

Tuesday - 25/06/2013					
18:00 - 20:00	Registi				
	Wednesday - 26/06/2013				
8:00 - 9:20	Registration				
9:20 - 10:00	Opening Ceremony (Room A)				
	Keynote Lecturer 1 (Room A)				
10:00 - 10:40	0:40 Brahim Benmokrane Chairman: Thanasis Triantafillou				
10:40 - 11:00	Coffee Break + P				
11:00 - 13:00	Session 1 (Room A)	Session 2 (Room B)			
	New FRP-based materials, systems and strengthening	Durability and long term behavior of FRP materials and			
	techniques (1)	systems (1)			
	Chairman: Abdeldjelil Belarbi Co-Chairman: Sena-Cruz	Chairman: Luke Bisby Co-Chairman: Andrea Prota			
11:00 - 11:20	Strengthening concrete structures using mineral based	Investigation of moisture behavior of high strength concrete			
	composites	and FRP bond by accelerated durability test			
	T. Blanksvärd, G. Sas, B. Täljsten	J. Shrestha, T. Ueda, D. Zhang, A. Kitami, A. Komori			
11:20 - 11:40	Compressive and flexural behavior of natural flax FRP tube confined coir fiber reinforced concrete	Simplified method for the calculation of long-term			
	L. Yan, N. Chouw, K. Jayaraman	deflections in FRP-strengthened reinforced concrete beams  A.R. Marí, E. Oller, J.M. Bairán, N. Duarte			
11:40 - 12:00	Strengthening of infilled reinforced concrete frames with	Low temperature bond behavior of concrete with braided			
	textile-reinforced mortar (TRM): a study on the development				
	and testing of textile-based anchors	A. Rolland, S. Chataigner, K. Benzarti, L. Dieng, O.			
12:00 - 12:20	L. Koutas, A. Pitytzogia, T.C. Triantafillou, S.N. Bousias  Hybrid composite plates (HCP) for shear strengthening of RC	Bouidarene, J.M. Paul, M. Quiertant, P. Collet Assessment of the long term behaviour of structural			
12.00 12.20	beams	adhesives in the context of NSM flexural strengthening			
	E. Esmaeeli, J.A.O. Barros, H. Baghi	technique with prestressed CFRP laminates			
12 20 12 10	CERR with a second house forter and forbible and	<u>I. G. Costa</u> , J.A.O. Barros			
12:20 - 12:40	GFRP-reinforcement bars as fasteners for high heat- insulating multi-layered sandwich panels	Experimental characterization of moisture, temperature and sustained loading on concrete-FRP bond performance			
	M. Pahn	S. Dash, Y. Jeong, M.M. Lopez, C.E. Bakis			
12:40 - 13:00	GFRP-anchors for concrete slabs with low layer thicknesses	Experimental verification of the behavior of concrete			
	<u>F. Hanz</u> , M. Pahn	members with FRP reinforcement exposed to fire			
13:00 - 14:20	Lun	<u>D. Horak</u> , M. Zlamal, P. Stepanek			
14:20 - 16:20	Session 3 (Room A)	Session 4 (Room B)			
	New FRP-based materials, systems and strengthening	Durability and long term behavior of FRP materials and			
	techniques (2)	systems (2)			
	Chairman: Ashraf Ashour Co-Chairman: Joaquim Barros	Chairman: Brahim Benmokrane			
14:20 - 14:40	Tensile properties of hybrid basalt FRP tendons	Co-Chairman: Miguel Azenha Fatigue Life prediction of reinforced concrete structures			
	X. Wana, N.M. Ali, Z. Wu	strengthened with NSM FRP using cohesive model			
		C. Chen, <u>L. Chenq</u>			
14:40 - 15:00	Prediction of mechanical behaviour of hybrid FRP by	Effect of moisture uptake on the shear stiffness of CFRP			
	interfacial shear stress transfer N.M. Ali, X. Wang, Z. Wu	tendons and the role of the manufacturing route <u>E. Toumpanaki</u> , J.M. Lees, G.P. Terrasi			
15:00 - 15:20		Fatigue tests on concrete bridge deck with GFRP stay-in-			
	by hybrid FRP sheet and fiber rope	place structural formwork with t-shape ribs			
15:20 - 15:40	T.C. Rousakis, M.E. Gkouma	P. Richardson, M. Nelson, <u>A. Fam</u> Time dependent deflections of normal and high strongth			
15:20 - 15:40	Size effect of bi-directional fibre patch anchors used to enhance the performance of FRP laminates	Time-dependent deflections of normal and high strength concrete beams reinforced with GFRP bars			
	R. Kalfat, R. Al-Mahaidi	C. Miàs, L. Torres, A. Turon			
15:40 - 16:00	Newly developed anchoring element for prestressed frp	Behavior of CFRP confined low strength concrete columns			
	reinforcement – functionality and design	under temperature changes			
16:00 - 16:20	<u>F. Girale</u> , P. Štěpánek, D. Horák, P. Daněk, V. Kostiha  Assessment of the effectiveness of prestressed NSM CFRP	<u>B. Erdil</u> , U. Akyüz, İ.Ö. Yaman Outdoor durability of concrete confined with CFRP			
13.55 10.20	laminates for the flexural strengthening of RC beams	T. Tomiyama, I. Nishizaki, P. Labossière, K.W. Neale, M.			
	M. Rezazadeh, I. Costa, J. Barros	Demers			
16:20 - 16:50	Coffee Break + Poster Session 1				
16:50 - 18:30	Session 5 (Room A)	Session 6 (Room B)			
	New FRP-based materials, systems and strengthening techniques (3)	Test recommendations for reliable characterization of FRP materials and systems			
	Chairman: Carlo Pellegrino	Chairman: Chris Burgoyne			
	Co-Chairman: Eduardo Pereira	Co-Chairman: Isabel Valente			



16:50 - 17:10	Flexural performance of shallow reinforced concrete beams	A comparison of on-site and elevated temperature cure of	
10.30 - 17.10	strengthened with fiber reinforced geopolymers	an FRP strengthening adhesive	
	C. Menna, D. Asprone, C. Ferone, F. Colangelo, A. Balsamo, A.		
	Prota, R. Cioffi, G. Manfredi	<u>D. Othman</u> , 1.3. Strutjoru, E. A. Disby	
17:10 - 17:30	Performance at elevated temperatures of post-cured CFRP	Effects of heating on FRP confinement of concrete	
17.120 17.100	strengthened reinforced concrete beams	I. Rickard, <u>L. Bisby</u> , T. Stratford, S. Hulsberg	
	G.W.R. Shier, M.F. Green		
17:30 - 17:50	Square concrete columns confined by GFRP tube or steel ties	An improved methodology for tensile tests on fibre	
	A. Abouzied, <u>R. Masmoudi</u>	reinforced polymer wraps	
		G. Ramesh, R. Gettu, B.H. Bharatkumar	
17:50 - 18:10	Eccentrically loaded hybrid reinforced concrete slender	Tests of continuous concrete slabs reinforced with basalt	
	columns	fibre reinforced polymer bars	
	T.A. Hales, <u>C.P. Pantelides</u> , L.D. Reaveley	<u>M.E.M. Mahroug</u> , A.F. Ashour, D. Lam	
18:10 - 18:30	Study on the effects of heat on BFRP versus steel reinforced	Durability of CFRP-laminate strengthening	
	concrete beams	<u>R. Helmerich</u> , B. Milmann, J. Wöstmann, S. Feistkorn	
	A. Villanueva, S.M.D. Aguiar		
19:30 - 21:30	WELCOME RECEPTION		
	Thursday - 27/06/2		
9:00 - 11:00	Session 7 (Room A)	Session 8 (Room B)	
	Bond behavior of FRP systems (1)	Reinforcement and strengthening performance of FRP	
	Chairman: Enzo Martinelli	systems (1)	
	Co-Chairman: H. Toutanji	Chairman: Amnon Katz	
0.00 0.30	Naval calayed anchorage system for internally reinfarral	Co-Chairman: João R. Correia	
9:00 - 9:20	Novel splayed anchorage system for internally reinforced concrete members	Mechanical behaviour of ultra high-performance fibrous- concrete beams reinforced by internal FRP bars	
	K.Z. Kostova, T.J. Ibell, A.P. Darby, M.C. Evernden	E. Ferrier, L. Michel, B. Zuber	
9:20 - 9:40	Experimental study of the bond behaviour of NSM FRP	Experimental and analytical investigations on the behavior	
3.20 3.40	reinforcements using a modified beam-test	of FRP-reinforced concrete element subjected to pure shear	
	<u>D. Cisneros</u> , A. Arteaga, A. De Diego, A. Alzate, R. Perera	G. Yang, M. Zomorodian, <u>A. Belarbi</u> , A.S. Ayoub, B. Acun	
9:40 - 10:00	Evaluation of bond quality at GFRP-concrete interface using	Shear capacity of HPFRC beams flexurally reinforced with	
	infrared images	steel and prestressed GFRP bars	
	M.M. Caldeira, D.V. Vieira, I. J.Padaratz, R. C. de APinto	<u>F. Soltanzadeh</u> , H. Mazaheripour, J. Barros, J. Sena-Cruz	
10:00 - 10:20	Transversely compressed- and restrained shear joints	Experimental study on the behavior of prestressed concrete	
	J.W. Schmidt, C.S. Hansen	beams with internal BFRP reinforcement	
		M. Pearson, T. Donchev	
10:20 - 10:40	FEM-based modelling of NSM-FRP bond behavior	Strength of concrete beams reinforced with GFRP bars	
	I.A. Sharaky, J.A.O. Barros, L. Torres	A.M.A.J. Teixeira, L.A.V. Carneiro, R.A. Menezes	
10:40 - 11:00	Evaluation of code formulations for NSM CFRP bond	Anchoring behavior of BFRP internal reinforcement at	
	strength of RC elements	normal and elevated temperatures	
11.00 11.00	M. Coelho, J. Sena-Cruz, S. Dias, T. Miranda	T. Donchev, K. Krier, D. Petkova	
11:00 - 11:20	Coffee Break + F		
11:20 - 13:00	Session 9 (Room A)	Session 10 (Room B)	
	Bond behavior of FRP systems (2)	Reinforcement and strengthening performance of FRP	
	Chairman: Renata Kotynia	systems (2) Chairman: Stijn Matthys	
	Co-Chairman: Claudio Mazzotti	Co-Chairman: Eva Oller	
11:20 - 11:40	Bond studies of HSC joints confined with stirrups, steel	Effectiveness of FRP wrapping on internal reinforcement	
11.70	fibers, or FRP sheets	buckling for non-circular concrete members	
	B. Hamad, H. Mallat	V. Giamundo, <u>G.P. Lignola</u> , A. Prota , G. Manfredi	
11:40 - 12:00	Bond behaviour of pre-tensioned CFRP tendons in UHPFRC	Strength prediction of SFRP confined concrete columns	
	A. Stark, J. Hegger	K. Abdelrahman, <u>R. El-Hacha</u>	
12:00 - 12:20	Flexural retrofitting design for strength and debonding	Experimental evaluation of CFRP wrapping in repairing	
	prevention	damaged circular RC columns	
	G.X. Guan, <u>C.J. Burgoyne</u>	N. Chikh, <u>A. Laraba</u> , R. Benzaid, H. Mesbah, N. Djebbar	
12:20 - 12:40	Determination of debonding fracture energy using wedge-	Strengthening slender reinforced concrete columns using	
	split test	longitudinal bonded CFRP laminates	
	G.X. Guan, C.J. Burgoyne	P. Sadeghian, A. Fam	
12:40 - 13:00	Experimental investigation on the long-term durability of	Toward performance-based design of FRP confinement of	
	bond between FRP and masonry substrates	concrete columns	
10.06	B. Ghiassi, D.V. Oliveira, P.B. Lourenço	J. Liu, <u>S.A. Sheikh</u>	
13:00 - 14:20	Lur	<del>,</del>	
14:20 - 16:20	Session 11 (Room A)	Session 12 (Room B)	
	Reinforcement and strengthening performance of FRP	Reinforcement and strengthening performance of FRP	
	systems (3)	systems (4)	



	Chairman: Raafat El-Hacha	Chairman: Kent Harries
	Co-Chairman: Chris Burgoyne	Co-Chairman: Jacob Schmidt
14:20 - 14:40	Punching shear strengthening of reinforced concrete flat	A parametric study on moment redistribution in FRP-
	slabs with carbon fiber-reinforced polymer reinforcement	strengthened continuous RC beams
	R. Koppitz, T. Keller, A. Kenel	A. Tajaddini, <u>T.J. Ibell</u> , A.P. Darby, M. Evernden
14:40 - 15:00	Assessment of the effectiveness of the NSM shear	Assessment of hybrid EBR-NSMR strengthening technique
	strengthening technique for deep T cross section RC beams	applicable to RC slabs
	<u>J. Barros</u> , S. Dias	<u>S.C. Florut</u> , V. Stoian , T. Nagy-György, D. Dan, D. Diaconu
15:00 - 15:20	Retrofitting of concrete T-girders pre-damaged in shear with	Experimental study on flexural capacity of RC beams
	CFRP composites and mechanical end anchorage	externally bonded with CFRP strand sheet
	T. El-Maaddawy, Y. Chekfeh	Y. Takahashi, Y. Sato, A. Kobayashi, M. Arazoe
15:20 - 15:40	End-anchorage systems to prevent EB FRP sheets debonding	Efficiency of CFRP NSM strips and EBR laminates for flexural
	in shear strengthened RC beams A. Mofidi, O. Chaallal, B. Benmokrane, K.W. Neale	strengthening of RC beams
15:40 - 16:00	Strengthening reinforced concrete beams in shear using	A. Balsamo, A. Bilotta, F. Ceroni, E. Nigro, M. Pecce Experimental study on the effect of load distribution on
15.40 - 16.00	mechanically fastened FRP strips	intermediate crack debonding failure of FRP-plated RC
	M.G. Oliva, L.C. Bank, D. Johnson, T. DuFour	beams
	Wild. Gird, <u>Lie. Barn</u> , B. Johnson, T. Baroar	B. Fu, J.G. Teng, G.M. Chen, J.F. Chen, Y.C. Guo
16:00 - 16:20	Experimentally observed behaviour of CFRP sheet	Performance evaluation of RC beams strengthened with
	strengthening across a shear plane	externally bonded FRP rod
	M. Grusova, T.J. Ibell, A.P. Darby, M. Evernden	<u>K. Iwashita</u> , Z.S. Wu, D. Sato, N. Isogai, Y. Yagi, H. Uchino, M.
		Yoshida, X. Wang
16:20 - 16:50	Coffee Break + F	Poster Session 2
16:50 - 18:30	Session 13 (Room A)	Session 14 (Room B)
	Bond behavior of FRP systems (3)	Reinforcement and strengthening performance of FRP
	Chairman: Lluís Torres	systems (5)
	Co-Chairman: Emidio Nigro	Chairman: Tim Ibell
16.50 17.10	No control to control	Co-Chairman: Salvador Dias
16:50 - 17:10	Numerical investigation on the effectiveness of FRP in	Behavior of reinforced concrete beams strengthened with
	repairing corrosion damaged concrete beams P.K.M. Moniruzzaman, <u>A. Rteil</u>	CFRP under long-term load action  M. Daugevičius, J. Valivonis
17:10 - 17:30	Prediction of FRP/concrete interface debonding using	Static loading tests on reinforced pc girders with
17.10 - 17.50	elasticity theory	pretensioned AFRP sheet by using removable pretensioning
	S. Ueno, <u>H. Toutanji</u> , R. Vuddandam	device
	or cerro, <u> roacan,</u> , raaaaa	<u>Y. Kurihashi</u> , N. Kishi, H. Mikami
17:30 - 17:50	Experimental and analytical identification of interfacial bond	Effects of pretension force and sheet volume on the load-
	characteristics in adhesively bonded joints	carrying behavior of a flexurally reinforced RC beam with a
	S.A. Hadigheh, R.J. Gravina, S. Setunge	pretensioned AFRP sheet
		<u>N. Kishi</u> , Y. Kurihashi, H. Mikami, M. Komuro
17:50 - 18:10	The role of FRP axial stiffness on the concrete bond strength	Use of FRP grid for the composite action of concrete
	<u>C. Mazzotti</u>	sandwich panels
		J. Soriano, <u>S. Rizkalla</u>
18:10 - 18:30	Bond behavior of the FRCM-concrete interface	Mechanical behaviour of ultra high-performance fibrous-
	T. D'Antino, L.H. Sneed, <u>C. Carloni</u> , C. Pellegrino	concrete wood panels reinforced by FRP bars
	Fuildon 28/06/20	E. Ferrier, L. Michel
9:00- 10:20	Friday - 28/06/20 Session 15 (Room A)	Session 16 (Room B)
9.00- 10.20	Health monitoring through FRP systems and quality control	Codes, standards and design guidelines for FRP-based
	+ Field applications of FRP reinforcement: sound and	reinforced/strengthened structures (1)
	innovative case studies	Chairman: Luc Taerwe
	Chairman: Sami Rizkalla	Co-Chairman: Chris Pantelides
	Co-Chairman: Amir Fam	
9:00 - 9:20	Co-Chairman: Amir Fam Beam spectral element with FRP debonding	The third edition of the Concrete Society's Technical Report
9:00 - 9:20		55
	Beam spectral element with FRP debonding E. Sevillano, R. Perera, <u>R. Sun</u>	55 <u>A. Darby</u> , J. Shave
9:00 - 9:20 9:20 - 9:40	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for	55 <u>A. Darby</u> , J. Shave Analytical truss models for prediction the shear strength of
	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members
9:20 - 9:40	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné	55 <u>A. Darby</u> , J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members <u>W. Teo</u> , Y. Hor
	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné  Construction and testing of hybrid-reinforced concrete	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members  W. Teo, Y. Hor  Layout design aspects in externally bonded FRP systems for
9:20 - 9:40	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné  Construction and testing of hybrid-reinforced concrete bridge deck slabs: Ste-Catherine overpass twin bridges	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members W. Teo, Y. Hor  Layout design aspects in externally bonded FRP systems for strengthening of two-way slabs
9:20 - 9:40 9:40 - 10:00	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné  Construction and testing of hybrid-reinforced concrete bridge deck slabs: Ste-Catherine overpass twin bridges  E. Ahmed, B. Benmokrane	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members W. Teo, Y. Hor  Layout design aspects in externally bonded FRP systems for strengthening of two-way slabs  D. Elmalich, O. Rabinovitch
9:20 - 9:40	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné  Construction and testing of hybrid-reinforced concrete bridge deck slabs: Ste-Catherine overpass twin bridges  E. Ahmed, B. Benmokrane  Filed application of GFRP bars in reinforced concrete water	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members  W. Teo, Y. Hor  Layout design aspects in externally bonded FRP systems for strengthening of two-way slabs  D. Elmalich, O. Rabinovitch  Shear capacity of FRP reinforced concrete beams
9:20 - 9:40 9:40 - 10:00	Beam spectral element with FRP debonding  E. Sevillano, R. Perera, R. Sun  Design example of use of FRP pultruded members for electricity transmission Towers  A. Godat, F. Legeron, V. Gagné  Construction and testing of hybrid-reinforced concrete bridge deck slabs: Ste-Catherine overpass twin bridges  E. Ahmed, B. Benmokrane	55  A. Darby, J. Shave  Analytical truss models for prediction the shear strength of FRP strengthened reinforced concrete members W. Teo, Y. Hor  Layout design aspects in externally bonded FRP systems for strengthening of two-way slabs  D. Elmalich, O. Rabinovitch



	Keynote Lecturer 2 (Room A)		
10:20 - 11:00	Stijn Matthys		
	Chairman: Lawrence Bank		
11:00 - 11:20	Coffee Break		
11:20 - 13:00	Session 17 (Room A)	Session 18 (Room B)	
	Reinforcement and strengthening performance of FRP	Advanced numerical models and simulations for FRP based	
	systems (6)	reinforced/strengthened structures (1)	
	Chairman: Maurizio Guadagnini	Chairman: Christian Carloni	
11:20 - 11:40	Co-Chairman: Maria Lopez  Blast resistance of FRP sheet and fiber reinforced concrete	Co-Chairman: Peter Bischoff  Modeling of biaxial bending in RC columns strengthened	
11:20 - 11:40	slabs	with externally applied reinforcement in combination with	
	Y.S. Yoon, K.H. Min, J. Lee, L. Li	confinement	
	11.3. 10011, K.11. Willi, <u>3. Lee,</u> L. Li	D.A. Bournas, T.C. Triantafillou	
11:40 - 12:00	Impact testing of RC round columns built using GFRP tubes	Finite element modeling of hybrid MF/EB FRP strengthened	
11.40 12.00	as stay-in-place formwork	RC beams	
	Y. Qasrawi, <u>P.J. Heffernan</u> , A. Fam	<u>U. Ebead</u> , H. Saeed	
12:00 - 12:20	Blast resistance capacity of FRP retrofitted RC panels	Numerical assessment of dapped beam ends retrofitted	
	P.F. Silva, T. Alkhrdaji	with FRP composites	
		A.C. Dăescu, T. Nagy-György, B.G. Sas, J.A.O. Barros, <u>C.</u>	
		<u>Popescu</u>	
12:20 - 12:40	Splices between external CFRP and internal reinforcing steel	Numerical strategies for modelling RC columns confined by	
	P. Keenan, <u>K.A. Harries</u>	means of FRP composites	
		C. Ceccato, T. D'Antino, G. Mazzucco, C. Pellegrino	
12:40 - 13:00	Concrete columns reinforced with GFRP and BFRP	Contribution to the understanding of the mechanical	
	S.A. Madatyan, <u>A.E. Lapshinov</u>	behaviour of CFRP-strengthened RC beams in fire:	
		experimental and numerical assessment	
		J.P. Firmo, M.R.T. Arruda, J.R. Correia	
13:00 - 14:20	Lur	ch	
14:20 - 16:40	Session 19 (Room A)	Session 20 (Room B)	
	Codes, standards and design guidelines for FRP-based	Advanced numerical models and simulations for FRP based	
	reinforced/strengthened structures (2)	reinforced/strengthened structures (2)	
	Chairman: Kenneth Neale	Chairman: Zhishen Wu	
	Co-Chairman: Pedro Silva	Co-Chairman: Mark Green	
14:20 - 14:40	Minimum thickness values for deflection control of FRP	Investigation of long-span suspension bridge with FRP cables	
	reinforced concrete	by FE simulation	
14:40 - 15:00	S. Veysey, <u>P.H. Bischoff</u> Shear-induced deformation of FRP RC beams	<u>Y. Yana,</u> X. Wang, Z. Wu, G. Wu  Modeling of failure mode of shear strengthened RC beams	
14.40 - 15.00	F. Yang, M. Guadagnini	with FRP sheets based on FE simulation	
	<u>r. rand,</u> w. Gadagiiiii	A.M. Sayed, X. Wang, Z. Wu	
15:00 - 15:20	Probabilistic models for mechanical properties of	Numerical study on load-carrying behavior of RC beams	
15.00 15.20	prefabricated CFRP	reinforced with pretensioned AFRP sheet	
	S. Gomes, L. Neves, D. Dias-da-Costa, P. Fernandes, E. Júlio	M. Komuro, N. Kishi, Y. Kurihashi, H. Mikami	
15:20 - 15:40	From national approval to an European Standard - ways to a	Analytical and numerical studies of mechanically-fastened	
	safer and wider application of FRP rebars	FRP systems: state-of-the-art	
	A. Weber	A. Napoli, <u>E. Martinelli</u> , R. Realfonzo, F. Matta, L.C. Bank,	
		V.L. Brown	
15:40 - 16:00	Shear behavior of concrete beams reinforced with basalt	A partial interaction model for prediction of intermediate	
	fiber reinforcement polymer (BFRP) bars	crack debonding in FRP-reinforced concrete beams under	
	T. Ovitigala, <u>M.A. Issa</u>	bending	
		A. Razaqpur, <u>A. Mostafa</u>	
16:00 - 16:20	Flexural capacity of FRP strengthened unbonded	Modeling the fire endurance of insulated near surface	
	prestressed concrete members: proposed design guidelines	mounted FRP strengthened beams	
	F.M. El Meski, <u>M.H. Harajli</u>	A. Palmieri, <u>S. Matthys</u> , L. Taerwe	
16:20 - 16:40	Coffee Break		
16:40 - 17:20	SC@UM Competition (Room A)		
17:20 - 18:00	Closing ceremony (Room A)		
19:45 - 23:30	BANQUET DINNER		
15.45 - 25.30	DANQUEI DINNEK		