---|---|-------|
| 0029 | Wu, Y. | Improving the Ductility of Reinforced Concrete Members Reinforced with FRP Bars | FRP reinforcement for new and existing structures | 11:00 |
| 0087 | He, Z. Sun, Y. | Experimental Study on Bond Behavior of GFRP Rod in Concrete Subjected to Stress Reversals | | 11:15 |
| 0152 | Al-Sunna, R. Pilakoutas, K. Waldron, P. Guadagnini, M. Al-Hadeed, T. | Deflection of GFRP Reinforced Concrete Beams | | 11:30 |
| 0176 | Stoian, V., Nagy-György, T. Dăescu, A.C. Diaconu, D. Sas, G. | Theoretical and Experimental Study on Prestressed Concrete Beam Support Zone Strengthened with Composites | | 11:45 |
| 0624 | Berardi, V.P. Feo, L. Giordano, A. Ascione, F. | On the Creep Behaviour of CFRP Pultruded Laminates: an Experimental Study | | 12:00 |
| 0763 | Galecki, G. Maerz, N. Nanni, A. Summers, D.A. Casadei, P. | The Use of High Pressure Waterjets in Concrete Substrate Preparation for FRP Applications | | 12:15 |
| 0870 | Boscatto, G. Russo, S. Siviero, E. | The FRP Beams as Reinforcement of Pedestrian Bridge | | 12:30 |
| 0917 | Nad, L. Špernoga, B. | Long-time Behaviour of GFRP Reinforced Concrete Beams | | 12:45 |

SESSION 4.2 – 8 June, 11:00-12:45 – Sala Turchia

Chair: A. van der Horst, Co-Chair: C. Nuti

| | | | | |
|------|--|---|---------------------------------------|-------|
| 0230 | Yokota, H. Iwanami, M. Kato, E. Ito, H. | Shear Capacity of Reinforced Concrete Footings Mixed with Synthetic Short Fiber | Underground and foundation structures | 11:00 |
| 0354 | Maltese, C. Pistolesi, C. Dal Negro, E. | New High Performance Liquid Alkali-Free Accelerators for Wet Sprayed Concrete: a State of the Art about Action Mechanism and Technological Properties | | 11:15 |
| 0395 | Bansal, S. Gupta, V. Kurian, J. | Use of Prestressed Soil Anchors in the Construction of an Underpass in High Water Table Zone | | 11:30 |
| 0454 | Junker, D. | Special Construction Technique for Large Bridge Foundations in Water, Pile Cap Lowering Using Strand Jacking | | 11:45 |
| 0496 | Mazzeo, A.A. | Slurry Piles for Seismic Resistant Structures Foundations | | 12:00 |
| 0541 | Maki, T. Mutsuyoshi, H. | Response Behavior of RC Pile-Soil System Using Finite Element Method | | 12:15 |
| 0783 | Heggade, V.N. Bagasrawala, S.T. | Soil Structure Interaction in Chimney Rafts | | 12:30 |

SESSION 11.1 – 8 June, 11:00-13:00 – Sala Egitto

Chair: F. Seible, Co-Chair: G. Manfredi

| | | | | |
|------|--|---|---|-------|
| 0086 | Cavill, B. Rebentrost, M. | Ductal® – An Ultra-High Performance Material for Resistance to Blasts and Impacts | Blast protection of concrete structures | 11:00 |
| 0256 | Mezzi, M. | The Performance-Based Design of R/C Structures for the Reduction of Blast Damages | | 11:15 |
| 0403 | Mitrofanov, V. | The Theory of Perfect Plasticity as the Elementary Mechanics of a Pseudo-Plastic Ultimate State of Concrete: Bases, Limitations, Practical Aspects, Improving | | 11:30 |
| 0552 | Weerheijm, J. van Deursen, J.R. Wubs, A.J. Rhijnsburger, M.P.M. | Design of a Blast Resistant Tunnel | Blast protection of concrete structures | 11:45 |
| 0553 | Weerheijm, J. Lim, H.S. | Break-up of Concrete Slab under Internal Explosion | | 12:00 |
| 0613 | Cadoni, E. Solomos, G. Albertini, C. | Mechanical Characterization of Concrete at High Strain-rate by a Modified Hopkinson Bar: a Tool in Blast and Impact Structural Assessment and Design | | 12:15 |
| 0816 | Schwarz, S. Yankelevsky, D. Karinski, Y. | Assessment of the Overall Blast-Resistance of Reinforced-Concrete Multistory Buildings | | 12:30 |
| 0906 | Hegemier, G.A. Seible, F. Rodriguez-Nikl, T. Arnett, K. | Blast Mitigation of Critical Infrastructure Components and Systems | | 12:45 |

SESSION 5.3 – 8 June, 11:00-12:45 – Sala Libia

Chair: G. Tadros; Co-Chair: P. Napoli

| | | | | |
|------|--|--|---------------------------------|-------|
| 0093 | Kasuga, A. Kata, K. Nakatsumi, K. Takaki, Y. | New Concept of Composite Bridges | Composite and hybrid structures | 11:00 |
| 0179 | Dipaola, V. Prete, F. Prete, G. | The Elasto-Plastic Behaviour of Encased Composite Beams for Slim Floors in Multi-Storey Buildings | | 11:15 |
| 0200 | Usami, O. Fukuhara, H. Sakamoto, Y. Kamisakoda, K. Yamaguchi, T. | Prestressed Concrete Box-girder Bridge with Corrugated Steel Webs Built by the Pre-connecting Corrugated-web Method: Shigaraki-dairoku and Shigaraki-dainana Bridges (Westbound Lanes) on New Meishin Expressway | | 11:30 |
| 0397 | Lohaus, L. Anders, S. | Static and Fatigue Behaviour of High-Performance Concrete in "Grouted Joints" for Hybrid Structures | | 11:45 |
| 0575 | De Nardin, S. El Debs, A.L.H.C. | Tests on Concrete Filled Steel Tubes under Eccentric Loads | | 12:00 |
| 0672 | De Stefano, M. Polazzi, D. Viti, S. | Steel-Concrete Composite Frame Seismic Response: a Fragility Analysis | | 12:15 |
| 0919 | Bydžovský, J. Khestl, F. | Possibilities in Modification of Cement-Bonded Particleboards | | 12:30 |

SESSION 6.4 – 8 June, 11:00-13:00 – Sala Algeria

Chair: H. Falkner, Co-Chair: G. Fabbrocino

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|------|---|--|----------------|-------|
| 0068 | Falkner, H. Grunert, J.P. | Steel fibre reinforced SCC – A durable and robust construction material | Prefabrication | 11:00 |
| 0423 | Igrec, T. Velan, D. Trogrlic-Uzelac, G. | Use of Prefabricated Concrete Elements in Construction of Railway Bridges in Croatia | | 11:15 |
| 0444 | Belletti, B. Bernardi, P. Gasperi, A. | Some Remarks Concerning the Evaluation of the Bearing Capacity of Thin Walled Prestressed Concrete Roof Elements | | 11:30 |
| 0556 | Dotreppe, J.-C. Coonce, S. Kaiser, F. | The Use of Precast Prestressed Concrete Beams as Continuous Structural Elements in Bridges | | 11:45 |
| 0743 | Gauthier, Y. Montens S. | U Shape Prestressed Concrete Decks for LRT / MRT Viaducts | | 12:00 |
| 0803 | Fabbrocino, G. Magliulo, G. Manfredi, G. | Seismic Response of Existing Precast Industrial Buildings with Poor Member Connections | | 12:15 |
| 0944 | Crisp, B.C. Hughes, S.R. | Structural Precast Concrete in Melbourne, Australia | | 12:30 |
| 0994 | Calvo, R.M.Á. Rucabado, R. Paris, J. Choulli, Y. | Stressing of the Stays by Elongation Method in the Cable Stay Bridge "Las Americas – Uruguay" | 12:45 | |

SESSION 16.3 - 8 June, 11:00-12:30 – Sala Roma

Chair: S. Joglekar, Co-Chair: A. Grimaldi

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|------|---|--|--|-------|
| 0059 | Holicky, M. Markova, J. | Safety of Concrete Structures in accordance with Eurocodes | Safety of concrete structures (new construction, assessment) | 11:00 |
| 0159 | Jang, J.B. Suh, Y.P. | The Development of Numerical Analysis Model to Evaluate the Shear Capacity of Cast-In-Place Anchor in Nuclear Power Plant | | 11:15 |
| 0160 | Watanabe, F. Omika, Y. Nagao, N. Tanaka, K. Araki, T. | Seismic Strengthening by External Cable-stayed System | | 11:30 |
| 0473 | Palmisano, F. Rausa, P. Vitone, A. | Use of Catenary Action of Reinforcement to Prevent Progressive Collapse in R. C. Buildings | | 11:45 |
| 0489 | Ramos, A. Lúcio, V. | Safety on Punching of Prestressed Flat Slabs | | 12:00 |
| 0597 | Nehil, T.E. Nanni, A. Masetti, F. | Test Load Magnitude and Acceptance Criteria for Strength Evaluation by Means of Load Testing: Current Recommendations of American Concrete Institute Committee 437 – Strength Evaluation | | 12:15 |

SESSION 12.1 – 8 June, 11:00-13:00 – Sala Albania

Chair: L. Taerwe, Co-Chair: P. Gambarova

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|------|--|--|---|-------|
| 0443 | Liu, X. Ye, G. De Schutter, G. Taerwe, L. Yuan, Y. | Effects of Polypropylene Fibers on Microstructure and Permeability of Self-Compacting Cement Paste at Elevated Temperature | Response of concrete structures to high temperatures and fire | 11:00 |
| 0610 | Matthews, S. | Whole-building Behaviour: Full-scale Testing and Modelling of the Cardington European Concrete Building (ECB) | | 11:15 |
| 0639 | Bamonte, P. Gambarova, P.G. Gorla, A. Niglia, A. | Residual Capacity of Undercut Fasteners Installed in Thermally-Damaged Concrete | | 11:30 |
| 0746 | Taerwe, L. Poppe, A.-M. Annerel, E. Vandeveld, P. | Structural Assessment of a Pretensioned Concrete Girder after Fire Exposure | | 11:45 |
| 0777 | Breccolotti, M. Materazzi, A.L. Venanzi, I. | Full Scale Investigations on the Fire Performance Of HPLWC Hollow Core Slabs | | 12:00 |
| 0864 | Bamonte, P. Gambarova, P.G. Cangiano, S. | Thermal and Mechanical Characterization of a High-Performance Micro-Concrete | | 12:15 |
| 0872 | Mangoni, E. Spinelli, P. Benedetti, A. | R/C Structures Exposed to Fire: Damage Assessment and Efficient Structural Repairing with FRP | | 12:30 |
| 0984 | Fellinger, J.H.H. Breunese, A.J. Walraven, J.C. | Constitutive Model for Fire Exposed Concrete in FE Analyses | | 12:45 |

CLOSING CEREMONY – 8 June, 14:30-16:00

Detailed program will be available at reception desk, including summary and outlook to future events: Dubrovnik 2007, Amsterdam 2008 and Washington 2010.