# Detailed technical program

## MONDAY 16 JUNE 2025

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| *8:00-9:00* | *Registration desk & Coffee (Méditerranée Space)* | | | | | | |
| | **Amphitheater Antipolis** | | | | | | |
| 9:00-11:00 | **Opening ceremony**<br>***Welcome from conference chairs, official address from Antibes mayor,***<br>***fib president address, fib fellows 2025 presentation, fib Medal Recipients 2025, fib Honorary Member 2025***<br>**AAYE ceremony including a tribute to Jean Muller by Claude Le Quéré, AFGC President** | | | | | | |
| 11:00-11:30 | *Coffee break & Exhibition (Gould Space)* | | | | | | |
| 11:30-12:30 | **Keynotes – Session Chair Iria Doniak, *fib* President** | | | | | | |
| 11:30-12:00 | **Keynote 1 - VN Heggade: Design and Construction of Bridges in India: lessons for practice to safe design** | | | | | | |
| 12:00-12:30 | **Keynote 2 - Kefei Li: Sulfate attack on structural concretes: from microscopic mechanisms to engineering modeling** | | | | | | |
| 12:30-14:00 | *Lunch (Gould Space)* | | | | | | |
| 14:00-15:15 | **Parallel Session 1** | | | | | | |
| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 26 (1/3)**<br>**Climate-friendly Transition of the Concrete Construction Industry: Challenges and Possibilities**<br>**Chairs Norbert Randl & Giuliana Somma** | **SPECIAL SESSION 5**<br>**Probabilistic Reliability Assessment of Existing Concrete Structures in Engineering Practice**<br>**Chair Miroslav Sykora** | **SPECIAL SESSION 4**<br>**Pre-fabricated shallow floors**<br>**Chair Wit Derkowski** | **SPECIAL SESSION 7**<br>**Material-appropriate construction with carbon-reinforced concrete**<br>**Chairs Steffen Marx** | **Parallel Session 1a**<br>**Numerical modelling**<br>**Chair Walter Kaufmann** | **Parallel Session 1b**<br>**Monitoring (1/2)**<br>**Chair Toshiaki Mizobuchi** | **Parallel Session 1c**<br>**Prestressing**<br>**Chair Tor Ole Olsen** |
| 14:00-14:15 | **Rice Husk Ash: is it a good substitute for cement in concrete?**<br>Giuliana Somma, E Runcio | **Structural Assessment of Prestressed Bridge Half-Joint Zones Using Global Safety Format and Continuous Monitoring**<br>Dario La Mazza, Gianni Croce, Paola Darò, Lavinia Coraci, Giuseppe Mancini | **Prefabricated shallow floors : history, present and future**<br>Jan Bujnak, Simo Peltonen | **A novel technique using EBR Side Extended (EBRSE) to delay FRP laminate debonding in strengthened concrete structures**<br>Mehdi Aghabagloo, Laura Carreras, Cristina Barris, Alba Codina, Marta Baena | **Training and Integrating a Machine-Learning-Based Shell Element in Reinforced Concrete Simulations**<br>Vera Balmer, Michael Anton Kraus, Stelian Coros, Walter Kaufmann | **Data-based bridge maintenance Transforming bridge inspections to performance monitoring**<br>Hitoshi Ito, Toshiaki Mizobuchi | **Bond behavior of prestressing strands with large strand diameters in pretensioned concrete**<br>Dominik Wrona, Annkathrin Sinning, Martin Claßen |
| 14:15-14:30 | **New cements: a look at the future of the construction sector for an ecological transition**<br>Edoardo Runcio, Giuliana Somma | **Comparison of approaches for determining global safety factors in NLNA of RC members failing in shear**<br>Diego Gino | **Shear resistance of prestressed hollow core slabs in shallow floors**<br>Matti Pajari | **Automated Robotic Deposition of Material-Appropriate Reinforcement Structures Inspired by Peltate Leaf Fibers**<br>Yue Zheng Wen, Annabell Rjosk, Danny Friese, Florian Schmidt, Johannes Mersch, Christoph Neinhuis, Thea Lautenschläger, Chokri Cherif | **Numerical modelling of out-of-plane buckling of reinforced concrete walls under monotonic loading**<br>Nathan Deleschaux, David Ruggiero | **Rupture of external prestressing tendons injected with cement grout. New monitoring method from the measure of their deformations**<br>Nicolas Bessoule, Christophe Carde, Bernard Tonnoir, Michel Virlogeux, Ivica Zivanovic | **Experimental evaluation of the prestressing force transmission length in the beam constructed from lightweight aggregate concrete, pretensioned with steel prestressing strand of 15.7 mm diameter**<br>Łukasz Ślaga, Andrzej Seruga |
| 14:30-14:45 | **Finding carbon and cost efficiencies in the design of RC slabs made from high early strength concrete**<br>Daniel Snodgrass, David Ruggiero | **Investigating the calibration potential of load partial factors in the fib Model Code**<br>Ramon Hingorani, Jochen Köhler, Miroslav Sykora | **Behaviour of shallow floors in fire situation**<br>Mikko Malaska, Salla-Mari West | **Crack analysis in an in-situ micro-tomography tension test of a carbon-reinforced specimen**<br>Frank Liebold, Tobias Neef, Bindusara Nagathihalli Lokesh, Tobias Fritsch, Giovanni Bruno, Viktor Mechtcherine, Hans-Gerd Maas | **The effect of loading and support condition on the shear resistance of reinforced concrete beams with low shear reinforcement ratio**<br>Yasar Hanifi Gedik, Nima Kian, Nguyen Duc Tung | **Case study for massive monitoring data analysis on concrete port infrastructures**<br>Pierre Leflour, Jorge Semiao, Patrick Lézin, Mahdi KHADRA, François-Baptiste Cartiaux | **Experimental evaluation of the steel prestressing strand development length in the beam constructed from lightweight aggregate concrete**<br>Łukasz Ślaga, Andrzej Seruga, Marcin Midro |
| 14:45-15:00 | **Three-Dimensional Topology Optimization of RC Slabs: Integrating Serviceability and Manufacturing Constraints**<br>Ahmad Majdouba, David Ruggiero | **Understanding existing barriers to consistent decision making on reuse**<br>Peter Tanner, Carlos Lara, David Sanz | **Steel-concrete shear connection in composite structures: a key structural component for shallow floors**<br>Jean-François Demonceau, Oliver Beckmann, Simo Peltonen | **Modeling dowel action in carbon reinforced concrete with CFRP grids**<br>Eduarda Dilkin, Sven Bosbach, Martin Classen | **Unified Finite Element Limit Analysis for reinforced concrete**<br>Peter Noe Poulsen, John Forbes Olesen | **New concept for sensor-based bridge inspections**<br>Alois Vorwagner, Vazul Boros, Maciej Kwapisz, Lienhart Werner, Dominik Prammer | **Internal forces in the anchorage zone reinforcement – analytical models vs measurements**<br>Hugo Raymond, Sylwia Schoenowitz-Zuradzka, Piotr Gwozdziewicz |
| 15:00-15:15 | **Sustainability-centred decision-making for interventions on existing concrete bridges**<br>Brian Brongers, Agnieszka Bigaj-van Vliet | **Probabilistic Assessment of Cooling Towers Under Carbonation-Induced Corrosion Using a Categorical Boosting Machine Learning Model**<br>Lenganji Simwanda, Miroslav Sykora | **Extending the Lifespan of Building Structures and Reducing its Environmental Impact**<br>Ronald Klein-Holte | **Influence of transversal rovings' spacing on the bond behaviour of chemically-prestressed carbon-textile reinforced concrete plates**<br>Mohammed Dhahir | **Analysis and simulation with a CFD tool of self-compacting concrete with crushed wind turbine blade**<br>Manuel Hernando-Revenga, Víctor Revilla-Cuesta, Javier Manso-Morato, Flora Faleschini, José T. San-José, Vanesa Ortega-López | **Evaluation of damage in concrete bridges through non-modal dynamic parameters**<br>Abdou Dia, Tuyen Viet Nguyen, Nisrine Makhoul | **Finite element modelling of post-tensioned beams with grout injection defects**<br>Marialorenza Vescovi, Daniele Ferretti, Beatrice Belletti |

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| **15:15-15:45** | ***Coffee break & Exhibition (Gould Space)*** | | | | | | |
| **15:45-17:00** | **Parallel Session 2** | | | | | | |
| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 26 (2/3)**<br>**Climate-friendly Transition of the Concrete Construction Industry: Challenges and Possibilities**<br>**Chairs Norbert Randl & Giuliana Somma** | **SPECIAL SESSION 23**<br>**Performance-based approach to the durability of concrete structures: Main results of the French PerfDub project**<br>**Chairs Gilles Escadeillas, François Cussigh & Bruno Godart** | **SPECIAL SESSION 8 (1/2)**<br>**Material components and manufacturing techniques for non-metallic reinforced concrete**<br>**Chair Rostislav Chudoba** | **SPECIAL SESSION 11**<br>**Robustness assessment of structures and infrastructures**<br>**Chairs Beatrice Belletti, Simone Ravasini, Robby Caspeele & Fulvio Parisi** | **Session Young Members Group (1/2)** | **Parallel Session 2a**<br>**Probabilistic analysis - Chair Alex Brodsky** | **Parallel Session 2b**<br>**GFRP**<br>**Chair Giovanni Plizzari** |
| **15:45-16:00** | **Durability aspects in the evaluation of carbon footprint in low-rise and high-rise buildings**<br>Alessandro P. Fantilli, Zahra Rajabi, Fabrizio Demaria, Fulvio Canonico | **Context and introduction of the PERFDUB project, François** Cussigh, Gilles Escadeillas, Didier Brazillier | **Biaxial tensile tests on carbon-reinforced concrete**<br>Jonathan Schmidt, Maximilian Weiß, Iurie Curosu, Birgit Beckmann, Steffen Marx, Manfred Curbach | **Reliability evaluation of the robustness of reinforced concrete frames considering different failure scenarios**<br>Elena Miceli, Diego Gino, Paolo Castaldo | | **Probabilistic analysis of corrosion-induced cover delamination in reinforced concrete structures**<br>Andreas Dekeyser, Els Verstrynge, Roman Wan-Wendner, Wouter Botte, Robby Caspeele | **Detailed evaluation of GFRP mesh mechanical properties for better structural integrity**<br>Elhem Ghorbel, Gláucia Dalfré, Amanda Mazzú |
| **16:00-16:15** | **Sustainable recycling of non-hazardous construction and demolition waste in self-compacting concrete for construction**<br>Haruna Ibrahim, Elhem Ghorbel, Zahid Alfi Mohammad, Obaidurrahman SAFI, George Wardeh | **Evaluation of concrete performance: from improving existing durability tests to the definition of new protocols**<br>Emmanuel Rozière, Philippe Turcry, Franck Cassagnabere, Philippe Fonollosa | **Combined impregnation and straightening of woven basalt textile reinforcement for cement composites: flexural behaviour**<br>Gilles Vandereecken, Tine Tysmans | **Nonlinear Response and Structural Robustness of RC Framed Buildings to Differential Soil Settlements**<br>Federica Rauseo, Fulvio Parisi | | **A Modified Model to Quantify Cracking Localization in Beams**<br>Yuri Karinski, Avraham Dancygier | **Mechanical and environmental behaviour of concrete beams with hybrid GFRP and steel reinforcement**<br>José J. Ortega, Lucía Garijo, Adriano Reggia, Giovanni Plizzari |
| **16:15-16:30** | **A framework for the preliminary design of structures and structural interventions taking into account the environmental performance**<br>Edoardo Rossi, Giorgio Mattarollo, Tamás Mészöly, Norbert Randl | **Analysis of data obtained on existing structures during the PerfDub project**<br>Bruno Godart, Michael Dierkens | **A Novel Manufacturing Process for Precise Honeycomb Shaping of Extruded Carbon-Reinforced Concrete Elements**<br>Christian Bertram, Jakob Beckers, Olivier Reinertz, Cynthia Morales Cruz, Thomas Matschei, Katharina Schmitz | **Numerical study on settlement-induced damage to RC frames: the effect of foundations and ground stiffness**<br>Belletti Beatrice, Elena Michelini, Sławomir Dudziak, Mauro Pappalardo, Simone Ravasini | | **Examining Bridge Pile Damage Probability in Liquefiable and Non-liquefiable Ground**<br>Golshid Shid, Ali Noorzad | **Investigations on the Bending Behavior of High Performance Aerogel Concrete with GFRP Reinforcement**<br>Torsten Welsch, Martina Schnellenbach-Held |
| **16:30-16:45** | **Comparative study on tensile behavior of textile reinforced concrete with short steel and basalt fibres**<br>Giorgio Mattarollo, Daniel Gergov, Norbert Randl, Tamás Mészöly, Edoardo Rossi | **PerfDub project - Data Base on concretes and its exploitation**<br>Jonathan Mai-Nhu, François Cussigh, Philippe Turcry, Emmanuel Roziere, Michael Dierkens, Gabriel Pham, François Toutlemonde, Patrick Rougeau | **Material-Minimised Carbon Reinforced Concrete for Multi-dimensional Tessellations in Building Applications**<br>Linda Debora Cortes Satizabal, Sascha Stüttgen, Meike Weiß, Kira Heins, Alice C. Niemeyer, Daniel Robertz, Thomas Gries | **The influence of nonlinear modeling on robustness quantification: a case study of bridges**<br>Matteo Colombo, Paolo Martinelli, Pedro Jose Verbel Arroyo | | **Dynamic Simulation of Concrete Structures Using an Extended RBSM Considering Large Rotation and Fragment Collision**<br>Kimura Kanto, Yamamoto Yoshihito | **Mechanical and microstructural characterization of straight and bent thermoplastic GFRP reinforcing bars**<br>Maha Fodda, Sylvain Chataigner, Ludwig Battais, Benjamin Terrade, Marc Quiertant, Arnaud Rolland, Karim Benzarti |
| **16:45-17:00** | **Life Cycle Assessment and Structural Design of Low Carbon Concrete Beams Containing High Percentages of Recycled Materials**<br>Buddhi Daraniyagala Arachchilage, Tsz Yeung Tsang, Liam Butler | **PerfDub project – Definition of performance thresholds according to exposure classes and methodology**<br>Myriam Carcasses | **Flexibility and Precision: Manufacturing concept for folded tessellated lightweight carbon-reinforced concrete slabs**<br>Carlos G Gomes, Christian Bertram, Olivier Reinertz, Katharina Schmitz, Rostislav Chudoba | **Robustness Assessment of an Existing RC Frame Building Subjected to Differential Settlements using NLFEA**<br>Elena Michelini, Sławomir Dudziak, Beatrice Belletti, Simone Ravasini | | **Strut-and-Tie Model Analysis of Prestress Transfer in Concrete Beams with Pre-Tensioned CFRP Strands**<br>Maria Serrano Mesa, Sebastian Heberling, Lea Maria Wilmsen, Mike Schlaich | **Investigation of the bond behaviour of non-metallic reinforcing bars in low-clinker concretes**<br>Paul Heber, Oliver Sikorski, Amer Suliman, Paul-Martin Großkopff, Birgit Beckmann, Steffen Marx |

| 17:00-18:15 | Parallel Session 3 | | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 26 (3/3)**<br>**Climate-friendly Transition of the Concrete Construction Industry: Challenges and Possibilities**<br>**Chairs Norbert Randl & Giuliana Somma** | **SPECIAL SESSION 12**<br>**On-going durability and corrosion studies on the specimens from the PN PERFDUB project**<br>**Chair Véronique Bouteiller** | **SPECIAL SESSION 8 (2/2)**<br>**Material components and manufacturing techniques for non-metallic reinforced concrete**<br>**Chair Mohammed Dhahir** | **SPECIAL SESSION 13**<br>**Advanced monitoring techniques for concrete structures**<br>**Chairs Numa Bertola & Alfred Strauss** | **Session Young Members Group (1/2)** | **Parallel Session 3a**<br>**Structural design (1/4)**<br>**Chair Hugo Corres** | **Parallel Session 3b**<br>**Innovative materials**<br>**Chair Gyorgy Balazs** |
| **17:00-17:15** | **Experimental investigations to identify challenges in design of prefabricated concrete structures for disassembly and reuse**<br>Ramon Hingorani, Tore Myrland Jensen, Petra Rüther, Vegard Alme Ulstein | **On-going durability and corrosion studies on the metric specimens cast as part of the PN PerfDuB and exposed to natural ageing sites**<br>François Cussigh , Véronique Bouteiller , Jonathan Mai-Nhu, Philippe Turcry, Elisabeth Marie-Victoire | **Tensile tests of recycled carbon fibers for carbon-reinforced concrete applications**<br>Enrico Baumgärtel, Md Sazzadur Rahman, Marcel Zeisberg, Jens Bachmann, Philipp Karsten Niebel, Birgit Beckmann, Steffen Marx | **Distributed Humidity Sensing for concrete structures**<br>Johannes Wimmer, Stefan Küttenbaum, Thomas Braml | | **Holistic Sustainability Analysis of Wrapped Textile-Reinforced Concrete Using the Example of a Pump Sump**<br>Fabian Kufner, Yannick Göttler, Petra Rucker-Gramm, Michael Horstmann | **Investigation of electric curing effect of potassium activated fly ash and slag based geopolymer mortars**<br>Mazem Yılmaz, Mücteba Uysal |
| **17:15-17:30** | **A framework for quantifying the benefits of robot-assisted deconstruction and reuse of structural concrete components**<br>Ramon Hingorani, Katarzyna Ostapska, Klodian Gradeci, Petra Rüther | **Durability performance of several concrete compositions including low carbon footprint concretes**<br>Jonathan Mai-Nhu, Philippe Turcry, Véronique Bouteiller, Elisabeth Marie-Victoire, Pauline Barthelemy, Myriam Bouichou, François Cussigh | **Low carbon footprint textiles for concrete reinforcement**<br>Alva Peled, Adan Wattad, Rotem Haik | **Concrete bridge monitoring through spatially distributed fibre optic sensing**<br>Numa Bertola, Francesco Fabbricatore | | **Experimental study on anchorage performance of a new fastening system for wood-frame façade connected to a concrete structure**<br>Alice Le Berder, Hugues Somja, Tuan-Anh Nguyen, Van Han Tran, Clémence Nicollet | **Limits and impacts of non-hazardous building demolition waste on mortar microstructure and mechanical properties**<br>Annelise Cousture, Haruna Ibrahim, Obaidurrahman Safi, Elhem Ghorbel |
| **17:30-17:45** | **A Performance-based Framework for Selecting Sustainable Concrete Solutions in Chloride-Exposed Environments**<br>Fabrizio Moro, Sylvia Kessler | **3-years results on the corrosion of PerfDuB specimens exposed to chlorides on natural ageing site**<br>Elisabeth Marie-Victoire, Myriam Bouichou, Jean Ducasse-Lapeyrusse, Véronique Bouteiller, Amandine Bonnet, Victor Da-Silva, Philippe Turcry, Jonathan Mai-Nhu, Pauline Barthelemy, François Cussigh, Sandrine Chanut | **Interphases with layered organic/inorganic structures for increased toughness of carbon fiber reinforced concrete composites**<br>Toni Utech, Tobias Neef, Lissy Flechsig, Viktor Mechtcherine, Christina Scheffler, | **Deep learning model for automated damage detection of con-crete bridges**<br>Ali Siddique, Vittorio Prodomo, Alfredo Valerij Laino, Antonio Bilotta | | **Crack Development in Looped Wire Rope Connections**<br>Torkil Veyhe, Søren G. Hansen, Henrik B. Jørgensen | **Evaluating model errors using EC2 to design alkali-activated reinforced concrete beams**<br>Daniele Ferretti, Erica Lenticchia, Marialorenza Vescovi |
| **17:45-18:00** | **Carbonation Resistance of Low-Carbon Concrete Incorporating Limestone Filler and Ultrafine Cementitious Materials**<br>Mouna Boumaaza, Thomas Holder, François Cussigh, Lionel Linger | **3-year exposition of PerfDuB specimens on a tidal zone: comparison between model predictions and experimental results**<br>Philippe Turcry, François Cussigh, Véronique Bouteiller, Elisabeth Marie-Victoire, Myriam Bouichou, Jean Ducasse-Lapeyrusse, Jonathan Mai-Nhu, Sandrine Chanut, Amandine Bonnet, Victor Da-Silva | **Electrochemical recovery of carbon fibres by acetic acid under mild conditions**<br>Stefan Röher, Julius Scheel, Alexandra Apel, Marco Liebscher, Inez Weidinger | **Analyses of a structural health monitoring system on bridges through AI approaches**<br>Antonio Bilotta, Ivan Di Cristinzi, Andrea Pollastro, Maria Rosaria Pecce | | **Development of Reinforcement Structure in RC Segment Joints for Shield Tunnels under High Axial Force Conditions**<br>Akinori Sato, Takahisa Fukushima, Yuma Okuyama, Nishiyama Yoshiki, Kaoru Matsuoka, Ryouichi Shimizu, Kazuhiro Kobayashi | **Carbonated water and MgO for improved performance of 3D concrete printing**<br>Pathmanathan Rajeev, Kirushnapillai Kopitha, Jay Sanjayan |
| **18:00-18:15** | **Design and construction of FRC tunnel precast segment with fibre enabled carbon footprint reduction**<br>Benoit De Rivaz | **3-year results on the corrosion of PerfDuB specimens exposed to carbonation on natural ageing sites**<br>Véronique Bouteiller, Amandine Bonnet, Victor Da-Silva, Elisabeth Marie-Victoire, Myriam Bouichou, Jean Ducasse-Lapeyrusse, Philippe Turcry, Jonathan Mai-Nhu, François Cussigh, Sandrine Chanut | **Impact of clay mineralogy on the rheological behavior of carbon reinforced concrete with sustainable binders**<br>Silvia Reißig, Michael Wenzel, Selina Vaculik, Tobias Neef, Cynthia Moralez-Cruz, Antonia Etscher, Thomas Matschei, Viktor Mechtcherine | **Sustainable and Resilient Infrastructure Vulnerabilities Considering Climate Change**<br>Nisrine Makhoul | | **Form-Finding Techniques for a Shell Reading Pavilion**<br>Carolina J. T. P. Regly, Nicolas J. Vianna, Samira F. Mistro, Vanessa O.V. Zaccarias, Felipe C. Melachos, Thomaz Buttignol (video) | **Future reinforcement for concrete**<br>Balazs Gyorgy |
| **18:15-20:00** | ***Presentation of the proposals of the YMG (Amphitheater Antipolis) then cocktail for the Young Members Group (Méditerranée Space)*** | | | | | | |

# TUESDAY 17 JUNE 2025

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| ***8:00-8:30*** | ***Registration desk & Coffee (Méditerranée Space)*** | | | | | |
| | **Amphitheater Antipolis** | | | | | |
| **8:30-9:30** | **Keynotes - Chair Carmen Andrade** | | | | | |
| 8:30-9:00 | **Keynote 3 - Patrick Rougeau & Véronique Bouteiller: Performance-based approach, durability of low carbon concrete and corrosion: contributions of the French national project PERFDUB and the DECADES and DECISION scientific groups** | | | | | |
| 9:00-9:30 | **Keynote 4 - Stephan Schumacher & Thierry Lassabatère: Concrete for Cigéo: How to design the civil engineering for long-term geological disposal of radioactive waste?** | | | | | |
| 9:30-10:00 | ***Coffee break & Exhibition (Gould Space)*** | | | | | |
| **10:00-11:15** | **Parallel Session 4** | | | | | |
| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** |
| | **SPECIAL SESSION 6 (1/2)<br>Physical based modelling of assessment of existing concrete infrastructure<br>Chairs Yuguang Yang & Mihailov Boyan** | **SPECIAL SESSION 16 (1/2)<br>Prefabricated Concrete Modular Buildings<br>Chairs Eduardo Júlio & André Furtado** | **SPECIAL SESSION 10 (1/2)<br>Retrofitting and strengthening of existing structures using non-metallic reinforced concrete<br>Chair Alexander Schumann** | **SPECIAL SESSION 19 (1/2)<br>Challenges and novel insights into the time-dependent behaviour of concrete<br>Chair Roman Wan-Wendner** | **Parallel Session 4a<br>Low carbon concretes<br>Chair Laury Barnes** | **Parallel Session 4b<br>Construction methods and management (1/2)<br>Chair Johann Kolleger** |
| **10:00-10:15** | **Experimental study on the shear capacity of reinforced concrete slabs with skewness**<br>Jiandong Lu, Eva Lantsoght, Yuguang Yang, Max Hendriks | **Prefabricated Concrete Modular Buildings: a renewed idea to cope with current housing challenges**<br>André Furtado, Eduardo Júlio | **Strengthening of Reinforced Concrete Columns Using Recycled Polyethylene Terephthalate Fibers: A Preliminary Numerical Study**<br>Korhan Deniz Dalgic, Uveys Gozun, Birkan Simsek, Medine Ispir, Alper Ilki | **Creep of concrete structures: what have we learned since Freyssinet and the Veurdre bridge and what do we need to improve in the future?**<br>Jean Michel Torrenti | **Development of C25 Low Carbon Concrete: Mechanical and Durability Behaviors**<br>Suliman Khan, Safat Al-Deen, Chi King Lee | **Cyclic testing of precast column-to-foundation joints equipped with a novel ductile mechanical connection system**<br>Bruno Dal Lago, Enes Krasniqi, Marko Bartolac, Milot Muhaxheri, Enrico Anselmo Papa, Paola Costa |
| **10:15-10:30** | **Shear Assessment of Precast composite girders using FprEN 1992-1 based shear expressions**<br>Mohammed Ibrahim, Marco Roosen, Max Hendriks, Yuguang Yang | **Lean-clinker mortars with recycled cement towards the production of low-carbon concrete for modular construction**<br>Martim Nabais, José Alexandre Bogas, Ricardo Carmo, Hugo Costa, Ângela Oliveira | **Crack Formation Behavior of Carbon-Reinforced Concrete for State II Sealing Layers**<br>Fabian Kufner, Michael Horstmann, Petra Rucker-Gramm, Jörg Reymendt, Jens Heckenbach, Rolf Scharmann | **Analysis of drying shrinkage and creep using a re-imbibition phase of concrete**<br>Robin Cartier, Hugo Cagnon, Thierry Vidal, Jerome Verdier | **Low carbon sprayed concrete based on high filler content**<br>Yvan Thiebaut, Massimo Stefanoni, Matthieu Jeusset, Paul-Alexandre Franco, Davide Michelis, Justin Denizeaux, Lionel Linger, Carlo Pistolesi, Enrico Dal Negro | **LT Bridge – Addressing Modern Demands in Bridge Engineering**<br>Franz Untermarzoner, Johann Kollegger, Patrick Huber |
| **10:30-10:45** | **Assessment of Residual Shear Capacity of Deep Beams based Solely on Site Measurements**<br>Boyan Mihaylov, Eissa Fathalla, Alexandru Trandafir | **Combined structural-energy optimization of precast concrete walls for modular buildings**<br>Seyedsajjad Hosseini, Aléxia Brandão, André Furtado, Romain Sousa, Ricardo Carmo, Mariana Nunes, Pedro Rio, Eduardo Júlio | **Strengthening of Historical Low-Strength Concrete Structures with Carbon-Reinforced Concrete – Large Component Tests**<br>Elisabeth Schütze, Alexander Schumann, Farhat Lamisa | **Concrete creep prediction – Cyclic hygric and mechanical exposures cannot be neglected**<br>Michael Haist, Anna Lena Podhajecky | **Evolution of permeability of Low Carbon Ternary Blended Cements – a 180 day study**<br>Berjees Qadr, Nicolas Gay, Georges AOUAD, Matthieu Briffaut | **Innovative Approach for Submerged Floating Road Tubes**<br>Silvino Pompeu-Santos |
| **10:45-11:00** | **Behaviour of existing post-tensioned concrete bridge girders with bonded curved tendons**<br>Alexandru Trandafir, Dan Dragan, Rik Steensels, Hervé Degée, Boyan Mihaylov | **Performance Analysis of Dry Connections in Precast Walls Under Cyclic Tension Loading**<br>Ricardo Martins, Ricardo Carmo, Hugo Costa, André Furtado, Romain Sousa, Eduardo Júlio | **Concrete structures strengthened with carbon-reinforced concrete under service loads**<br>David Sandmann, Carolin Würgau, Steffen Marx | **Autogenous Shrinkage Model for Concrete Considering the Combined Effects of Mineral**<br>Admixtures, Huan-Chi Ma, Yue Geng, Giovanni Di Luzio, Yu-Yin Wang | **Mechanical and structural behavior of low-carbon concrete based on a clinker-free binder containing metakaolin**<br>Tom Rigaud, Zakaria Djamai, Gabriel Samson, Raphaël Bucher, Christian CREMONA, Martin CYR | **Technical management of horizontal reaction force adjustment work and section force improvement by jacking down method in PC multi-span continuous rigid frame bridge - Construction Of Kinosaki Ohashi Bridge-**<br>Toshiaki Fujiwara, Takashi Okubo, Hayami Yanagida, Noritake Hirata, Tomohiro Shibuya, Takahiro Inagaki |
| **11:00-11:15** | | **Seismic behaviour of a 6-storey precast concrete modular building: Performance assessment and parametric study**<br>André Furtado, Romain Sousa, Ricardo Carmo, Eduardo Júlio | **Synergy between silica fume and crystalline admixtures on the self-healing capacity of Textile-Reinforced Mortars**<br>Niki Trochoutsou, Liberato Ferrara | **Refined analysis of reinforced concrete structures subjected to external loads and imposed deformations**<br>Alejandro Perez Caldentey | **Mechanical behaviour and deformations of low-carbon concretes with limestone, bast furnace slag or metakaolin**<br>Suzanne LE THIERRY, Thomas Duval, François Jacquemot | **Development of Replacement Technology for UFC Flat Decks and HSPJ Decks and Its Application to the Kobe Route Renewal Project**<br>Hajime Aoi, Sota Sasawaki, Tomoaki Hasegawa and Yasuyuki Iwa-sato |

| 11:15-12:30 | Parallel Session 5 | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 6 (2/2) Physical based modelling of assessment of existing concrete infrastructure**<br>**Chairs Yuguang Yang & Mihailov Boyan** | **SPECIAL SESSION 16 (2/2) Prefabricated Concrete Modular Buildings**<br>**Chairs Eduardo Júlio & André Furtado** | **SPECIAL SESSION 10 (2/2) Retrofitting and strengthening of existing structures using non-metallic reinforced concrete Chair David Sandmann** | **SPECIAL SESSION 19 (2/2) Challenges and novel insights into the time-dependent behaviour of concrete**<br>**Chair Thierry Vidal** | **Parallel Session 5a Structural design (2/4)**<br>**Chair Enrico Baumgartel** | **Parallel Session 5b Recycling (1/2)**<br>**Chair Elhem Ghorbel** |
| **11:15-11:30** | **Numerical modelling of RC dapped-end beams with different reinforcement layouts**<br>Giovanni Menichini, Maurizio Orlando, Anssi Laaksonen | **Fire behaviour of modular reinforced concrete buildings – numerical simulation of the thermomechanical response**<br>Eloísa Castilho, João Pedro Firmo | **Standardising Bond Characterisation Method for Carbon-Reinforced Concrete in Strengthening Applications: Interlaboratory lap-splice tensile tests** Duy Minh Phuong Vo, Nazmul Hasan, Elisabeth Schütze, Alexander Schumann, Miriam Melzer, Jan Philip Schulze-Ardey, Jan Bielak, Fabian Thems, Cynthia Morales Cruz, Vitalii Kryzhanovskyi, Christopher Taube | **Temperature impact on the mechanical properties of high-strength concrete** Shamseldin Abdo, Quoc Tri Phung, Robby Caspeele, Suresh Seetharam, Roman Wan-Wendner | **Generative design of reinforced concrete structures incorporating constructability aspects**<br>Karin L. Yu, Eleni Chatzi, Walter Kaufmann | **Recycled sand for 3D-printed Strain Hardening Cementitious Composite: A Review of Recent Developments**<br>Laura Sofia Gomez Jaramillo, Mladena Lukovic, Branko Savija, Wen Zhou |
| **11:30-11:45** | **Using acoustic emission monitoring to assess the reliability of existing concrete structures: a case study**<br>Fengqiao Zhang | **Structural assessment of bolted connections under shear monotonic loading developed for precast concrete walls** Ricardo Martins, Ricardo Carmo, Hugo Costa, André Furtado, Romain Sousa, Eduardo Júlio | **Seismic behaviour at Ultimate Limit State of RC structures retrofitted with GFRP rebars** Mattia Mairone, Raffaele Tarantini, Giuseppe Andrea Ferro, Davide Masera, Mauro Corrado | **Experimental study on the compressive sustained load strength of concrete with high age at loading** Jonas Geng, Robin Mecka, Freek Bos, Oliver Fischer | **Numerical application of a novel method to determine composite action proving load-dependent behaviour of the interface**<br>Jules Smits, Stijn François, Ann Van Gysel, Tom Molkens | **Bond behavior of recycled aggregate concrete with steel rebars**<br>Annkathrin Sinning, Dominik Wrona, Josef Hegger, Martin Classen |
| **11:45-12:00** | **Reconstructing As-Built CAD Drawings for Existing Buildings from Laser Scanning Data**<br>Fengyu Zhang, Qingzhao Kong, Cheng Yuan, Peizhen Li | **Experimental characterization of the monotonic and cyclic behaviour of a new dry-horizontal joint between precast walls**<br>Aléxia Brandão, Sajjad Hosseini, André Furtado, Ricardo Carmo, Romain Sousa, Yllnor Tmava, Wanchai Detphan, Wit Derkowski, Eduardo Júlio | **Mechanical characterization tests and numerical simulations for evaluating the effectiveness of fiber-reinforced cementitious mortar as shear strengthening of masonry walls** Carlo Vienni, Maurizio Orlando, Luca Salvatori | **Compressive strength development of concretes with volcanic ash exposed to realistic temperature conditions**<br>Anja Klausen, Antonia Menga, Terje Kanstad | **Setting of arbitrary combinations of constant bending moments and constant shear forces in reinforced concrete beams**<br>Thilo Schmidt, Clara Walsemann, Andrej Albert, Peter Mark | **Optimum contents of waste materials from wind farm decommissioning for incorporation into concrete mixes**<br>Nerea Hurtado-Alonso, Marta Skaf, Ana Belén Espinosa González, Roberto Serrano-López, Chaimae Mourou, Juan M. Manso |
| **12:00-12:15** | **Experimental investigation of the fatigue behaviour of reinforced concrete dapped-end connections**<br>Sameera Hippola, Boyan Mihaylov | **Computer Vision System for Dimension Control in the Prefabrication of Concrete Panels**<br>Paul Debus, Jónatas Valença | **Highly resilient externally strengthened blasted concrete beams through improved self-centering** Cesare Signorini, Franz Bracklow, Eric Jacques, Chris Jackson, Petr Maca, Birgit Beckmann, Viktor Mechtcherine | **Time dependent modelling of concrete for the simulation of 3D printing**<br>Libor Jendele, Jiri Rymes, Jan Cervenka, Michaela Herzfeldt | **Introducing a novel experimental setup for assessing the progressive collapse resistance of structures**<br>Andri Setiawan, Diego Cetina, Maria L. Gerbaudo, Lorenzo Marin, Manuel Buitrago, Nirvan Makoond, Jose M. Adam | **Experimental Investigation of Aggregate Replacement Ratios in Concrete with Recycled Concrete Aggregates**<br>Cecilie Kristensen, Linh Cao Hoang, Jesper Harrild Sørensen, Gregor Fischer, Lars Zenke Pørlov Hansen |
| **12:15-12:30** | | **BIM Library Plugin for Circular Economy: Leveraging Digital Product Passports for Sustainable Design**<br>João Palma, António Aguiar Costa | **Behavior of RC Beams Strengthened with CFRP Sheets Exposed to Low Temperature** Inyong Lee, Jongkwon Choi | **Homogenization Methods for Characterizing the Viscoelastic Behavior of Concrete in Service and Deconstruction Phases**<br>Francois Soleilhet, Maxime Ressier, Julien Sanahuja | **Partial collapse tests of a precast concrete building specimen**<br>Andri Setiawan, Nirvan Makoond, Manuel Buitrago, Jose M. Adam | |
| **12:30-14:00** | ***Lunch & Exhibition (Gould Space)*** | | | | | |
| **13:00-14:15** | ***Posters Session (Gould Space)*** | | | | | |

| 14:15-15:30 | Parallel Session 6 | | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 17 (1/2)**<br>***fib* Guides on protection, repair and strengthening**<br>**Chairs Eduardo Júlio & Veronique Bouteiller** | **SPECIAL SESSION 18**<br>**Monitoring of reinforced concrete structures by means of embedded sensors to assess the indicators of their durability**<br>**Chair Géraldine Villain** | **SPECIAL SESSION 21 (1/2)**<br>**3D printing of concrete and concrete structures**<br>**Chairs Yong Yuan & Yaxin Tao** | **Parallel Session 6a**<br>**Innovative materials**<br>**Chair Laurent Michel** | **Parallel Session 6b**<br>**UHPFRC (1/2)**<br>**Chair François Toutlemonde** | **Parallel Session 6c**<br>**Construction methods and management (2/2)**<br>**Chair Jan Vitek** | **Parallel Session 6d**<br>**Recycling (2/2)**<br>**Chair Nikola Tosic** |
| **14:15-14:30** | **Overview on the fib Guide on protection, repair and strengthening techniques for concrete structures (fib bulletins 102 and 103)**<br>Eduardo Júlio | **Monitoring of water content of concrete by embedded resistivity and newly developed capacitive sensors**<br>Houssein Ibrahim, Géraldine Villain, Jean-Paul Balayssac, Sérgio Palma Lopes, Narintsoa Ranaivomanana, Xavier Dérobert | **Conceptual Design and Production of a 3D Printed Concrete Base Brick with Evaluation of its Thermal Properties**<br>Elisabeth Radl, Marc-Patrick Pfleger, Alexander Sieh, Markus Vill | **Initial investigations on stress redistributions between different CFRP reinforcement types**<br>Marius Hägle, Felix Hofmann, Alexander Stark | **Evaluation of Fatigue Characteristics of Self-Healing UHPC using Ultrasonic and Natural Frequency Methods**<br>Yusuke Nagai, Zhewen Huang, Roberto Felicetti, Liberato Ferrara | **An Optimization Method for the Intelligent Modularization of Concrete Frame Structures**<br>Niklas Frank, Robert Renz, Felix Hofmann, Albert Albers | **Experimental investigation of the short- and long-term behaviour of recycled aggregate concrete precast/prestressed hollow core slabs**<br>Michael McGinnis, Michael Gangone, Alejandro Nogales, Lizeth Marisol Gomez-Santana, Brad Weldon, Adam Reihl, Nikola Tošić, Yahya Kurama |
| **14:30-14:45** | **Electrochemical chloride extraction (chapter 7 from bull 102 and "a review")**<br>Véronique Bouteiller | **Monitoring of water content and mechanical properties of concrete by ultrasonic velocity enhanced by tomographic method**<br>Rouba Hariri, Nicolas Derrien, Maximilien Lehujeur, Jean François Chaix, Vincent Garnier, Olivier Durand, Odile Abraham | **Pore structure analysis of printcrete under varying temperatures**<br>Yaxin Tao, Yong Yuan, Yi Zhang, Timothy Wangler | **Topological interlocking assemblies based on origami inspired carbon-reinforced concrete waterbomb modules**<br>Carlos G. Gomes, Sascha Stüttgen, Meike Weiß, Reymond Akpanya, Alice C. Niemeyer, Daniel Robertz, Rostislav Chudoba | **Finite Element Analysis for Eccentric Performance of Ultra-High Performance Concrete Columns with Fiber-Reinforced Polymer Bars**<br>Baozheng Zhang, Weichen Xue, Jiafei Jiang | **Construction of the arch bridge in Cervena**<br>Jan Vitek, Milan Spicka, Petr Sykora, Roman Simacek | **Design of Rigid Pavement with Hydraulic Concrete Using Recycled Tires on a Class IV Road, Ruta del Cacao – Guayas - Ecuador**<br>Natividad García Troncoso Samantha Hidalgo-Astudillo, Julianny Torres, Javier Zuña, Nadia Quijano, David Valverde, Carola Gordillo, Albert de la Fuente (video) |
| **14:45-15:00** | **Electrochemical chloride extraction using lithium-based electrolyte solution considering ASR potential of concrete**<br>Takao Ueda, Akira Nanasawa | **Metrological analysis to extract the qualified observables, corrected from temperature effects**<br>Jean-François Chaix, Rouba Hariri, Houssein Ibrahim, Odile Abraham, Sergio Palma Lopes, Xavier Derobert, Jean-Paul Balayssac, Vincent Garnier, Geraldine Villain | **Concrete 3D printing and reinforcement: Determination of bond strength through pull-out tests**<br>Johannes Ewerz, Marc-Patrick Pfleger, Elisabeth Radl, Patrick Huber | **A Holistic Approach for Carbon-Reinforced Concrete Structures Using Modular Design and Homogenization Techniques**<br>Marja-Lisa Herrmann, Domen Macek, Leonie Mester, Finn Döpke, Aya Ragab, Viviane Adam, Hagen Holthusen, Tim Brepols, Simon Klarmann, Sven Klinkel | **Ultra-High Performance Concrete and Normal Strength Concrete Interfacial Bond in Columns**<br>Mina Fakeh, Amir Fam | **How modern technology can support the inspection of cable-stayed bridges**<br>Gianni Moor, Colm O'Suilleabhain, Tristan Craig-Tyler | **Influence of Fine recycled aggregates on the properties of 3D printing concrete**<br>Jose Luis Hermida, Ruth Saavedra, Samantha Hidalgo-Astudillo, Nikola Tošić, Miren Etxeberria, Albert de la Fuente |
| **15:00-15:15** | **Experimental investigation on effects of graphene on ICCP-SS intervention method for concrete structures**<br>Xiaoming Zhu, Meini Su, Yong Wang | **Combination of multi-physical sensors for concrete durability indicators evaluation using AI**<br>Sylvain Dufau, Cédric Baudrit, Mehdi Sbartaï, Vincent Garnier, Géraldine Villain, Sidi Mohammed Elachachi, François Demontoux | **Experimental analysis of the structural behavior of hybrid concrete 3D printed-cast beam systems**<br>Lien Saelens, Kim Van Tittelboom, Robby Caspeele, Roman Wan-Wendner | **Comparison between experimental and numerical investigation of the bending behavior of carbon prestressed concrete plates with openings**<br>Nima Kian, Yasar Hanifi Gedik, Goran Vojvodic, Nguyen Duc Tung, Nguyen Viet Tue | **A comparative study on design approaches for Ultra-High Performance Concrete flexural elements**<br>Sina Yüksel, Torsten Leutbecher | **High-Speed Visual Inspection of Railway Viaduct Intrados**<br>Pierre Carreaud, Ayoube Dakir, Thibault Gouache, Julien Baron | **Optimizing Concrete Mix Design for Increased CO2 Absorption**<br>Goli Nossoni, Eddie Luzik, Ayodeji Ajidahun |
| **15:15-15:30** | **Externally Applied Textile Reinforced Systems - fib Bulletin 103 Chapter 6**<br>Francesco Bencardino, Pietro Mazzuca | **Monitoring of electrical resistivity profiles of concrete structures submitted to tide in marine environment**<br>Sérgio Palma Lopes, Marie-Ange Eid, Géraldine Villain, Stéphanie Bonnet | | **Time-dependent flexural behavior of hybrid fiber reinforced concrete**<br>Sergio Carmona, Giovanni Plizzari | | | |
| **15:30-16:00** | ***Coffee break & Exhibition (Gould Space)*** | | | | | | |

| 16:00-17:15 | Parallel Session 7 | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** |
| | **Parallel Session 7d**<br>**Structural design (3/4)**<br>**Chair Konrad Bergmeister** | **SPECIAL SESSION 24**<br>**Extending the life of concrete structures via intelligent digital twin technology**<br>**Chairs Chongjie Kang & Steffen Marx** | **SPECIAL SESSION 21 (2/2)**<br>**3D printing of concrete and concrete structures**<br>**Chairs Yong Yuan & Yaxin Tao** | **Parallel Session 7a**<br>**Assessment (1/2)**<br>**Chair Akio Kasuga** | **Parallel Session 7b**<br>**UHPFRC (2/2)**<br>**Chair Liberato Ferrara** | **Parallel Session 7c**<br>**Creep and shrinkage**<br>**Chair Alejandro Perez-Caldentey** |
| **16:00-16:15** | **Directive reuse precast concrete elements**<br>Rob Vergoossen, Danny Jilissen, Thijs Noordhoek | **Bridge Database for Digitalization**<br>Sylvia Keβler | **Experimental Study on Time-Dependent Pumping Behaviour of 3D Concrete Printing**<br>Pathmanathan Rajeev, Nilusha Nissanka, Jay Sanjayan | **Structural assessment of the Albert-Louppe Bridge: temperature effects on the global behaviour**<br>Sellin Jean-philippe, David Tronchet, Antoine Theordore | **Fiber alignment in hybrid fiber reinforced self-compacting UHPFRC**<br>Thomaida Polydorou, Demetris Demetriou, Prodromos Pigiotis, Anna Mina, Demetris Nicolaides, Michael F. Petrou | **Comparing the design of post-tensioned concrete bridges by EN 1992 and TMH7 by a probabilistic analysis**<br>Francois Joubert, Gideon Van Zijl, Nico De Koker, Pierre Van der Spuy (video) |
| **16:15-16:30** | **Comparison between timber-concrete and steel-concrete composite slabs. Where are we now?**<br>Laura Corti, Giovanni Muciaccia | **Automated Damage Detection in a Nonlinear Model Updating Approach for Concrete Bridges**<br>Martina Schnellenbach-Held, Bjarne Sprenger | **Analysis of factors influencing the maximum continuous printing height of 3D printed concrete**<br>Zibo Zuo, Yulin Huang, Yaxin Tao, Yong Yuan, Wouter De Corte | **In-situ survey of post-tensioned bridges in Slovakia**<br>Peter Paulík, Jakub Gašpárek | **UHPFRC slabs for retrofitting half-joints bridges**<br>Matteo Colombo, Greta Cornaggia, Giulio Zani, Marco Di Prisco | **Propagation of creep and shrinkage model uncertainties in predicting multi-decade behaviour of box girder bridges**<br>Arthur Slobbe, Gijs Eumelen, Bart Van den Broek, Jasper Doorgeest |
| **16:30-16:45** | **The influence of nodal region detailing on the quasi-static and dynamic response of frame structures**<br>Andrea Monserrat-López, Duarte M. Viula Faria, Fabio Brantschen, Alejandro Nogales Arroyo, Miguel Fernández Ruiz | **Characterisation and benefits of digital sensors for Structural Health Monitoring of the Nibelungen Bridge Worms**<br>Ralf Herrmann, Eshwar Kumar Ramasetti, Poojitha Ponnam, Sebastian Degener | **Assessment of Post-Tension Capacity in Novel 3D-Printed Topology-Optimized Formwork via Load Transfer Testing**<br>Mahsa Sakha, Saim Raza, Xiaomeng Wang, Haifeng Fan, Niels Pichler, Moslem Shahverdi | **In situ and laboratory testing of fiber-reinforced cementitious mortars for cortical restoration of viaduct piles**<br>Carlo Vienni, Luca Salvatori, Maurizio Orlando, Salvatore Giacomo Morano | **Time-dependent behaviour of PS-UHPC balanced cantilever box girder with a central hinge**<br>A S Dwivedi, M. N. Shariff | **Nonlinear finite element analysis of the mechanical behavior of asphalt considering viscoelastic characteristics**<br>Wooyeon Kim, Hyo Eun Joo, Yuya Takahashi, Maeshima Takuya |
| **16:45-17:00** | **Parametric design study of textile-reinforced concrete sandwich panels with recycled PET foam core**<br>Erich Meiners Munoz, Panagiotis Kapsalis, Tine Tysmans | **Quantifying the uncertainty of predictive simulations in digital twins through the identification of model bias**<br>Daniel Andrés-Arcones, Martin Weiser, Phaedon-Stelios Koutsourelakis, Jörg F. Unger | **Characterization of Cold Joint Formation in Digitally Printed Mortar During the Dormant Phase: A Time-Dependent Study**<br>M Divya, S.A.H Riza, M. N. Shariff | **Evaluation of residual prestress in concrete beam with modified saw-cut method**<br>Andrea Nino Consiglio, Gianpaolo Rosati, Giovanni Muciaccia, Dario Coronelli, Gianluca Ascari | | **Restrained shrinkage induced early-age cracking of blended-cement based concrete with fly ash and slag**<br>Castel Arnaud, Sumaiya Afroz, Quang Dieu Nguyen, Taehwan Kim, Htet Lin |
| **17:00-17:15** | **Experimental investigation of the combined in-plane and out-of-plane shear capacity of reinforced concrete elements without shear reinforcement**<br>Jens Skovgaard Larsen, Søren Gustenhoff Hansen, Henrik Brøner Jørgensen | **Probabilistic Sensor Fault Detection in Bridge Structural Health Monitoring**<br>Jan-Hauke Bartels, Cedric Eisermann, Chongjie Kang, Steffen Marx | | **Research on tendon's transmission length in old post-tensioned concrete structures**<br>Rafał Walczak, Wit Derkowski | | **Restrained Shrinkage Cracking in FRC Slabs**<br>Porsiem Tang, Ali Amin, Ian Gilbert, Walter Kaufmann |

| 17:15-18:30 | Parallel Session 8 | | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 3**<br>**Structural and Seismic Performance Evaluation of Ageing Concrete Bridges**<br>**Chair Mehdi Kashani** | **SPECIAL SESSION 25**<br>**Strut-and-Tie & Stress Fields**<br>**Chair Miguel Serio Lourenço** | **Parallel Session 8a**<br>**Fibres (1/3)**<br>**Chair Tor Arne Martius-Hammer** | **Parallel Session 8b**<br>**Assessment (2/2)**<br>**Chair Max Hendriks** | **Parallel Session 8c**<br>**Durability (1/5)**<br>**Chair Bruno Godart** | **Parallel Session 8d**<br>**Concrete structures (1/2)**<br>**Chair Terje Kanstad** | **Parallel Session 8e**<br>**Structural design (4/4)**<br>**Chair Steve Foster** |
| **17:15-17:30** | **Numerical Modelling of Ageing RC Bridge Piers Considering Nonuniform Geometric-Mechanical Degradation**<br>Ziliang Zhang, Hammed O. Aminulai, William Powrie, Mohammad M. Kashani | **Strut-and-tie models and stress fields: past, present and future**<br>Walter Kaufmann, Karin L. Yu | **The particle-matrix model as an easy tool for mix design of fibre reinforced concrete**<br>Tor Arne Martius-Hammer | **Assessment of the corrosion degree of beams subjected to accelerated corrosion based on indirect data**<br>Eline Vereecken, Wouter Botte, Geert Lombaert, Robby Caspeele | **Experimental Basis for Assessment of Concrete Structures Exposed to Alkali-Silica Reactions**<br>Kathrine Mürer Stemland, Terje Kanstad | **Analysis of the effect of rebar couplers geometry on the cracking behaviour of reinforced concrete beams**<br>Amine Ben-Dahou, Mohamed Nasser, Emmanuel Ferrier, Aron Gabor, Laurent Michel, Rémi Gardes, Richard Boisson, Philippe Huet, Clément Poissonnet, Jean-Marie Dolo | **Experimental evaluation of concentrated load distribution in prefabricated floor**<br>Milosz Jeziorski, Wit Derkowski |
| **17:30-17:45** | **Performance assessment of corroded PC beam elements**<br>Zila Rinaldi, Alberto Meda, Fabio Di Carlo, Filippo Molaioni | | **Quality Control of Fibre-Reinforced Concrete Using the Montevideo Test: A Case Study in Real-World Construction**<br>Victoria Olivera, Diego Novello, Luis Segura-Castillo | **Shear Capacity of Reinforced Concrete Beams with Bent-up Bars**<br>Esra Jespersen, Henrik Brøner Jørgensen, Frederik Autrup | **Effects of late heating on the delayed ettringite formation in concrete: multi-parameter study**<br>Marius Nanfack, Adrien Bouvet, Hector Gomart, Albert Noumowe, Pierre Seguin | **Performance assessment of structural joints against progressive collapse in precast concrete structures**<br>Sepideh Akbari, Robert Vollum, Bassam Izzuddin | **Experimental Investigation of Wall Connections Designed for Disassembly**<br>Henrik Brøner Jørgensen, Jakob Bay Sørensen, Christian Buch Goldenberg, Kim Nikolajsen |
| **17:45-18:00** | **Modeling for seismic analysis of an existing segmental cantilever bridge**<br>Maria Rosaria Pecce, Antonio Bilotta, | **Practical application of Levels-of-Approximation approach in Strut-and-Tie and Stress Field modelling**<br>Duarte Viula Faria, Carlos Meléndez Gimeno, Miguel Sério Lourenço, Miguel Fernández Ruiz | **FRCM strengthening of floor slabs in Citterio building**<br>Marco Di Prisco, Isabella Colombo, Lorenzo Radice, Christian Amigoni<br>fulltext : paper for oral presentation | **Inspection of Water Intake Tunnels Using High-Efficiency Photogrammetric Methods**<br>Paoline Prevost, Thomas Mauroux, Thibault Gouache, Pierre Carreaud | **Performance-based evaluation of Delayed Ettringite Formation reactivity of precast concrete elements containing limited slag content**<br>Yvan Thiebaut, Thomas Jochyms, Lionel Linger, François Cussigh, Laurent Boutillon, Julien Gauduchon, Nastaran Vivan, Abdelkrim Ammouche, Aurélien Delevoye, Yves-Henri Pignol | **Investigations on the structural behaviour of prestressed modular shell structures with dry joints**<br>Felix Hofmann, Ben Stöhr, Alexander Stark | **A series of load tests for the preservation of railway arch bridges**<br>Jenny Keßler, Steffen Marx |
| **18:00-18:15** | **Fiber-based Modeling of Corroded RC Bridge Piers**<br>Simone Reale, Alessandro Palermo, Alberto Pavese | **A computationally efficient FE-tool for ULS and SLS stress field analysis using convex optimization**<br>Daniel Vestergaard, Kasper P. Larsen, Peter N. Poulsen, Linh C. Hoang | **Effect of incorporating different quantities of recovered steel fibres on the mechanical properties of fibre reinforced concrete**<br>Guanzhi Liu, Maria Koetsier, Nikola Tošić, Wim Ekkelenkamp, Marija Nedeljković, Mladena Luković, Albert De La Fuente | **3D simulation of restrained ASR expansion for numerical assessment of existing concrete structures**<br>Zhanchong Shi, Kathrine Stemland, Guomin Ji, Max Hendriks, Terje Kanstad | **Investigation, analysis and cause estimation of cracked prestressed concrete girders due to the application of the desalination Method**<br>Koji Osada, Takao Ueda, Akira Nanasawa, Kenta Sato | **Discrete numerical simulations of reinforced concrete glass hybrid beam**<br>Yilin Wang, Jan Vorel, Bert Van Lancker, Alessandro Proia, Daniele Pelessone, Jan Belis, Roman Wan-Wendner | **Selection of appropriate geometries of additively manufactured reinforcement bars for the bond with concrete**<br>Luca Locher, Thomas Braml, Bjoern Kleemann |
| **18:15-18:30** | **Experimental tests inducing shear failure on PC bridge deck girders**<br>Francesco Tondolo, Pierclaudio Savino, Antonino Quattrone, Donato Sabia, Mattia Anghileri, Fabio Biondini, Gianpaolo Rosati, Bernardino Chiaia | **Conceptual framework for the consistent estimation of crack widths in disturbed concrete regions**<br>Boyan Mihaylov, Jaime Mata Falcón, Miguel Ferreira | **Influence of Interlayer Properties on the Mechanical Performance of Multi-Layered Concrete Structures**<br>Salma Es-satte, Syed Yasir Alam, Jean-Michel Torrenti, Ahmed Loukili | **Updating Wind Load Effects in Assessment of Existing Roof Structure - Case Study**<br>Miroslav Sykora, Dimitris Diamantidis, Jana Markova, Michal Sen, Adam Valik | **Performance Study of a New Sliding Material for Use in Structural Bearings**<br>Mariela Cordero Verge | **Formulation of a consistent crack width calculation method for reinforced concrete members**<br>Otto Terjesen, Reignard Tan, Terje Kanstad | **Application of the applied element method to a reinforced concrete sub-assemblage under a column-removal scenario**<br>Nada Elkady, Laurence Weekes, Levingshan Augusthus-Nelson |
| **18:30-19:00** | ***BUSES BOARDING*** | | | | | | |
| **19:30-23:30** | ***GALA DINNER FOR REGISTERED PARTICIPANTS*** | | | | | | |

# WEDNESDAY 18 JUNE 2025

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| **8:00-8:30** | ***Registration desk & Coffee (Méditerranée Space)*** | | | | | | |
| | **Amphitheater Antipolis** | | | | | | |
| **8:30-9:30** | **Keynotes - Chair Agniezska Bigaj-Van Vliet** | | | | | | |
| **8:30-9:00** | **Keynote 5 : Beatrice Belletti, Simone Ravasini : Structural capacity assessment of PC members subjected to different corrosion-induced damage scenarios** | | | | | | |
| **9:00-9:30** | **Keynote 6 : Elisabeth Marie-Victoire : The challenges of diagnosing and restoring historic concrete** | | | | | | |
| **9:30-10:00** | ***Coffee break & Exhibition (Gould Space)*** | | | | | | |
| **10:00-11:15** | **Parallel Session 9** | | | | | | |
| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 1 (1/2)<br>Punching Behaviour of Flat Slabs<br>Chair Antonio Ramos** | **SPECIAL SESSION 22 (1/2)<br>Data-Driven Innovations in Concrete Materials and Structures<br>Chairs Syed Yasir Alam, Sandra Nunes, Moncef Nehdi** | **Parallel Session 9a Durability and corrosion (2/5)<br>Chair José Matos** | **Parallel Session 9b<br>Seismic behaviour (1/2)<br>Chair Alper Ilki** | **Parallel Session 9c<br>Concrete structures (2/2)<br>Chair Yi Zhang** | **Parallel Session 9d<br>Rehabilitation and modifications (1/2)<br>Chair Heggade** | **Parallel Session 9e<br>Concrete (1/3)<br>Chair Giovanni di Luzio** |
| **10:00-10:15** | **Properties of the interface between two concrete layers for strengthening flat slabs**<br>Katarina Gajdosova, Daniel Ceres | **Analysis on empirical knowledge transition on mix proportioning by using machine learning**<br>Satoshi Fujimoto, Chiharu Usui | **Study on the influence of compactness, and type of additions on the durability of low clinker concrete**<br>Marion Vouzelaud, Myriam Carcasses, Franck Cassagnabere, Jonathan Mai-Nhu, Patrick Rougeau | **Seismic and Energy Retrofit of Reinforced Concrete Buildings Envelopes: State-of-the-art review**<br>Christiana Filippou, Daniel Oliveira, Dionysios Bournas, Paulo B. Lourenco | **Design and construction of the iconic Saint-Denis Pleyel station in the Grand Paris Express project**<br>Yi Zhang, Christophe Sandré | **Stays replacement on the Vasco da Gama Bridge**<br>Jean-Michel Odin, Michel Virlogeux, Patrick Ladret, Nicolas Trotin, Rui Monteiro | **Can maturity method be applied to low carbon thin concrete elements?**<br>Agathe Bourchy, Ibrahim Dahiru, Jean-Michel Torrenti, Gael Le-Bloa |
| **10:15-10:30** | **Numerical analysis of fire-induced effects on load-carrying capacity of reinforced concrete slab-column connections under unbalanced moments**<br>Ricardo Randi, Andreia Fanton, Leandro Trautwein, Luiz Carlos Almeida, António Pinho Ramos | **Automated Air Void Parameter Evaluation in Hardened Concrete using Confocal Laser Scanning Microscopy and Deep Learning**<br>Viktor Kostic, Viktor Kotsev, Qadeer Khan, Daniel Cremers, Jithender Timothy, Thomas Kränkel, Christoph Gehlen | **Low-carbon concretes: natural diffusion and migration in a non-steady-state regime**<br>Stéphanie Bonnet, Gayelle Fahed, Anthony Soive | **Preliminary Study on the Seismic Behavior of CFRP-Confined Non-Conforming RC Columns with Retained Plaster Layer**<br>Ali Gurkan Gencali, Medine Ispir, Alper Ilki | **Causeway footbridges : technical challenges deriving from the integration of a two-part duct and integrated LED system onto stay cables and aerodynamic impacts**<br>Vincent Maillet, olivier flamand, Nikolaj Pedersen, Matthieu Guesdon | **The application of precast panel "Cap Slab" for deck replacement work of PC composite girder brirges in Japan**<br>Nakada Takafumi, Tominaga Takayuki, Mitamura Kenji, Ikehata Shinya | **Modelling and Analysis of Hydration Heat Causing Early Age Cracking in Massive Concrete Structures**<br>Simona Potůčková, Milan Holý, Jiří Kolísko |
| **10:30-10:45** | **Test set-up effect on the punching behavior of slab-column connection: a numerical and theoretical investigation**<br>Rafael Díaz, Ricardo Randi, Leandro Trautwein, António Pinho Ramos | **Fresh state concrete: augmenting sense data with digital tools**<br>Callum White, Janet M. Lees | **Diffusive methods for measuring carbonation properties of concrete under natural laboratory conditions**<br>Ouijdane Qacami, Bruno Huet, Philippe Turcry, Abdelkarim Aït-Mokhtar, Ravi Patel, Frank Dehn | **Impact of Incorporating Parallel Threaded Mechanical Coupler Splices on the Seismic Behavior of Reinforced Concrete Columns**<br>Mohamed Nasser, Amine Ben-Dahou, Laurent Michel, Emmanuel Ferrier, Aron Gabor, Rémi Gardes, Richard Boisson, Philippe Huet, Clément Poissonnet, Jean-Marie Dolo | **Lost knowledge in construction history - A case study of historical prestressing systems**<br>Jakob Vogt, Johannes Reimer, Steffen Marx | **Lean duplex stainless steel: a solution to prevent corrosion for reinforced concrete exposed to severe chloride environments**<br>Véronique Bouteiller, Sebastien Mignocchi, Eric Chauveau, Thierry Chaussadent, Philippe Mauger, Amandine Bonnet, Victor Da-Silva | **Effect of intermittent drying periods on the surface deterioration of blast furnace slag mortars during freeze-thaw de-icing salt attacks**<br>Alexander Haynack, Jithender J. Timothy, Thomas Kränkel, Christoph Gehlen |
| **10:45-11:00** | **Contribution of Drop Panels to Prevent Progressive Collapse of Columns Supported RC Flat Slabs**<br>David Yankelevsky, Yuri Karinski, Vladimir Feldgun | **Prediction of mortar flow loss time by using machine learning of electrochemical properties**<br>Chiharu Usui, Satoshi Fujimoto, Shin Hara | **Sustainable concrete repair practices in Switzerland development of a low carbon footprint, self-healing structural mortar**<br>Michel Di Tommaso, Marco Basaldella, Paolo Tudori, Paolo Sabatini | **Calculation method based on BRB equivalent stiffness and engineering application**<br>Xu Yang, Bin Xue, Xiangxiang Ren, Peizhen Li, Wenlu Wen | **Investigation of Shear Cracks in Reinforced Concrete Slender Members with Shear Reinforcement**<br>Aakriti Khadka, Giorgio T. Proestos | **Effect of Chipping into End Regions of Pre-tensioned Prestressed Concrete Girders on Anchorage Behavior of Strands**<br>Jinsei Kuwano, Eisuke Nakamura | **Green House Gas implications, steel reinforcement corrosion and concrete carbonation**<br>Melchers Rob, Igor Chaves |
| **11:00-11:15** | **Punching behavior of slab-column connections with recycled coarse aggregate concrete**<br>António Ramos, Carla Marchão, Rui Marreiros, Manuel Domingues, Tainara Cardos | **Labelling Strategy Optimizer: An Optimized and Personalized Labelling Solution**<br>Dheeraj Dhruvakumar, Navid Ranjbar, Zahra Rastegar | **Report on Chloride-Induced Deterioration of Concrete Structures on the Hanshin Expressway**<br>Kyoko Kinoshita, Ichiba Takato, Shinomiya Taku, Aoi Hajime | | | **Retrofitting beams at the roof level of existing RC buildings to prevent their progressive collapse**<br>Juan Sebastián Fontalvo, Lisbel Rueda-García, Brais Barros, Manuel Buitrago, Jose M. Adam | **Effect of binder composition on chloride diffusivity and binding capacity of cementitious material from Australian bentonite**<br>Oluwatosin Babatola, Alastair Macleod, Laurie Aldridge, Frank Collins, Will Gates |
| ~~**11:15-11:30**~~ | **Influence of column rectangularity on punching shear assessment of sudden column removal scenarios**<br>Maria Liapopoulou, Karl Micallef, Juan Sagaseta | | | | | | |

| 11:15-12:30 | Parallel Session 10 | | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** | **Gould 2 Room** |
| | **SPECIAL SESSION 1 (2/2)**<br>**Punching Behaviour of Flat Slabs**<br>**Chair Antonio Ramos** | **SPECIAL SESSION 22 (2/2)**<br>**Data-Driven Innovations in Concrete Materials and Structures**<br>**Chairs Syed Yasir Alam, Sandra Nunes, Moncef Nehdi** | **Parallel Session 10a Durability and corrosion (3/5)**<br>**Chair Lionel Linger** | **Parallel Session 10b Seismic behaviour (2/2)**<br>**Chair Alessandro Palermo** | **SPECIAL SESSION**<br>**Macro Synthetic Fiber-reinforced structural elements – short- and long-term behaviour**<br>**Chairs Albert de la Fuente, Nicola Buratti, Pedro Serna, Nikola Tosic** | **Parallel Session 10d Reinforcement**<br>**Chair Antonio Caballero** | **Parallel Session 10e Concrete (2/3)**<br>**Chair Mouna Boumaaza** |
| **11:15-11:30** | **Influence of planted column offset on shear resistance of transfer slabs**<br>Jiayu Long, Robert Vollum, Lorenzo Macorini | **Application of anomaly detection method to hammering test of concrete structures**<br>Hiroshi Shimbo, Toshiaki Mizobuchi, Tomoko Ozeki, Junichiro Nojima | **Durability for Sustainability - a Balancing Act**<br>Brett Pielstick, Ron Bryson | **Forced Vibration Testing of a Rehabilitated Five-Story Reinforced Concrete Shear Wall University Library**<br>Cole McDaniel, Peter Laursen, Elizabeth Splees, Samuel Royston | **Time-dependent behaviour of polypropylene fibre-reinforced beams: conclusions and takeaways from a three-year experimental campaign on full-scale beams under sustained load**<br>Nikola Tošić, Jürgen Bokern, Martin Hunger, Albert de la Fuente | **Experimental study on overlap joints of concrete screws as post-installed reinforcement**<br>Pascal Perrin, Jürgen Feix | **Diagnosis of Reinforced Concrete Elements in a Nuclear Power Plant Cooling Tower for Service Life Extension**<br>Noureddine RAFAÏ, Abdelkrim Ammouche, Thibault Lenormand |
| **11:30-11:45** | **Modelling punching shear failure under eccentric loading by means of nonlinear joint elements**<br>Chunrong Lu, Robert Vollum, Lorenzo Macorini | **Structural Design Workflows using Multi-Modal Human-Machine-Interfaces in Dlubal RFEM for Concrete Analysis and Design**<br>Michael Kraus, Isamu Lautenschläger, Jaroslav Broz, Georg Dlubal | **Predictive Maintenance and Optimization of Reinforced Concrete Structures: A Comprehensive Tool for Durability Prediction in Maritime and Road Infrastructure**<br>Paulo Claude, Frederic Duprat, Thomas De Larrard, Jonathan Mai-Nhu, Patrick Rougeau, Louis Marracci, Pierre Mazurelle | **Seismic performance of composite sandwich shear walls with different flange types**<br>Yonggang Li, Bin Zhao | **Enhanced Flexural Performance: Polypropylene Fiber-Reinforced Concrete Beams with Low Reinforcement Ratio**<br>Krishnaa Subramanian, Martin Hunger, Jürgen Bokern, Tom Molkens, Rutger Vrijdaghs | **The large-scale renovation work on a 23-span post-tensioned T-shaped girder bridge on Hanshin Expressway No.3 in Japan**<br>Hiroki Tomonari, Kota Hamazaki, Yuichi Yamashita, Tagawa Chihiro, Suzuki Hiroyuki | **Coupled Analysis of Oxygen Diffusion and Corrosion Re-actions in Cementitious Materials Using 3D Pore Model**<br>Kai Tanigawa, Keiyu Kawaai, Nami Ishizaki |
| **11:45-12:00** | **Numerical modeling of two-way shear in post-tensioned flat slabs**<br>Mary Beth Hueste, Madhura Chavan | **Data-driven structural reliability assessment of precast SFRC tunnel segments using tests carried out on L16-1 of the Grand Paris Express project**<br>Yi Zhang, Silvia Ientile, Franziska Schmidt, Christophe Sandré, François Toutlemonde | **Frequentist parameter estimation techniques applied to the fib carbonation model**<br>Juan Mauricio Lozano Valcarcel, Thomas Kränkel, Amir Rahimi, Christoph Gehlen | **Impact of Corrosion on seismic response of reinforced concrete structures in severe exposure conditions Environment**<br>Michele Delconti, Giovanni Muciaccia, Liberato Ferrara | **Performance Assessment of fiber-reinforced concrete with recycled plastics: An Experimental Study**<br>Antonella D'Alessandro, Laura Ierimonti, Alina Elena Eva, Matteo Draconte, Luca Torelli, Ilaria Venanzi | **Investigation of spatial position of carbon grids in planar textile-reinforced concrete members**<br>Lore Zierul, Berk Gündogdu, Birgit Beckmann, Steffen Marx | **Innovative concrete carbon mixing system: Preliminary results**<br>Marco Davolio, Stefano Gelain, Federico Furlani, Giovanni Muciaccia, Liberato Ferrara |
| **12:00-12:15** | **Experimental Setup for Investigating Shear and Punching Behaviour of Reinforced Concrete Slab Bridge on Columns**<br>Juuso Auvinen, Anssi Laaksonen | **Basic research on assessing progression of cracks inside reinforced concrete members using machine learning with electromagnetic waveforms**<br>Ruiko Toriumi, hinata yamamoto, Junichiro Nojima, Ito Hitoshi, Toshiaki MIZOBUCHI | **HS2 project: supply of an Electrically Isolated Tendons for a precast segmental viaduct, in compliant with fib 75 requirements**<br>Antoine Carry, Nicolas Demey, Nuno Geirinhas | **ISOSISM PS for optimal seismic protection of concrete structures**<br>Mauro Sartori, Stefano Barone, Ivan Alende, Charles Cynober, Cyril Gaucherand | **Experimental study on hybrid fiber reinforced concrete with macro-synthetic and steel fibers**<br>Giovanni Plizzari, Livio Pascali, Matteo Draconte, Marco Paparella, Francesco Surico, Luca Torelli | **Effects of shear properties of thermoplastic Basalt FRP (BFRTP) reinforcing bars on the structural performance of BFRTP-RC beams**<br>Yasuo Yamasaki, Ryota Kurihara, Motohiro Ohno, Tetsuya Ishida | **Future prospects for the digital quality control of fresh concrete using artificial intelligence and computer vision**<br>Michael Haist |
| **12:15-12:30** | **Punching Shear Behavior of Full-Scale Flat Slabs Cast From Coarse Recycled Aggregate Concrete**<br>Tadeaš Fecko, Ludmila Kormošová, António Pinho Ramos, Dario Coronelli, Miguel Fernández Ruiz, Robert Vollume, Jaroslav Halvonik | **Detailed Design Optimization of Reinforced Concrete Flexural Sections Using Multi-Objective Genetic Algorithm**<br>Paul Quéva, Ludovic Jason, Gilles Arnaud, Gabriel Sarazin | **Study on structural concretes produced from ACT low-carbon cement and applicability of Eurocode rules**<br>Christian Clergue, François Boutin, Pierre Pimienta | | **Proposal of Modular prefab hybrid elements for structural slabs mixing wood and Fiber reinforced concrete with macro synthetic fibres**<br>Giovanni Plizzari, Luca Facconi, Matteo Draconte, Giovanni Spatti, Debora Nezosi, Massimo Berlinghieri, Davide Salghetti | **Steel shear keys for RC balcony-slab joints in internally insulated buildings**<br>Anass El Qoraychi, Mohammad Abdallah, Hugues Somja, Tuan-Anh Nguyen, Romuald Billard | **Investigation of Carbonation of Concrete Based on Crushed Sand and Admixtures**<br>Jacques Herve Koung A Bediang, Elat Assoua Moukete Emmanuel, Djomou Djonga Paul, Mbessa Michel |
| | **FE modelling of RC flat slabs with openings under vertical load and cyclic horizontal load**<br>Giovanni Menichini, Massimo Lapi, António Ramos, Maurizio Orlando | | | | | | |
| **12:30-14:00** | ***Lunch & Exhibition (Gould Space)*** | | | | | | |

| 14:00-15:15 | Parallel Session 11 | | | | | |
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| | **Amphitheater Antipolis** | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** |
| | **Parallel Session 11a Sustainability Chair Michael Haist** | **Parallel Session 11b Elevated temperatures and fire Chair Ananth Ramaswamy** | **Parallel Session 11c Durability and corrosion (4/5) Chair Franziska Schmidt** | **Parallel Session 11d Monitoring (2/2) Chair Sylvia Kessler** | **Parallel Session 11e Fibres (2/3) Chair Marco di Prisco** | **Parallel Session 11f Concrete (2/2) Chair Matthieu Briffaut** |
| **14:00-14:15** | **Grand Paris Express Line 18 viaduct: an efficient design to reduce carbon emission**<br>Alexandros Giannopoulos, Anthony Scaramozzino | **Comparison between traditional model and hygro-thermal-chemical model of the ballastless track structure at an early age**<br>Mengxuan Ye, Zhiping Zeng, Roman Wan-Wendner | **An increase of corrosion rate when concrete is subjected to both chloride contamination and carbonation compared to individual attack**<br>Huy Tang Bui, Kang Hai Tan | **Monitoring of bridges: a new step is reached by improving the accuracy of instrumented spherical bearings**<br>Cyril Gaucherand, Michal Ambor, Charles Cynober | **Correlation between the Barcelona test and the three-point bending test in steel fibre reinforced concrete**<br>Mustapha Kaoua, Hans Pauwels, Mouna Boumaaza, Benoit De Rivaz, Christophe Justino | **Fatigue tests on large-scale prestressed reinforced concrete beams**<br>Clara Schramm, Aleksei Shmorgun, Dennis Birkner, Raúl Enrique Beltrán Gutiérrez, Steffen Marx |
| **14:15-14:30** | **Sustainability assessment of bahareque and reinforced concrete structural systems for social housing**<br>Alid Rocha-Tamayo, Natividad García-Troncoso, Irene Josa, Albert de la Fuente (video) | **Integrated local bond-slip model of reinforcing bar in fibre-reinforced concrete at ambient and elevated temperatures**<br>Christopher Kevinly, Panwei Du, Kang Hai Tan | **The challenge in defining a reliable critical chloride threshold for reinforced concrete service life modelling**<br>Federica Lollini | **A Machine Learning-Driven Framework for Scour Detection in Railway Bridges Using Onboard Sensing**<br>Tola Sinem, Joaquim Tinoco, Eugene J. O'Brien, Jose C. Matos | **Fibre-Reinforced Concrete (FRC): study of the parameters influencing residual flexural tensile strengths**<br>Thomas Duval, Pierre-Yves Hervé, François Jacquemot | **Experimental investigations of the frictional behavior of sawn and shot-blasted concrete surface under various pressure and gap oppenings**<br>Robin Mecka |
| **14:30-14:45** | **Impact of new Eurocode 2 over the structural design and environmental sustainability of precast concrete structures**<br>Bruno Dal Lago, Alessio Rimoldi | **Lessons from TELT Lyon-Turin Tunnel Fire Tests: High-Strength Concrete under Extreme Loads and Fire Curve**<br>Takwa Sayari, Mahmoud Abou Dalle, Marie Angelot, Nicolas Bsaibes, Nicola Mazzon, Lionel Linger, Christophe Tessier | **From corrosion assessment to electrochemical re-alkalization of carbonated concrete in a hydroelectric dam : A case-study**<br>Chantal Chalhoub, Stéphane Laurens, Elie Sassine, Stéphane Panin, Dubosc Arnaud | **Height-dependent microstructure of concrete cover in reinforced wall elements using X-ray computed tomography**<br>Milena Kucharska, Piotr Dybeł | **Reinforcement of Beams with Internally Bonded Carbon Fibre Reinforced Polymer**<br>Mehmet Uz, Esra Avci, Yunus Guner, Mustafa Guler | **Numerical analysis of load-bearing behavior with brittle material models: examples for steel- and textile-reinforced concrete and masonry**<br>Jenny Keßler, Carolin Würgau, Daniel Gebauer, Petr Maca, Birgit Beckmann, Jan Cervenka, Steffen Marx |
| **14:45-15:00** | **Sustainable Reuseable Hybrid Structural Building System**<br>Alireza Fadai | **Residual compressive strength of EPS lightweight concrete under heating–water cooling regime**<br>Karim Miled, Leila Maghrebi, Hassen Sabeur | **Feasibility study on the in-situ measurement of chloride content using X-ray fluorescence analysis for application in the condition assessment and service life prediction of reinforced concrete structures**<br>Elena Lorenz, Beate Villmann, Ulf Roland, Christian Wagner, Björn Höhlig | **Advanced Continuous Monitoring of Bridge Bearings and Isolators for Enhanced Maintenance Strategies – Real Case Applications**<br>Paola Darò, Monica Longo, Salvatore Ferrara, Dario La Mazza, Sebastiano Cogo, Giuseppe Mancini | **Portland cement free steel fibre reinforced concrete for structural tunnel applications**<br>Marvin Glissner, Carola Edvardsen | **Data-based comparison of former and new Eurocode 2 shear provisions for prestressed members without transverse reinforcement**<br>Sam Coppens, Robby Caspeele, Roman Wan-Wendner |
| **15:00-15:15** | **Self-regulating "smart" concretes in sustainable construction**<br>Vyacheslav Falikman | **Micro-indentation investigations in Concrete and Steel exposed to high temperature**<br>Guruprasad Y.K., Ananth Ramaswamy | **Modelling of reinforcement corrosion propagation under fib WP 8.9.2**<br>Carmen Andrade | | **Advantages of hybrid RFRC to increase the redundancy of a ribbed slab: an experimental study**<br>Tom Molkens, Tobias Barbier, Rutger Vrijdaghs | **Finite element-based fatigue assessment of reinforced concrete structures subjected to time-series forces**<br>Mohammad Afaghi, Benard Isojeh, Trevor Hrynyk, Anja Klausen, Jan Arve Øverli |
| **15:15-15:45** | ***Coffee break & Exhibition (Gould Space)*** | | | | | |

| 15:45-17:00 | Parallel Session 12 | | | | |
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| | **Ella Fitzgerald Room** | **Miles Davis Room** | **Louis Armonstrong Room** | **Gould 1 Room** | **Sydney Bechet Room** |
| | **Parallel Session 12a**<br>**CFRP**<br>**Chair Agniezska Wiater** | **Parallel Session 12b**<br>**Durability and corrosion (5/5)**<br>**Chair Emmanuel Ferrier** | **SPECIAL SESSION 14**<br>**Carbon Capture and Utilisation by accelerated carbonation of recycled concrete aggregates: results from French Projects**<br>**Chair Philippe Turcry** | **Parallel Session 12c**<br>**Rehabilitation and modifications (2/2)**<br>**Chair Silvia Ientile** | **Parallel Session 12d**<br>**Fibres (3/3)**<br>**Chair Albert de la Fuente** |
| 15:45-16:00 | | **Tenshield, a low carbon filler for post-tensioning tendons**<br>Julien Mercier, Antoine Carry, Laurent Gaillet | **French projects on the CO2 uptake by carbonation of RCA, Turcry Philippe**<br>Torrenti Jean-Michel, Mahieux-Pierre-Yves, Aït-Mokhtar Abdelkarim | **Numerical formulation of the generality envelope**<br>Alessio Pelagalli, Tom Molkens, Laurens Luyten, Lennert Loos | **Statistical Analysis to Assess the Factor Kk,max in SFRC Structures**<br>Ron Kesse, Yuri Karinski, Avraham Dancygier |
| 16:00-16:15 | **Structural Performance of CFRP-Reinforced Concrete Beams Using Digital Fabrication Techniques**<br>Sven Engel, Eduarda Dilkin, Martin Classen | **Durability of textile reinforcement made of hemp fibres impregnated with epoxy resin**<br>Sebastian Kuhn, Marcus Ricker, Malte Kaliske, Tânia Feiri | **CO2 uptake by a bed of recycled concrete aggregates crossed by a flow of gas with a high concentration of CO2: influence of temperature and initial water content**<br>Corvec Gaël, Artoni Riccardo, Turcry Philippe, Richard Patrick, Aït-Mokhtar Abdelkarim | **Experimental Study of Effective Desalination Method Using PC T-Girder Specimens**<br>Shoji Nojima, Naoki Hagiwara, Kotaro Honda, Takao Ueda | **Impact of PVA fiber on the mechanical performance of pervious concrete model material with glass beads skeleton**<br>Jie Li, Jun Xia, Luigi Di Sarno, Guobin Gong |
| 16:15-16:30 | **Behavior of concrete beams prestressed with CFRP reinforcement under flexural load**<br>Agnieszka Wiater, Dominika Ziaja, Maciej Kulpa, Juliusz Żach, Paweł Studziński, Tomasz Siwowski | **Galecopper Bridge: Securization and replacement of damaged lock-coil cables**<br>Matthieu Guesdon, Janwillem Breider, Nicolas Fabry, Jurgen Jochims, Charlotte Murphy, Reno Couwenberg | **CO2 uptake by accelerated carbonation of recycled concrete aggregates: quantifying bound CO2 by a defined protocol**<br>Pernin Thomas, Cassayre Laurent, Camy Séverine, Jaunkeypersad Kilesh, Kaddah Farah, Corvec Gaël, Jeong Jena, Roziere Emmanuel Turcry Philippe, Artoni Riccardo | **Predicting the Tensile Behavior of TRM composites: A Comparative Study of Established Simplified Models**<br>Christiana Filippou, Marco Carlo Rampini, Marco di Prisco, Christis Z Chrysostomou | **Application of fiber-reinforced concrete in load bearing structures**<br>Chen Lin, Guomin Ji, Terje Kanstad |
| 16:30-16:45 | **Effect of multiaxial stress state on the load-bearing capacity of CFRP prestressing strands**<br>Prathamesh Khorgade | **Durability of FRP-to-concrete bonded joints subjected to accelerated aging in laboratory and to field natural aging**<br>Emmanuel Ferrier, Arnaud Gagnon, Corentin Le Roy, Jeremy Roth, Christophe Aubagnac, Emilie Lepretre | **CO2 uptake by accelerated carbonation of recycled concrete aggregates: characterization at the grain scale by tomography and micro-indentation**<br>Kaddah Farah, Lux Jerome, Roziere Emmanuel, Turcry Philippe, Amiri Ouali, Ranaivomanana Harifidy, Ait-Mokhtar Abdelkarim | | **Influence of fibres and iron dust on the electrical conductivity of 3D-printed concrete mixes**<br>Eduardo Galeote, Josep Claramunt, Jose Luis Hermida, Albert de la Fuente |
| 16:45-17:00 | **Externally bonded CFRP structural strengthening systems – Accelerated resin curing process for rapid return to service**<br>Julien Mercier, Jean-Roch Lucas, Alain Huynh, Sylvain Chataigner | | **Parametric and statistical study of RCA and carbonated RCA properties analysed as of a data collection**<br>Braymand Sandrine, Mercado Mendoza Hugo Ramiro, Roux Sébastien | | **Fabrication of a textile reinforcement from hemp fibres**<br>Sebastian Kuhn, Paul Penzel, Lars Hahn, Tânia Feiri, Malte Kaliske, Chokri Cherif, Marcus Ricker |

| | Amphitheater Antipolis |
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| 17:00-17:30 | **Closure ceremony**<br>**Closing from the co-chairs and the *fib* president**<br>**Presentation of the next *fib* events** |