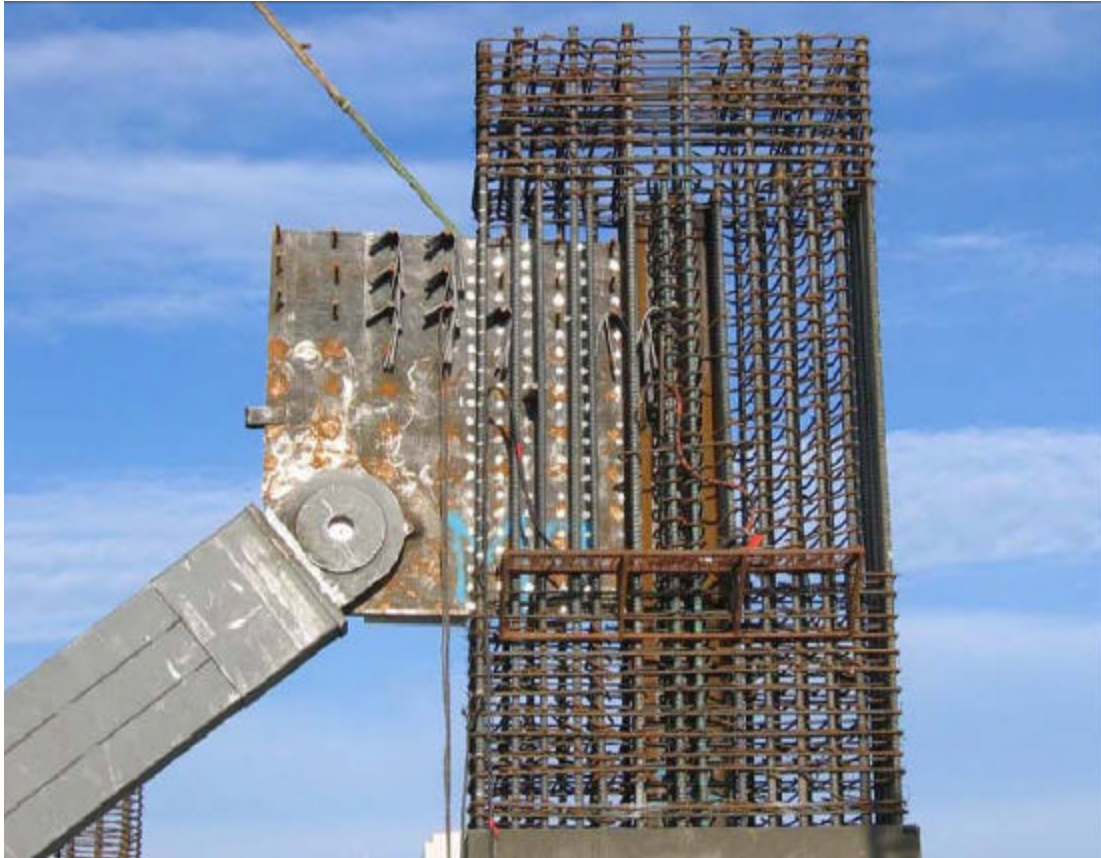


COMPOSITE CONSTRUCTION IN STEEL AND CONCRETE VI

Engineering Conferences International

July 20-24, 2008



Devil's Thumb Ranch
Tabernash, Colorado, USA





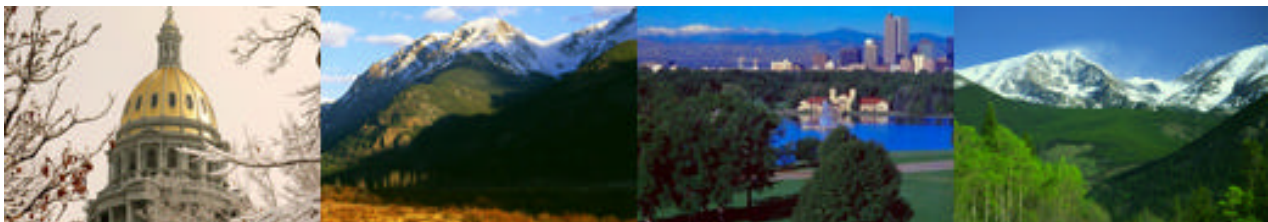
Dear CCVI participant,

On behalf of the CCVI Organizing Committee, it is my pleasure to welcome you to our Sixth International Conference on Composite Construction in Steel and Concrete. After five successful conferences, we come together once again to share the latest advances in knowledge in the area of steel-concrete composite construction. Let us use the next few days fruitfully by exchanging and discussing ideas, renewing and starting new friendships, and developing an agenda for the future of composite construction.

I will also like to thank the staff of Engineering Conferences International and the Devil's Thumb Ranch for their help in putting this conference together.

Enjoy your stay!

Roberto Leon
On behalf of the Organizing Committee



Organizing Committee

Chair: Dr. Roberto T. Leon, Georgia Institute of Technology, Atlanta, GA (USA)
Co-Chairs: Dr. W. Samuel Easterling, Virginia Tech, Blacksburg, VA (USA)
Dr. Gian Andrea Rassati, University of Cincinnati, Cincinnati, OH (USA)
Dr. Jerome F. Hajjar, University of Illinois, Urbana-Champaign IL (USA)
Dr. J. Lange, Technical University of Darmstadt, Darmstadt (Germany)

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Professor Brian Uy, University of Wollangong
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Toko Hitaka, University of Kyoto, Japan
Larry Griffis, W.P. Moore & Assoc., Austin, USA (*)
Kent Harries, University of Pittsburg, USA
Yan Xiao, Hunan University, China, University of Southern California, USA
Oreste Bursi, University of Trento, Italy
Mario Fontana, ETH, Zürich
Wolfgang Kurz, University of Kaiserslautern, Germany
Dr. Dennis Lam, University of Leeds, UK
Professor Robert Tremblay, Ecole Polytechnique, Canada

**Composite Construction VI
Devil's Thumb Ranch – Colorado
June 20-24, 2008
Final Program**

Sunday, July 20

15:00 Arrival and check-in

18:00 Welcome reception

19:00 Dinner

Monday, July 21

7:30 Breakfast

8:45 Welcome and Introductions..... Roberto T. Leon

9:00 Keynote Lecture 1: Research Needs for Composite Systems in High-Rise Construction, Bill Baker, SOM (Chicago, USA)

9:50 Session MM1: Numerical Models for Beams Michel Crisinel

1. Numerical modeling of composite castellated beams, Marian Gizejowski, Warsaw University of Technology, Poland
2. A class of finite elements for nonlinear analysis of composite beams, Quang-Huy Nguyen (*), INSA de Rennes, France
3. Numerical calculation of the deflections of composite girders, Frank Böhme, Technische Universität Darmstadt, Germany

Session MM2: Codes Riccardo Zandonini

1. Where structural steel and concrete meet, Johannes W. B. Stark, Delft University of Technology, The Netherlands
2. Harmonization of design rules in Europe, Fernando Gonzalez, Technische Universität Darmstadt, Germany
3. Review and comparison of encased composite steel-concrete column detailing requirements, William P. Jacobs, SDL Structural Engineers, USA

Session MM3: Shear Connection W. Samuel Easterling

1. Prediction of shear resistance of headed studs in troughs of profiled sheeting, Roger P. Johnson, University of Warwick, UK
2. Lifetime oriented design concepts of steel-concrete composite structures subjected to a fatigue loading, Gerhard Hanswille, University of Wuppertal, Germany
3. Design of shear connectors between steel and concrete in composite construction (**), Jerome F. Hajjar, University of Illinois, USA

11:00 Coffee break

11:20 Session MM4: Numerical Modeling of Joints and Frames .. Gian A. Rassati

1. A mixed-finite element approach for performance-based design of rectangular concrete-filled steel tube (RCFT) frames, Jerome Hajjar, University of Illinois, USA
2. Macro-elements for composite beam-column connections, Uwe Dorka, University of Kassel, Germany
3. Generic finite element local model for composite beam-column joint welded connection, Saenboon Amorntipsakul (*), University of Kassel, Germany

Session MM5: Innovations Brian Uy

1. Design issues for composite floors in steel buildings, W. Samuel Easterling (**), Virginia Tech, USA
2. New results of material analysis regarding the Bauschinger- effect on the deflection behavior of composite beams, Jörg Lange, Technische Universität Darmstadt
3. Evaluation of adhesive bonding between steel and concrete, Wolfgang Kurz, University of Kaiserslautern, Germany

Session MM6: Shear Connection 2..... Roberto T. Leon

1. Headed studs close to the concrete surface - fatigue behavior and application, Ulrike Kuhlmann, University of Stuttgart, Germany
2. Fatigue behavior of shear connectors in high performance concrete, Markus Feldmann, RWTH Aachen University, Germany
3. /Cyclic performances of shear connectors, Adrian Liviu Ciutina, University of Timisoara, Romania

12:30 Lunch

13:30 Free time and ad-hoc sessions/discussions

18:00 Dinner

19:30 Session ME1: Foundations and Column Bases Jörg Lange

1. Design of anchor plates based on the component method, Markus Rybinski, Universität Stuttgart, Germany
2. An economical and efficient foundation connection for concrete filled steel tube piers and columns, Charles W. Roeder, University of Washington, USA
3. Using steel fiber reinforced cementitious composite (SFRCC) in shallow embedded column base, Yao Cui, Kyoto University, Japan
4. Seismic behavior and design of cast-in-place anchors: State-of-the-Art, Jian Zhao (**), University of Wisconsin – Milwaukee, USA

Session ME2: Innovative Slab Systems..... Mark Bradford

1. New prestressed composite slab system for buildings with multiple HVACR installations, Marcin Abramski (*), Kaiserslautern University of Technology, Germany
2. Composite slab with integrated installation floor using cellular beams, Markus Knobloch , ETH Zurich, Switzerland
3. Steel fibre reinforced continuous composite slabs, Florian P. Ackermann, Kaiserslautern University of Technology, Germany
4. Elemental bending test and modeling of shear bond in composite slabs, Redzuan Abdullah, Universiti Teknologi Malaysia

Session ME3: Shear Connection 3..... Roger P. Johnson

1. New steel-concrete shear connection for composite bridges, Jean-Paul Lebet, Swiss Federal Institute of Technology, Switzerland
2. Continuous shear connectors in bridge construction, Oliver Hechler, ArcelorMittal, Germany
3. Effects of group arrangement on the ultimate strength of stud shear connection, Chang-Su Shim, Chung-Ang University, Korea

22:00 Social Hour(s)

Tuesday, July 22

7:30 Breakfast

9:00 Keynote Lecture 2: Composite Buildings in Germany, Wolfgang Kurz and Jörg Lange, Germany

9:50 Session TM1: Composite Columns 1 Russell Bridge

1. Behavior of concrete-filled thin-walled steel tubes in flexure, Andrew Wheeler, University of Sydney, Australia
2. Behavior of concrete-filled CFT columns based on fiber element analyses, Tiziano Perea, Georgia Tech, USA
3. Structural design of concrete filled steel elliptical hollow sections, Dennis Lam, University of Leeds, UK

Session TM2: Bridges 1..... Mario Fontana

1. Evaluation of in-situ measurements for improved design of composite bridge with integral abutments, Milan Veljkovic, Sweden
2. Shear strength of joints for the hybrid truss bridge according to the structural connection system, Kwang Hoe Jung, Hyundai Engineering and Construction Co. Ltd., Korea
3. Developing composite action in existing non-composite steel girder bridges, Mike Engelhardt, University of Texas at Austin, USA

Session TM3: Seismic Performance of Connections/Members..... O.S. Bursi

1. Composite joints in robust building frames, Jaspart Jean-Pierre, University of Liege, Belgium
2. Behavior of columns in composite CES structural system, Hiroshi Kuramoto, Osaka University, Japan
3. Numerical modeling of composite beam-to-beam joints – innovative solutions, Samy Guezouli, INSA-RENNES, France

11:00 Coffee break

11:20 Session TM4: Composite Columns 2..... Jerome F. Hajjar

1. Seismic performance of composite EWECs columns in new hybrid structural system, Fauzan Fauzan, Toyohashi University of Technology, Toyohashi, Japan
2. Design of Composite Columns: Steel, Concrete, or Composite?, Russell Bridge, University of Western Sydney, Australia
3. Strength of concrete filled steel tubes under high-strain rate loading, Xiao Yan, Hunan University, China

Session TM5: Bridges 2 Mike Engelhardt

1. Experimental investigations of the shear connection behavior in joints of composite bridges, Alain Lachal, LGCGM, INSA-RENNES, France
2. Inelastic strength behavior of horizontally curved composite I-girder bridge structural systems: fixed-end bridge FEA study, Donald White, Georgia Institute of Technology, Korea
3. Efficient erection method of cantilever bridge deck using ribbed steel form bolted to girder, Youn-Ju Jeong, Korea Institute of Construction Technology, Korea

Session TM6: Seismic Design 2..... Charles Roeder

1. Cyclic tests on RC-steel shear plate composite wall system applicable in beam spans with large openings, Toko Hitaka, Kyoto University, Japan
2. Experimental investigation of coupling beams in hybrid coupled core wall systems, Gian A. Rassati, University of Cincinnati, USA
3. Behavior of composite columns in frames subjected to seismic loads, Roberto T. Leon (**), Georgia Tech, USA

12:30 Lunch

13:30 Tour to Rocky Mountains National Park / Free time and ad-hoc sessions/ discussions

18:00 Dinner

19:30 Session TE1: Composite Columns 3 Roberto T. Leon

1. Strength of concrete filled historic cast-iron columns, Stefan Heyde, Technical University of Berlin, Germany
2. Concrete-filled steel tube columns-test compared with Eurocode 4, C. Douglas Goode (*), University of Manchester, UK
3. Design of composite columns made of concrete filled tubes with inner massive core profiles and high strength materials, Gerhard Hanswille, University of Wuppertal, Germany

Session TE2: Composite Beams..... Uwe Dorka

1. Ductility of composite beams with trapezoidal composite slabs, Mark A. Bradford, The University of New South Wales, Australia
2. Effect of strain profiles on the behaviour of shear connectors for composite steel-concrete beams, Olivia Mirza, University of Western Sydney, Australia
3. Design model for continuous composite beams with web openings, Torsten Weil, Ed. Zueblin AG, Germany
4. Efficient design for the calculation of the deflection and the shear force capacity of a slim-floor girder, Ulrike Kuhlmann, Universität Stuttgart, Germany

Session TE3: Seismic Design 3..... Toko Hitaka

1. Analyses of steel-concrete composite beam-to-column connections: Bolted solutions, Riccardo Zandonini, University of Trento, Italy
2. Analyses of steel-concrete composite beam-to-column connections: Welded solutions, Oreste Bursi, University of Trento, Italy
3. Hysteretic behavior and strain analysis of joints between steel beams to gangue concrete-filled steel tubular column with ring stiffeners, Gouchang Li (**), Shenyang University, PRC
4. Strengthening of composite beam-to-column joints: static and seismic behavior, Ghandi Loho (*), INSA-RENNES, France

22:00 Social Hour(s)

Wednesday, July 23

7:30 Breakfast

9:00 Keynote Lecture 3: Composite Construction for Moderate Height Buildings in the USA, Larry Griffis (Austin, USA)

9:50 Session WM1: Fire Design..... Ulrike Kuhlmann

1. Geometric non-linear modeling of partial interaction in composite t-beams in fire, Amin Heidarpour, The University of New South Wales, Australia
2. Where structural steel and concrete meet in the heat, Rob Stark, Smit Westerman & Stark Partners, The Netherlands
3. Predicting the Standard Fire Behavior of Composite Beams, Amit Varma, Purdue University, USA

Session WM2: Innovations 2 Jean-Pierre Jaspart

1. Ultimate flexural strength of hybrid composite girders using high-performance steel of HSB600 at sagging bending, Seok-Goo Youn, Seoul National University of Technology
2. Modern composite structures made of high performance materials, Sabine Rauscher, RWTH Aachen University
3. Steel-FRP composite structural systems, Kent A. Harries, University of Pittsburgh, USA

Session WM3: Innovative Structures and Members..... Alain Lachal

1. The new Langensand Bridge In Luzern, Gabriele Guscelli (**), Swizerland
2. The multi-story car park for the "Neue Landesmesse" in Stuttgart over highway A8, Germany, Roland Friede, Technische Universität Darmstadt, Germany
3. Design and testing of two composite underspanned beams, Michel Crisinel, Swiss Federal Institute of Technology EPFL, Switzerland

11:00 Coffee break

11:20 Session WM4: Composite Beams: A World Overview M. Bradford
Session WM5: Composite Columns: A World Overview R.T. Leon
Session WM6: New Materials: A World Overview J.Lange

12:30 Lunch

13:30 Free time and ad-hoc sessions/discussions

18:00 Social Hour

18:45 Conference Banquet

Thursday, July 23

7:30 Breakfast

9:00 Keynote Lecture 4: [Composite Bridges in Germany](#), Gerhard Hanswille,
(Wuppertal, Germany)

9:50 Session ThM1: Shear Connectors: A World Overview R.P. Johnson
Session ThM2: Seismic Design: A World Overview J. F. Hajjar
Session ThM3: Bridges: A World Overview G. Hanswille

11:00 Coffee Break

11:20 Theme Reports..... CCVI Organizing Committee

12:15 Conference Closing..... Roberto T. Leon

12:30 Farewell Luncheon