## SOCIAL PROGRAM

**Welcome Reception**
*Tuesday 7th December 2004* *7:00pm – 9:00pm*
*Equinox Room, Union Building*
*University of Adelaide, North Terrace Campus*

This is an opportunity to renew acquaintances over a drink and canapés prior to the commencement of the technical program. The registration desk will be located near the Equinox Room and will be open during the Welcome Reception.

Dress: Smart casual.

**The Australian Opal Collection Exhibit** *[Optional Visit – No Charge]*
*Wednesday 8th December 2004* ***or*** *Thursday 9th December 2004* *approx 7:00pm-9:00pm*
*14 King William Street, Adelaide*

This optional visit will be of particular interest to international delegates and accompanying persons. After a short presentation a selection of Australian wines will be available for tasting and visitors will have the opportunity to purchase articles at discounted rates.

Space is limited and guests wishing to attend will be asked to book their place on a sign-up sheet, which will be available near the conference registration desk. Guests are required to make their own way to and from the venue which is approximately a 10 minute walk from The University of Adelaide.

Dress: Smart casual.

**Conference Dinner**
*Friday 10th December 2004* *7:30pm – 11:30pm*
*Ballroom*
*Radisson Playford Hotel, North Terrace, Adelaide*

Enjoy the evening at one of Adelaide's finest boutique hotels with an all-inclusive dinner, drinks and entertainment. This is an opportunity for you to get together with new and old friends for a fun filled night.

Guests are required to make their own way to and from the venue which is approximately a 10 minute walk from The University of Adelaide.

Pre-dinner drinks will be served from 7:30pm – 8:00pm in the ballroom foyer.

Dress: Semi-formal / Business.

**Conference Tour**
*Saturday 11th December 2004* *8:45am – 5:00pm*
*Barossa Valley Winery and Sightseeing Tour*

Enjoy the day in one of South Australia's premier wine regions, the Barossa Valley. The tour will include winery tours, sightseeing and lunch (drinks not included).

Guests are required to make their own way to and from the departure point on King William St near Victoria Dr by the Army Barracks, which is approximately a 5 minute walk from The University of Adelaide. The buses will depart at 9:00am ***sharp***, please arrive no later than 8:45am, otherwise you will miss the bus.

Dress: Comfortable casual.

***PRELIMINARY***

# CONFERENCE PROGRAM AT A GLANCE

| Approx. Time* | Wednesday 8th December 2004 | | Thursday 9th December 2004 | | Friday 10th December 2004 | |
|---|---|---|---|---|---|---|
| | Registration & Arrival Tea/Coffee | | ASCE JCC Editorial Board Member Meeting | | | |
| 0800 | Conference Opening & Welcome Address | | Registration & Arrival Tea/Coffee | | Registration & Arrival Tea/Coffee | |
| 0830 | **Keynote Presentation**<br>Strengths and limitations of fibre reinforced polymers in the civil infrastructure, material advances and the influences of present and future developments<br>***L.C. Hollaway*** *& I. Hackman* | | **Keynote Presentation**<br>ISIS technologies for civil engineering smart infrastructure<br>***A.A. Mufti*** | | **Keynote Presentation**<br>Mechanically-fastened FRP (MF-FRP) – a viable alternative for strengthening RC members<br>***L.C. Bank*** | |
| 0900 | **Keynote Presentation**<br>Bond-slip models for interfaces between externally bonded FRP and concrete<br>***J.G. Teng****, X.Z. Lu, L.P. Ye & J.J. Jiang* | | **Keynote Presentation**<br>Structural strengthening and integrity with hybrid FRP composites<br>***Z.S. Wu*** | | **Keynote Presentation**<br>Strengthening of scaled steel-concrete composite girders and steel monopole towers with CFRP<br>*D.Schnerch &* ***S. Rizkalla*** | |
| | Cinema | Margaret Murray Room | Cinema | Margaret Murray Room | Cinema | Margaret Murray Room |
| 0930 | **Special Session**<br>Long-term monitoring | Material and products | Practical applications | Confinement of concrete in compression | **Special Session**<br>FRP research in Southeast Asia | Flexural strengthening of concrete beams and slabs (B) |
| | Morning Tea | | Morning Tea | | Morning Tea | |
| 1130 | Bond and interfacial stresses between FRP and concrete (A) | Strengthening of beam-column joints | Flexural strengthening of concrete beams and slabs (A) | FRP structures (A) | **Special Session**<br>FRP research in China | Strengthening of concrete columns and walls |
| 1300 | Group Photo & Lunch | | Lunch | | Lunch | |
| 1400 | **Keynote Presentation**<br>Health monitoring and durability of FRP composites in bridge renewal<br>***V.M. Karbhari*** | | **Keynote Presentation**<br>The use of FRP as embedded reinforcement in concrete<br>***P. Waldron*** | | **Keynote Presentation**<br>New shear bond model for FRP-concrete interface – from modeling to application<br>***T. Ueda*** *& J.G. Dai* | |
| | Cinema | Margaret Murray Room | Cinema | Margaret Murray Room | Cinema | Margaret Murray Room |
| 1430 | **Special Session**<br>FRP research in Italy | Durability | **Special Session**<br>FRP research in the Middle East | Shear and torsional strengthening of concrete beams | Strengthening of timber and masonry structures | Strengthening of steel structures |
| | Afternoon Tea | | Afternoon Tea | | Afternoon Tea | |
| 1700 | IIFC General Meeting | | Debonding failure in FRP strengthened beams | Concrete structures reinforced or prestressed with FRP | Bond and interfacial stresses between FRP and concrete (B) | FRP structures (B) |
| | IIFC meetings / Opal exhibit | | IIFC meetings / Opal exhibit | | Conference Dinner | |

**** Times listed are only approximate. Refer to the detailed program for actual times.***

***PRELIMINARY***

# CONFERENCE PROGRAM

| Wednesday 8th December 2004<br>Morning Sessions | | | | | |
|---|---|---|---|---|---|
| 0800 | 0830 | **Registration & Arrival Tea/Coffee**<br>*Eclipse Room* | | 0800 | 0830 |
| 0830 | 0850 | **Conference Opening & Welcome Address**<br>*Cinema*<br>Professor J. McWha, Vice Chancellor & Professor P. Dowd, Executive Dean ECMS<br>Chairperson: R. Seracino | | 0830 | 0850 |
| 0850 | 0920 | **Keynote Presentation**<br>*Cinema*<br>Strengths and limitations of fibre reinforced polymers in the civil infrastructure, material advances and the influences of present and future developments<br>***L.C. Hollaway** & I. Hackman* | | 0850 | 0920 |
| 0920 | 0950 | **Keynote Presentation**<br>*Cinema*<br>Bond-slip models for interfaces between externally bonded FRP and concrete<br>***J.G. Teng**, X.Z. Lu, L.P. Ye & J.J. Jiang* | | 0920 | 0950 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Special Session A1**<br>**Long-term Monitoring** | **Session B1**<br>**Material and Products** | | |
| 1000 | 1020 | Field monitoring of concrete structures with internal or external FRP reinforcement (Invited Paper)<br>*J.P. Newhook* | Test and analysis of the basic mechanical properties of CFRP sheets<br>*Y.X. Yang, Q.R. Yue, J.S. Cao, Y. Zhao & P. Cai* | 1000 | 1020 |
| 1020 | 1040 | EIS-based sensors for NDE of FRP-strengthened concrete beams: experiments and finite element simulation<br>*R. Harichandran, S. Hong, L. Udpa, L. & Z. Zeng* | Mineral based bonding of CFRP to strengthen concrete structures<br>*B. Täljsten* | 1020 | 1040 |
| 1040 | 1100 | Strain monitoring techniques for FRP laminates<br>*G.A. Sarazin & J.P. Newhook* | Coaxially reinforced composite rods<br>*V.N. Kestelman, G.E. Freger & D.G. Freger* | 1040 | 1100 |
| 1100 | 1130 | **Morning Tea**<br>*Eclipse Room* | | 1100 | 1130 |
| | | **Session A2**<br>**Bond and Interfacial Stresses Between FRP and Concrete (A)** | **Session B2**<br>**Strengthening of Beam-Column Joints** | | |
| 1130 | 1150 | Tests for the evaluation of bond properties of FRP bars in concrete<br>*M. Guadagnini, K. Pilakoutas, P. Waldron & Z. Achillides* | Evaluation of wrap thickness in CFRP-strengthened concrete T-joints<br>*A. Parvin & S. Wu* | 1130 | 1150 |
| 1150 | 1210 | On the interfacial mechanics of FRP-strengthened concrete structures<br>*U.A. Ebead, K.W. Neale & L. Bizindavyi* | CFRP-retrofitted RC exterior beam-column connections under cyclic loads<br>*S.S. Mahini, H.R. Ronagh & S.T.Smith* | 1150 | 1210 |
| 1210 | 1230 | Bond behavior of CFRP rods in RC beam with hanging region<br>*R. Thamrin, T.T. Ngoc, S. Hir, N. Yoshikawa & T. Kaku* | Flexural repair of RC exterior beam-column joints using CFRP sheets<br>*S.S. Mahini, H.R. Ronagh & P.F. Dux* | 1210 | 1230 |
| 1230 | 1250 | Dowel resistances of bond interfaces between FRP sheets and concrete<br>*J.G. Dai, T. Ueda, Y. Sato & H. Jaqin* | Multi-level seismic rehabilitation of existing frame systems and subassemblies using FRP composites<br>*S. Pampanin, D. Bolognini, A. Pavese, G. Magenes & G.M. Calvi* | 1230 | 1250 |
| 1250 | 1300 | **Group Photo**<br>*Barr Smith Library (weather permitting)* | | 1250 | 1300 |
| 1300 | 1400 | **Lunch**<br>*Equinox Room* | | 1300 | 1400 |

| Wednesday 8th December 2004<br>Afternoon Sessions | | | | | |
|---|---|---|---|---|---|
| 1400 | 1430 | **Keynote Presentation**<br>*Cinema*<br>Health monitoring and durability of FRP composites in bridge renewal<br>***V.M. Karbhari*** | | 1400 | 1430 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Special Session A3**<br>**FRP Research in Italy** | **Session B3**<br>**Durability** | | |
| 1440 | 1500 | FRP research in Italy – Towards a new code for FRP strengthening<br>(Invited Paper)<br>*G. Monti* | The response and modeling of composite structures under fire exposure<br>*S. Boyd, J. Bausano, J. Lesko, S. Case & H. Halverson* | 1440 | 1500 |
| 1500 | 1520 | Bond tests on concrete elements with CFRP and anchorage systems<br>*F. Ceroni & M. Pecce* | A study on the fire behavior of multifunctional and fire resistant FRP building components<br>*T. Keller, C. Tracy & A. Zhou* | 1500 | 1520 |
| 1520 | 1540 | Flexural strengthening of RC beams using emerging materials: ultimate behavior<br>*A. Prota, G. Manfredi, A. Nanni, E. Cosenza & M. Pecce* | Temperature effect on bonding and debonding behavior between FRP sheets and concrete<br>*Z.S. Wu, K. Iwashita, S. Yagashiro, T. Ishikawa & Y. Hamaguchi* | 1520 | 1540 |
| 1540 | 1600 | Flexural strengthening of RC beams using emerging materials: cracking behavior<br>*F. Ceroni, M. Pecce, A. Prota & G. Manfredi* | Durability of reinforced concrete structures with externally bonded FRP sheets<br>*T. Shimomura & K. Maruyama* | 1540 | 1600 |
| 1600 | 1620 | FRP-confined concrete constitutive relationships<br>*C. Faella, R. Realfonzo & N. Salerno* | Determining hydrolysis behavior and durability from short term water sorption data<br>*T. Wells & R.E. Melchers* | 1600 | 1620 |
| 1620 | 1640 | Debonding in FRP strengthened RC beams: comparison between code provisions<br>*C. Faella, E. Martinelli & E. Nigro* | Service life prediction of GFRP pipes in aggressive environments<br>*M. Farshad, A. Necola & P. Flüeler* | 1620 | 1640 |
| 1640 | 1710 | **Afternoon Tea**<br>*Eclipse Room* | | 1640 | 1710 |
| 1710 | 1800 | **IIFC General Meeting**<br>*Cinema* | | 1710 | 1800 |
| **IIFC Meeting(s)** *[Committee(s) and Room(s) TBA]*<br>**& The Australian Opal Collection Exhibit** *[Optional Visit]* | | | | | |

| Thursday 9th December 2004<br>Morning Sessions | | | | | |
|---|---|---|---|---|---|
| *0730* | *0830* | **ASCE JCC Editorial Board Member Meeting**<br>*Prof. C. Bakis* | | *0730* | *0830* |
| 0800 | 0830 | **Registration & Arrival Tea/Coffee**<br>*Eclipse Room* | | 0800 | 0830 |
| 0830 | 0900 | **Keynote Presentation**<br>*Cinema*<br>ISIS technologies for civil engineering smart infrastructure<br>***A.A. Mufti*** | | 0830 | 0900 |
| 0900 | 0930 | **Keynote Presentation**<br>*Cinema*<br>Structural strengthening and integrity with hybrid FRP composites<br>***Z.S. Wu*** | | 0900 | 0930 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Session A4**<br>**Practical Applications** | **Session B4**<br>**Confinement of Concrete in Compression** | | |
| 0940 | 1000 | A case study of application of FRP composites in strengthening of the reinforced concrete headstock of a bridge structure<br>*A. Nezamian & S. Setunge* | Behaviour of large-scale columns confined with FRP composites in compression<br>*H. Toutanji, S. Matthys, L. Taerwe & K. Audenaert* | 0940 | 1000 |
| 1000 | 1020 | Progressive failure analysis of a composite army bridge<br>*R. Iyer, A. Mosallam & F. Abdi* | Theoretical model for concrete confined with FRP<br>*Y.L. Huang, J.G. Teng, L. Lam & L.P. Ye* | 1000 | 1020 |
| 1020 | 1040 | CFRP strengthening and monitoring of the Gröndals Bridge in Sweden<br>*B. Täljsten & A. Hejll* | Strengthening of RC elements using CFRP: the French studies and the main results<br>*J.L. Clément* | 1020 | 1040 |
| 1040 | 1110 | **Morning Tea**<br>*Eclipse Room* | | 1040 | 1110 |
| | | **Session A5**<br>**Flexural Strengthening of Concrete Beams and Slabs (A)** | **Session B6**<br>**FRP Structures (A)** | | |
| 1110 | 1130 | Fatigue and post-fatigue quasi-static performance of RC-beams externally strengthened with CFRPs<br>*C. Gheorghiu, P. Labossière & J. Proulx* | Behaviour of hybrid FRP-concrete-steel double-skin tubular columns<br>*J.G. Teng, T. Yu & Y.L. Wong* | 1110 | 1130 |
| 1130 | 1150 | A generic design approach for all adhesively-bonded longitudinally-plated RC beams<br>*D.J. Oehlers* | Flexural performance of newly developed hybrid FRP-concrete beams<br>*W.X. Li & Z.S. Wu* | 1130 | 1150 |
| 1150 | 1210 | Prestressed near surface mounted reinforcement (NSMR) for strengthening concrete beams<br>*H. Nordin & B. Täljsten* | A new fibre composite sandwich panel<br>*M.F. Humphreys* | 1150 | 1210 |
| 1210 | 1230 | Static behavior of 40 year-old prestressed concrete bridge girders strengthened with various FRP systems<br>*O.A. Rosenboom, R.O. Carneiro, T.K. Hassan, A. Mirmiran & S.H. Rizkalla* | Development and analysis of the large-span FRP woven web structure<br>*P. Feng, L.P. Ye, R. Bao &J.G. Teng* | 1210 | 1230 |
| 1230 | 1330 | **Lunch**<br>*Equinox Room* | | 1230 | 1330 |

| Thursday 9th December 2004<br>Afternoon Sessions | | | | | |
|---|---|---|---|---|---|
| 1330 | 1400 | **Keynote Presentation**<br>*Cinema*<br>The use of FRP as embedded reinforcement in concrete<br>***P. Waldron*** | | 1330 | 1400 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Special Session A6**<br>**FRP Research in the Middle East** | **Session B6**<br>**Shear and Torsional Strengthening of Concrete Beams** | | |
| 1410 | 1430 | Numerical modeling of RC beams strengthened with CFRP under dynamic loading<br>*S. Mohammadi & A.A. Mousavi Khandan* | Torsional strengthening of reinforced concrete beams using CFRP composites<br>*A.K.Y. Hii & R. Al-Mahaidi* | 1410 | 1430 |
| 1430 | 1450 | Strengthening of RC columns with inadequate transverse reinforcement<br>*A. Ilki, V. Koc, O. Peker, E. Karamuk & N. Kumbasar* | Concrete shear-transfer strengthening with externally applied FRP composites<br>*N. Saenz, C.P. Pantelides & L.D. Reaveley* | 1430 | 1450 |
| 1450 | 1510 | Innovative three-sides wrapping technique for rectangular RC columns using CFRP sheets<br>*A.A. El-Ghandour & A.A Abdelrahman* | Shear strengthening of beams with composite materials<br>*G. Monti, F. Santinelli & M.A. Liotta* | 1450 | 1510 |
| 1510 | 1530 | Moment redistribution in RC continuous beams strengthened in flexure by CFRP laminates<br>*A.A. El-Ghandour, A.A. Abdelrahman, E.A. Nasr & H.A. Aly* | Numerical predictions for the ultimate torque capacity of FRP strengthened reinforced concrete beams<br>*M. Ameli, H.R. Ronagh, M.A. Bradford & B. Uy* | 1510 | 1530 |
| 1530 | 1550 | FE modeling of FRP strengthened RC joints<br>*D. Mostofinejad. & S.B. Talaei Taba* | Experimental investigations on FRP strengthening of beams in torsion<br>*M. Ameli, H.R. Ronagh & P.F. Dux* | 1530 | 1550 |
| 1550 | 1610 | | Photographic strain monitoring for civil engineering<br>*A. Carolin, T. Olofsson & B. Täljsten* | 1550 | 1610 |
| 1610 | 1640 | **Afternoon Tea**<br>*Eclipse Room* | | 1610 | 1640 |
| | | **Session A7**<br>**Debonding Failure in FRP Strengthened Beams** | **Session B7**<br>**Concrete Structures Reinforced or Prestressed with FRP** | | |
| 1640 | 1700 | Verifications of some design equations of beams externally strengthened with FRP composites<br>*L. Zhao & H. Toutanji* | Load-deflection response of high strength concrete beams pretensioned by carbon fiber reinforced polymers<br>*P.X.W. Zou* | 1640 | 1700 |
| 1700 | 1720 | Debonding failure in CFRP strengthened concrete beams<br>*N. Khomwan, S.J. Foster & S.T.Smith* | Modelling of arching action in FRP reinforced concrete<br>*S.E. Taylor. & D.R. Robinson* | 1700 | 1720 |
| 1720 | 1740 | Parametric study of intermediate crack (IC) debonding on adhesively plated beams<br>*I. Liu, D.J. Oehlers & R. Seracino* | Fatigue behaviour of second generation of steel-free concrete bridge deck slab<br>*A.H. Memon & A.A. Mufti* | 1720 | 1740 |
| 1740 | 1800 | Investigation of debonding failure in FRP plated beams<br>*S.K. Sharma, M.S. Mohamed Ali, & P.K. Sikdar* | Crack widths during sustained flexural loading of small-scale GFRP reinforced concrete beams<br>*C.E. Bakis & M.A. Ogden* | 1740 | 1800 |
| 1800 | 1820 | Prediction models for debonding failure loads of CFRP retrofitted RC beams<br>*H. Pham & R. Al-Mahaidi* | Predicting the long-term behaviour of concrete beams pretensioned by fibre reinforced polymers – Part A: A theoretical framework<br>*P.X.W. Zou* | 1800 | 1820 |
| 1820 | 1840 | Prediction of debonding failure in FRP flexurally strengthened RC members using a local deformation model<br>*S.T. Smith & R.J. Gravina* | Predicting the long-term behaviour of concrete beams pretensioned by fibre reinforced polymers – Part B: Illustrative Examples<br>*P.X.W. Zou* | 1820 | 1840 |
| **IIFC meeting(s)** *[Committee(s) and Room(s) TBA]*<br>**& The Australian Opal Collection Exhibit** *[Optional Visit]* | | | | | |

| Friday 10th December 2004<br>Morning Sessions | | | | | |
|---|---|---|---|---|---|
| 0800 | 0830 | **Registration & Arrival Tea/Coffee**<br>*Eclipse Room* | | 0800 | 0830 |
| 0830 | 0900 | **Keynote Presentation**<br>*Cinema*<br>Mechanically-fastened FRP (MF-FRP) – a viable alternative for strengthening RC members<br>***L.C. Bank*** | | 0830 | 0900 |
| 0900 | 0930 | **Keynote Presentation**<br>*Cinema*<br>Strengthening of scaled steel-concrete composite girders and steel monopole towers with CFRP<br>*D.Schnerch & **S. Rizkalla*** | | 0900 | 0930 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Special Session A8**<br>**FRP Research in Southeast Asia** | **Session B8**<br>**Flexural Strengthening of Concrete Beams and Slabs (B)** | | |
| 0940 | 1000 | FRP research in Southeast Asia: Durability and structural protection (Invited Paper)<br>*K.H. Tan* | Bridge strengthening with prestressed CFRP plate systems<br>*D. Millar, P. Scott & R. Clénin* | 0940 | 1000 |
| 1000 | 1020 | Evaluation, selection and acceptance criteria for using FRP systems for strengthening reinforced concrete and masonry structures<br>*R. Jamaji, J. Quek & S.K. Savardekar* | CFRP strengthened openings in two-way concrete slabs<br>*O. Enochsson, T. Olofsson & B. Täljsten* | 1000 | 1020 |
| 1020 | 1040 | Long-term deflections of FRP-strengthened beams under sustained loads<br>*M.K. Saha & K.H. Tan* | Effect of CFRP sheets on the concrete-steel fatigue bond strength<br>*A.A. Rteil, K.A. Soudki & T.H. Topper* | 1020 | 1040 |
| 1040 | 1100 | Engineered cementitious composites for effective FRP-strengthening of RC beams<br>*M. Maalej & K.S. Leong* | Study of sewers strengthened by composite plates: numerical optimization and experimental study<br>*S. Kesteloot, C. Djelal, S. Baraka, I. Benslimane & P. Domange* | 1040 | 1100 |
| 1100 | 1130 | **Morning Tea**<br>*Eclipse Room* | | 1100 | 1130 |
| | | **Special Session A9**<br>**FRP Research in China** | **Session B9**<br>**Strengthening of Concrete Columns and Walls** | | |
| 1130 | 1150 | FRP in China: the state of FRP research, design guidelines and application in construction (Invited Paper)<br>*L.P. Ye, P. Feng, X.Z. Lu, P. Qian, L. Lin, Y.L. Huang, W.H. Hu, Q.R. Yue, Y.X. Yang, Z. Tan, T. Yang, N. Zhang & R. Li* | Carbon FRP strengthened RC columns under combined flexure-compression loading<br>*M. Quiertant & F. Toutlemonde* | 1130 | 1150 |
| 1150 | 1210 | Experimental and finite element studies on deteriorated steel members repaired with CFRP sheets<br>*Q.R. Yue, F.M. Peng, Y.X. Yang & N. Zhang* | Retrofit of two-column bridge piers with diamond-shaped columns for earthquake loading using CFRP<br>*M. Saiidi, A. Itani, K. Sureshkumar, & S. Ladkany* | 1150 | 1210 |
| 1210 | 1230 | Behaviour of continuous RC beams strengthened with CFRP composites<br>*J.W. Zhang, S.T. Smith, T.T. Zhang & Z.T. Lu* | Reinforced concrete squat walls retrofitted with carbon fiber reinforced polymer<br>*S.J. Hwang, T.C. Chiou & Y.S. Tu* | 1210 | 1230 |
| 1230 | 1250 | Strengthening efficiency of RC beams with externally bonded carbon fibre and glass fibre sheets<br>*G.J. Xiong, X. Jiang & J. Liu* | Experimental study on the strengthening and repair of R/C wall-frame structures with an opening by CF-sheets or CF-grids<br>*A. Kitano, O. Joh & Y. Goto* | 1230 | 1250 |
| 1250 | 1350 | **Lunch**<br>*Equinox Room* | | 1250 | 1350 |

| Friday 10th December 2004<br>Afternoon Sessions | | | | | |
|---|---|---|---|---|---|
| 1350 | 1420 | **Keynote Presentation**<br>*Cinema*<br>New shear bond model for FRP-concrete interface – from modeling to application<br>***T. Ueda** & J.G. Dai* | | 1350 | 1420 |
| | | ***Cinema*** | ***Margaret Murray Room*** | | |
| | | **Session A10**<br>**Strengthening of Masonry and Timber Structures** | **Session B10**<br>**Strengthening of Steel Structures** | | |
| 1430 | 1450 | Numerical simulation of FRP strengthened unreinforced masonry<br>*S.H. Xia & D.J. Oehlers* | Evaluation and construction of composite strengthening systems for the Sauvie Island Bridge<br>*A.S. Mosallam* | 1430 | 1450 |
| 1450 | 1510 | Diagonal tests on tuff masonry strengthened with CMF systems<br>*G. Marcari, G. Fabbrocino, A. Prota, G. Manfredi & C. Aldea* | Strengthening of historic cast iron girders with bonded CFRP plates<br>*F.S. Rostásy, U. Neubauer & R. Nothnagel* | 1450 | 1510 |
| 1510 | 1530 | FRP jacketing of masonry columns<br>*T. Krevaikas & T.C. Triantafillou* | Investigation into the bond between CFRP and steel tubes<br>*S. Fawzia, X.L. Zhao, R. Al-Mahaidi & S.H. Rizkalla* | 1510 | 1530 |
| 1530 | 1550 | Strengthening of timber structures in-situ with an application of fiber-reinforced polymers<br>*K.U. Schober & K. Rautenstrauch* | An ultra-high modulus carbon/glass fibre composite system for structural upgrading of steel members<br>*N.K. Photiou, L.C. Hollaway & M.K. Chryssanthopoulos* | 1530 | 1550 |
| 1550 | 1610 | Improving the structural performance of timber beams with FRP composites: a review<br>*J.R. Gilfillan, S.G. Gilber. & G.R.H. Patrick* | Suppression of local buckling in steel tubes by FRP jacketing<br>*J.G. Teng & Y.M. Hu* | 1550 | 1610 |
| 1610 | 1640 | **Afternoon Tea**<br>*Eclipse Room* | | 1610 | 16400 |
| | | **Session A11**<br>**Bond and Interfacial Stresses Between FRP and Concrete (B)** | **Session B11**<br>**FRP Structures (B)** | | |
| 1640 | 1700 | Experimental and numerical investigations of bond between CFRP and concrete<br>*K. Schilde & W. Seim* | Friction and load transfer in bolted joints of pultruded fibre reinforced polymer section<br>*J.T. Mottram* | 1640 | 1700 |
| 1700 | 1720 | Recent researches on interfacial behavior of FRP sheets externally bonded to RC structures<br>*X.Z. Lu, L.P. Ye, J.G. Teng, Y.L. Huang, Z. Tan & Z.X. Zhang* | GFRP for bridge structures in Russia<br>*A.Ye. Ushakov, A.V. Pankov, Yu.G. Klenin & T.G. Sorina* | 1700 | 1720 |
| 1720 | 1740 | Bond characteristics of CFRP fabrics bonded to concrete members using wet lay-up method<br>*H. Pham & R. Al-Mahaidi* | Web-flange junctions of pultruded GRP WF profiles: notched flange shear strengths<br>*G.J. Turvey & Y. Zhang* | 1720 | 1740 |
| 1740 | 1800 | A new approach for interfacial stress analysis of beams bonded with a thin plate<br>*J. Yang, J.F. Chen & J.G. Teng* | The effect of non-classical behaviors on the measurement of the Timoshenko shear stiffness<br>*M.D. Hayes & J.J. Lesko* | 1740 | 1800 |
| 1800 | 1820 | Experimental study on bond stress-slip behaviour of FRP-concrete interface using electronic speckle pattern interferometry technique<br>*S.Y. Cao, J.F. Chen & J.W. Pan* | Strength and life prediction for a composite structural beam<br>*M.D. Hayes & J.J. Lesko* | 1800 | 1820 |
| 1930 | 2330 | **Conference Dinner**<br>*Ballroom*<br>*Radison Playford Hotel, North Terrace, Adelaide* | | 1930 | 2330 |