

11th International Conference AMCM 2025

Analytical Models and New Concepts in Concrete and Masonry Structures

Białystok University of Technology

Day 1

Schedule	December 3, 2025 (Wednesday)
12.00	Registration
14.00	Plenary Session I Auditorium C, 45E Wiejska Street [5]
	Welcoming speech by: Professor Marta Kosior-Kazberuk , Rector of Białystok University of Technology, Professor Wit Derkowski , Chair of the Section of Concrete Structures of the Polish Academy of Sciences, Professor Agnieszka Bigaj-van Vliet , Presidium Member of the International Federation for Structural Concrete (<i>fib</i>) Addresses by invited guests
14.30	Session 1 – Masonry Structures Section Chairs: Prof. Marta Kosior-Kazberuk , Prof. José Alexandre Bogas
14.30	Keynote lecture by Prof. María Aurora Flórez de la Colina Universidad Politécnica de Madrid, Madrid, Spain Key issues in historical masonry structures conservation. Case studies in Spain
15.00	Adrieli Oliveira Soares, Kárita Christina Soares, Kanaïama Alves, Arthur Aviz Palma e Silva , Brazil Optimizing calcination conditions of coffee-ground biochar for use in Portland cement mortars
	Oliwia Sikora , Krzysztof Adam Ostrowski, Poland Effect of perforation arrangement in CFRP tubes on load-bearing capacity of concrete columns
	Agnieszka Jabłońska-Krysiewicz, Dariusz Tomaszewicz , Poland Influence of resin type, concrete grade, and anchorage depth on the pull-out load-bearing capacity of anchors
	Dominik Pernecký , Ladislav Klusáček, Czech Republic Response of the masonry wall to horizontal prestressing
	Shivani Sharma , Sudhanshu Sharma, Dhiman Basu, India Characterization of the Interfacial Transition Zone
	Jan Klimasara , Jolanta A. Prusiel, Poland Design of reinforced concrete cylindrical tanks using numerical and analytical methods
16.30	Coffee Break
17.00	Session 2 – Sustainable development Section Chairs: Prof. Carolina Piña Ramírez , Prof. Anna Szymczak-Graczyk
	José Alexandre Bogas , Ricardo Cruz, Maria Gomes, Portugal Low carbon recycled binder from concrete waste as a more eco-efficient alternative in earth stabilisation
	Benoit Bissonnette , Luc Courard, Andrzej Garbacz, Canada Development of sustainable cement-based materials using recycled concrete aggregate and expansive agent
	Tien Peng , United States From obligation to opportunity – US Buy Clean policies to decarbonize concrete
	Seweryn Malazdrewicz , Poland Mechanical and economic evaluation of recycled aggregate self-compacting concrete in the context of large panel buildings deconstruction
	Igal Shohet , Monica Paciuk, Alon Uralainis, Gili Lifshitz Sherzer, Israel Durability, deterioration patterns and life cycle costs of hollow concrete blocks partitions: a comparative study
	Teresa Rucińska , Olga Borziak, Poland Analysis of the potential use of waste in the form of powders and fine aggregates in cement composites
19.00	Welcome Banquet Center for Modern Education Białystok University of Technology, 16 Zwierzyniecka Street [6]

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Day 2

Schedule	December 4, 2025 (Thursday)	
9.00	Plenary Session II Auditorium C, 45E Wiejska Street [5] Section Chairs: Prof. Grzegorz Świt, Prof. Jacek Domski	
	Keynote lecture by Prof. Jan Bień Wroclaw University of Science and Technology, Poland Technical Gerontology of Concrete Bridges	
9.30	Session 3A - Construction Methods and Management Auditorium C, 45E Wiejska Street [5] Section Chairs: Prof. Grzegorz Świt, Prof. Jacek Domski	Session 3B - Structural Performance and Design (Part I) Auditorium B, 45E Wiejska Street [4] Section Chairs Prof. Jacek Korentz, Prof. Janusz Krentowski
	Łukasz Topczewski , Paweł Mikołajewski, Poland Underwater structural investigation: scour monitoring around bridge piers	Agnieszka Wiater , Tomasz Wojciech Siwowski, Poland Assessment of Second-Generation Eurocode 2 in predicting shear resistance of FRP-reinforced lightweight concrete members
	Beata Nowogońska , Poland Prediction of the service life of brick walls using the coefficient method for national conditions	Paulina Zajdel , Krzysztof Adam Ostrowski, Piotr Kuraś, Poland Possibilities of using waste from the processing of steel components to reinforce cement mortar
	Hassan Abdolpour , Jennifer Udebunu, Benedykt Mrosek, Michał Pachnicz, Poland Effect of fresh and spent FCC catalyst (ECAT) on the mechanical and microstructural properties of eco-friendly ultra-high-performance concrete	Bartosz Grzeszykowski , Magdalena Szadkowska, Maciej Lewandowski-Szewczyk, Elżbieta Szmigiera, Poland Experimental verification of rigid plastic bond model in the design of composite steel concrete columns
	Gili Lifshitz Sherzer , Igal M. Shohet, Israel Probabilistic maintenance optimization of concrete culverts: integrating corrosion-driven deterioration and structural simulation	Magdalena Lewandowska , Michał Demby, Szymon Wojciechowski, Robert Studziński, Poland Torsional strength and stiffness of concrete elements: an experimental approach
	Petr Moštěk , Ladislav Klusáček, Czech Republic Static analysis of the post-tensioned SPP truss girder	Dawid Zmyślony , Czesław Bywalski, Roman J. Wróblewski, Poland Limitations of simplified methods for determining second-order effects in high-slenderness RC cantilever columns
	Milena Kucharska , Piotr Dybeł, Poland Influence of casting method on bond performance and self-compacting concrete properties	Miłosz Jeziorski , Wit Derkowski, Poland Flexural moment distribution in hollow core floors: code provisions in light of new experimental data
	Agnieszka Głuszko , Lidia Buda-Ożóg, Poland Experimental assessment of crushed prefabricated fibre-reinforced concrete rings	Marcin Gryniiewicz , Michał Dzun, Julita Krassowska, Zhihua Chen, Dai Wang, Poland Simulations of wire ropes used in prestressed concrete: model validation based on archival complex experiment
	PP Nordica Presentation	
11.30	Coffee Break	
12.00	The conference participants take part in the Bialystok University of Technology Anniversary Celebration Auditorium, Faculty of Electrical Engineering Bialystok University of Technology, Wiejska 45D street [3]	
12.00	Members of the Concrete Structures Section attend the section meeting in Room 34 Bialystok University of Technology, Wiejska 45E street [4]	
14.00	Białystok University of Technology Anniversary Dinner Faculty of Electrical Engineering Bialystok University of Technology, Wiejska 45D street [3]	

15.00	<p align="center">Session 4 – Concrete and Innovative Materials</p> <p align="center">Auditorium C, 45E Wiejska Street [5]</p> <p align="center">Section Chairs: Prof. Agnieszka Jędrzejewska, Prof. Olga Borziak</p>
	<p>Ágata González Caro, Antonio Manuel Merino Lechuga, José Ramón Jiménez, José María Fernández-Rodríguez, Spain</p> <p align="center">Accelerated CO₂ curing of alkali-activated pervious paving blocks with seashell aggregates</p>
	<p align="center">Marzena Kurpińska, Poland</p> <p align="center">Influence of pore structure on mechanical and thermal performance of cementitious composites</p>
	<p>Antonio Manuel Merino Lechuga, Ágata González Caro, José Ramón Jiménez, José María Fernández-Rodríguez, Spain</p> <p align="center">Accelerated carbonation curing of alkali-activated pervious paving blocks</p>
	<p>Farzam Omid Moaf, Marzena Kurpińska, Hakim S. Abdelgader, Mikolaj Miśkiewicz, Barbara Sadowska-Buraczewska, Poland</p> <p align="center">Effect of calcium nitrate and fly ash on the mechanical properties of grout for two-stage concrete</p>
	<p>Isaac O. Agbamu, Marcin Wysokowski, Teofil Jesionowski, Mieczysław Kuczma, Poland</p> <p align="center">Innovative formulation and evaluation of bio-based self-healing concrete for enhanced sustainability and durability</p>
	<p>Carolina Piña Ramírez, Alejandra Vidales Barriguete, Sonia Navarrete Ocaña, Spain</p> <p align="center">Development of an elastic and waterproof cement mortar incorporating polymeric aggregate: an innovative and sustainable solution for screed application</p>
16.30	Coffee Break
17.00	<p align="center">Session 5 – Composite structures</p> <p align="center">Auditorium C, 45E Wiejska Street [5]</p> <p align="center">Section Chairs: Prof. Stanisław Karczmarzyk, Prof. Rafał Szydlowski</p>
	<p align="center">Bilal Ahmed, Poland</p> <p align="center">Finite element study on steel-concrete composite beams with web openings</p>
	<p>Julita Krassowska, Filip Chyliński, Marta Kosior-Kazberuk, Dai Wang, Dawei Shu, Poland</p> <p align="center">Bond-slip behavior between concrete with pozzolanic additives and BFRP and GFRP bars</p>
	<p>Janusz Rogowski, Damian Szczech, Jakub Zając, Renata Kotynia, Poland</p> <p align="center">Investigation of concrete beams reinforced with GFRP or steel bars: an experimental approach</p>
	<p align="center">Filip Broniewicz, Poland</p> <p align="center">Predicting pre-failure behaviour of GFRP lighting poles</p>
	<p>Rafał Kostro, Marta Kosior-Kazberuk, Julita Krassowska, Poland</p> <p align="center">Shear and bending capacities of concrete beams with composite reinforcement</p>
	<p>Jakub Zając, Damian Szczech, Janusz Rogowski, Renata Kotynia, Poland</p> <p align="center">Investigation of concrete beams reinforced with GFRP bars: finite element modelling</p>
	<p>Paul Heber, Oliver Sikorski, Alexander Schumann, Paul-Martin Großkopff, Birgit Beckmann and Steffen Marx, Germany</p> <p align="center">Experimental investigation of the bond behaviour of GFRP reinforcing bars in low-clinker concrete</p>
20.00	<p align="center">Gala Banquet at Kawelin Restaurant</p> <p align="center">10 Legionowa Street, 15-099 Białystok</p>

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Day 3

Schedule	December 5, 2025 (Friday)
9.00	<p>Plenary Session III Auditorium C, 45E Wiejska Street [5] Section Chairs: Prof. Wit Derkowski, Prof. Beata Nowogońska</p> <p>Keynote lecture by Prof. Agnieszka Bigaj-van Vliet Netherlands Organisation for Applied Scientific Research (TNO) The role of the International Federation for Structural Concrete (<i>fib</i>) and <i>fib</i> Model Code 2020 in enabling innovation for concrete structures</p>
9.30	<p>Session 6 – Structural Performance and Design (Part II) Auditorium C, 45E Wiejska Street [5] Section Chairs: Prof. Wit Derkowski, Prof. Beata Nowogońska</p> <p>Anna Szymczak-Graczyk, Tomasz Garbowski, Poland Comparative finite element analysis of sunk wells lowering in varying soil</p> <p>Stanisław Karczmazyk, Poland Two-variable individual-layer nonlocal model of static bending of asymmetric sandwich plate with laminate facings</p> <p>Rafał Walczak, Wit Derkowski, Poland Stirrup-deficient post-tensioned concrete girders – shear failure mode and shear performance analysis</p> <p>Tadeusz Chyży, Czesław Miedziński, Krzysztof Czech, Marcin Orłowski, Dai Wang, Hai Zhang, Jacek Karpiesiuk, Poland Diagnostics of cable post-tensioned concrete girders – the effect of temperature</p> <p>Piotr Noakowski, Germany Longitudinal forces in concrete structures: an ignored phenomenon which severely changes the structure behavior</p> <p>Gili Lifshitz Sherzer, Yuri Ribakov, Israel Numerical and experimental study on fiber content optimization of high-strength steel fiber-reinforced concrete cylinders</p> <p>Abel A. Belay, Marta Kosior-Kazberuk, Julita Krassowska, Poland Impact of basalt minibars on the structural performance of BFRP bar reinforced concrete beams</p>
11.00	<p>Closing of the Conference Prof. Wit Derkowski</p>
11.30	<p>Lunch at Max Bistro Faculty of Mechanical Engineering, Białystok University of Technology 45C Wiejska Street [2]</p>
13.00	<p>Departure for Vilnius, Lithuania from the Faculty of Civil Engineering building [5]</p>

The conference programme was compiled and organized by Mirosław Broniewicz, m.broniewicz@pb.edu.pl

Map of the buildings indicated in the conference program

