

















# INTERNATIONAL CONFERENCE ON "CEMENT - BASED MATERIALS TAILORED FOR A SUSTAINABLE FUTURE"

IN HONOUR OF PROF. SURENDRA P. SHAH AND PROF. TURAN ÖZTURAN

MAY 27-29, 2021





#### **PROGRAM**

cbmt2021.org



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MAY 27-29, 2021 · ISTANBUL / TURKEY



#### Day 1 - May 27, 2021 (Thursday)

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	MAIN HALL A	
11:00 - 11:40 (UTC)	Opening Ceremony - Welcome Remarks	
11:40 - 12:20 (UTC)	<b>Keynote Lecture I</b> - Surendra P. Shah, Northwestern University, USA The basic behavior of Cement Asphalt Emulsion Composites	
12:20 - 13:00 (UTC)	<b>Keynote Lecture II</b> - Turan Özturan, Boğaziçi University, Turkey Lightweight Fly ash Aggregate Production and its Potential Use in Producing Lightweight Concrete	
13:00 - 13:20 (UTC)	Coffee Break	
13:20 - 14:00 (UTC)	Keynote Lecture III - Ravindra Gettu, Indian Institute of Technology Madras	

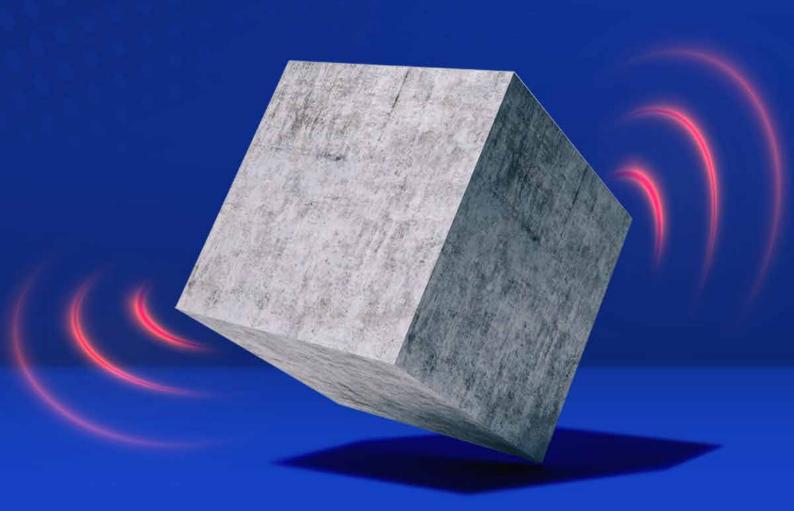


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Day 1 - May 27, 2021 (Thursday)			
	Main Hall A New materials and methods for sustainable structures	Hall B Use of nano-technology in cement-based materials	Hall C New methods for characterization of materials
14:00 - 14:15 (UTC)	Effects of combination of retarders on CSAcement systems B.C. Acartürk, L.E. Burris - The Ohio State University, US	Organomodified nanomontmorillonites for quaternary fibre cementitious nanocompositesand mortars - Comparisons and observations S. Papatzani, K. Paine - Hellenic Military Academy Engineering Athens, Greece	Validation of phenolphthalein test method for quantifying carbonation in specialty cementitioussystems using TGA and Bayesian statistics G. D. Vasudevan, D. Trejo - Oregon State University, USA
14:15 - 14:30 (UTC)	Effect of phase transition temperatures of thephase change material on hydration and mechanical properties of cement paste O. A. Chaudhari, L. Alkhaffaf, H. Khalil, P. Fontana - Research Institutes of Sweden, Sweden	The effect of sewage sludge nano biochar on mechanical properties of mortar M. Sisman, E. Teomete, J. Yanik, U. Malayoğlu -Dokuz Eylül University, Turkey	Autogenous self-healing assessment in engineered cementitious composites through gaspermeability measurements G. Yıldırım, O. Öztürk, M. Şahmaran - Kırıkkale University, Turkey
14:30 - 14:45 (UTC)	Performance of compacted Mg(OH)2 after carbonation A. H. Akca, S. Ma, D. Esposito, S. Kawashima -Columbia University, USA	Heating multifunctionality of concrete with nanoadditions and waste materials O. Galao, F.J. Baeza, B. del Moral, C. Mocan, R.Pla, E. Zornoza, J. Vera-Agullo, P. Garces - University of Alicante, Spain	Numerical modeling of piezoresistivity of smartconcrete under compression A. Mugisha, E. Teomete - Dokuz Eylül University,Turkey
14:45 - 15:00 (UTC)	Use of activated Swedish clay as supplementary cementitious materials G. Plusquellec, A. Babaahmadi, E. L'Hopital, K. Malaga, U. Mueller - RISE Research Institutes of Sweden, Sweden	Effect of colloidal nano silica on the stress- strain behavior of concrete under compression H.N. Türkmenoğlu, H.N. Atahan - Istanbul Technical University, Turkey	Probabilistic model for flexural strength of cementitious materials containing CNTs M. Ramezani, Y.H. Kim, Z. Sun - University of Louisville, USA
15:00 - 15:15 (UTC)	Performance evaluation of calcium silicatehydrate (CSH) based sustainable hardeningaccelerator in concrete Saikat Das, Sonalisa Ray, Sudipta Sarkar - Indian Institute of Technology Roorkee, India	Strategies for conductivity enhancement ofconcrete using waste materials and nano- additions F.J. Baeza, O. Galao, B. del Moral, C. Mocan, R.Pla, E. Zornoza, J. Vera-Agullo, P. Garces - University of Alicante, Spain	Ultrasound based crack depth estimation in steel-fiber reinforced concrete A.S. Kırlangıç - Bahçeşehir University, Turkey

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	Day 2 - May 28, 2021 (Friday)	
	MAIN HALL A	
11:00 - 11:40 (UTC)	<b>Keynote Lecture IV</b> - Nele de Belie, Ghent University, Belgium Durability and sustainability of self-healing concrete	
11:40 - 12:20 (UTC)	Keynote Lecture V - Liberato Ferrara, Politecnico di Milano, Italy	
12:20 - 12:45 (UTC)	Coffee Break	



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Day 2 - May 28, 2021 (Friday)			
	Main Hall A  New materials and methods for sustainable structures	Hall B Materials and mix design for improved durability	Hall C Fresh state performance of cement-based materials
12:45 - 13:00 (UTC)	Building code compliance of 3D concrete walls constructed using 3D printing construction technology in the USA M. Ekenel, M. Sanchez, A. Kazemian, B. Khoshnevis - ICC Evaluation Service, US	High temperature exposed recycled aggregate concretes subjected to compression F.B. Varona, F. Baeza-Brotons, A.J. Tebza-Abril, F.J. Baeza, D. Bru - University of Alicante, Spain	Influence of temperature on rheological propertiesof grout produced from waste volcanic tuff of Cappadocia Region M. Bayram, D. Oktay, N. Yüzer - Yıldız Technical University, Turkey
13:00 - 13:15 (UTC)	Towards tailored cement- based materials with ground calcium carbonates E. Denarie, L. Sofia, P. Gonnon - Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland	Characterization and durability assessment of lime-based grouts D. Oktay, N. Yüzer - Yıldız Technical University,Turkey	Evaluation of the effects of design parameters on the robustness of self-consolidating mixtures by a novel method  T.K. Erdem, E. Bilgiç, Z. Kanpara Cıvaş, H.G. Güner, M.  Dönmez - İzmir Institute of Technology, Turkey
13:15 - 13:30 (UTC)	Carbonation of concrete containing limestonefiller D.K. Panesar, R. Zhang - University of Toronto , Canada	High performance concrete design for megaprojects: 1915 Çanakkale bridge project M. Tarhan, B. Karakayalı, E. Örtemiz, G.Aktaş, H.Bulu, M. Çavuşoğlu - Akçansa Cement, Turkey	Design of low-CO2 cement- based binder for additive manufacturing M. Aydın, Z. B. Bundur, N. Özyurt, M.A. Gülgün - Özyeğin University, Turkey
13:30 - 13:45 (UTC)	Very high strength fast- hardening concrete using composite binders V.R. Falikman, O.O. Kalashnikov - Scientific Research Institute for Concrete and Reinforced Concrete - Russia	The effect of amount and type of fines, and sizeof aggregate on the sorptivity and compressivestrength of SCCs S. N. Bıçakçı, I. Altındağ, C. Şengül, H. Hilmioğlu, U. A. Doğan and M. H. Ozkul	An experimental study on the rheological behavior of materials composing liquid phase of fresh self- compacting concrete (SCC) H. Hoornahad, M. Ahmad Vand, A. Ahmad Vand - Aria University of Sciences and Sustainability, Iran
13:45 - 14:00 (UTC)	Coffee Break		



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Day 2 - May 28, 2021 (Friday)			
	Main Hall A New materials and methods for sustainable structures	Hall B Materials and mix design for improved durability	Hall C Fresh state performance of cement- based materials
14:00 - 14:15 (UTC)	CSC - certification for concrete and its supply chain C. Artelt, M. Scharpf, A. Özbora Tarhan - Heidelberg Cement AG, Germany	The relationship between the steel reinforcement ratio and effective thermal conductivity of reinforced concrete H.L.(Roger) Chen, B.E. Baş, G. Leon, S. Mardmomen - West Virginia University, US	Design of self-compacting concrete used for 1915 Çanakkale Bridge's steel shafts B. Karakayalı, M. Tarhan, E. Örtemiz, İ. Gökalp, Y.Engin, H. Bulu, M. Çavuşoğlu, AKÇANSA Cement, Turkey
14:15 - 14:30 (UTC)	Compressive strength performance of concrete containing calcined laterite as a supplementary cementitious material A.J. Babafemi - Stellenbosch University, SouthAfrica	Effects of concrete properties on the service lifeof reinforced concrete structures C. Çolak, Ö. Şengül - Istanbul Technical University,Turkey	The buildability performance of construction demolition waste-based geopolymeric binder Oğuzhan Şahin, Anıl Kul, Gürkan Yıldırım, Mustafa Şahmaran - Kırşehir Ahi Evran University, Turkey
14:30 - 14:45 (UTC)	Concrete compatible biogranules: a novel healing agent for biobased self-healing concrete M. Sönmez, Y.Ç. Erşan - Hacettepe University, Turkey	High performance lightweight concrete (HPLWAC) design using natural sources Z.C. Girgin - Yıldız Technical University, Turkey	Investigating the influence of natural additives on rheology of cement-paste A. G. Güldoğan, Z. B. Bundur - Özyeğin University,Turkey
14:45 - 15:00 (UTC)	Use of seawater as the mix water for concrete O. G. Aydoğan, S. Bilici, A. H. Akca, E. Balcı, N.Özyurt - Boğaziçi University, Turkey		



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Day 3 - May 29, 2021 (Saturday)		
11:00 - 11:40 (UTC)	<b>Keynote Lecture VI</b> - Zongjin Li, University of Macau, China High crack resistant cement-based materials achieved by on-site polymerization	
11:40 - 12:20 (UTC)	Keynote Lecture VII - Viktor Mechtcherine, TU Dresden, Germany	
12:20 - 12:45 (UTC)	Coffee Break	



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Day 3 - Ma	ay 29, 2021 (Saturday)		
	Main Hall A Fiber-reinforcement in advanced materials	Hall B Assesment and repair of concrete structures	Hall C Geopolymer mortars
12:45 - 13:00 (UTC)	Development of deflection- hardening hybridfiber- reinforced concretes with large share ofcoarse aggregates G. Yıldırım, O. Öztürk, M. Şahmaran - Kırıkkale University, Turkey	Assessment and repair of concrete structures -sustainability considerations P.C. Stivaros - GEI Consultants - US	Utilization of basalt powder as geopolymeric binder B. Aktürk, A.B. Kızılkanat, N. Kabay, V. Akyüncü - Istanbul Bilgi University, Turkey
13:00 - 13:15 (UTC)	The influence of synthetic fibers on chloridemigration coefficient U. Alparslan, İ. İzmit, M. Tarhan, B.C. Karakayalı, E. Örtemiz, B. Erdal - Kordsa Teknik Tekstil A.Ş.,Turkey	The use of 4th generation integral corrosion inhibiting admixture and the experience of a decade in various elements of precast, RCC and PSC elements in large size case studies.  S.K. Manjrekar - Sunanda Specialty Coatings PVT. LTD.	Compressive strength development of alkali activated concretes under ambient and delayedoven curing conditions  A. Niş, E. Kalaycıklı, U. Keklik - Istanbul Gelişim University, Turkey
13:15 - 13:30 (UTC)	Advanced cement-based materials tailored for glass reinforced concrete M. Maraslı, Ö. Akalın, S. Güntepe - FibrobetonA.Ş., Turkey	Case Study of 800 Buildings for Corrosion & Residual Life A.Nakhawa - Structural Engineers and Project Consultants - India	Production and utilization of geopolymer concrete K. Kılınç, Ş. Aldemir - Kırklareli University, Turkey
13:30 - 13:45 (UTC)	Usage of fiber reinforcement for concrete pavement applications and implication of fiberreinforcement to the thickness design O. Özturk, F. Menekşe, N. Özyurt - Boğaziçi University, Turkey	Strategies to optimally valorise recycled concrete aggregates from destroyed buildings inSyria A. Rashwani, B. Kadan, S. Seyedian Choubi, Y. Alhammoudi, M. Guadagnini, T.Hanein, J. Provis, C. Meral Akgul - International Sham University, Syria	Binary use of F-Class fly-ash with different aluminosilicates for the improved mechanical properties of ambient-cured geopolymer mortars O. Öztürk - Konya Technical University, Turkey
13:45 - 14:00 (UTC)	Coffee Break		



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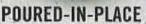
#### Day 3 - May 29, 2021 (Saturday)

Main Hall A Waste materials for sustainable concrete production	
A comparative assessment of waste use in concrete I. Sanrı Karapınar, A. E. Özsoy Özbay - Maltepe University, Turkey	
Ternary blended cement and sustainable concrete made from solid waste pozzolans J.T. Kolawole, K.O. Olusola, A.J. Babafemi - Obafemi Awolowo University, Nigeria	
The utilization of washing aggregate sludge waste in cement mortar N. Kabay, H. Özkan, S. Musaoğulları - Yıldız Technical University, Turkey	
Use of wood ash and glass sand wastes for sustainable concrete production S.C. Bostancı - European University of Lefke, Northern Cyprus	
Use of industrial wastes as an alternative binder to cement for better sustainable building construction  E. Aydın - European University of Lefke, North Cyprus	



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