

## **SSRC Task Group Sessions and Annual Meeting – Preliminary Program Tuesday 2pm – 8pm**

### **SS1: Tu 2:00-3:00 Task Group Technical Presentations Session 1**

Moderator: Benjamin Schafer – SSRC Vice-Chair

Welcome to the 2010 SSRC Task Group Sessions and Annual Meeting

Improved Stability of Cross Frames for Steel Bridge Systems Using Tubular Members

Anthony Battistini, Karl Frank, Todd Helwig, Michael Engelhardt,

Effect of Buckling on the Design of Steel Plate Girder Bridges

Metwally Abu-Hamd

Application of a 3D Fluid-Thermal-Mechanical Model for Performance-Based Analysis of Composite Structures under Fire,

Julio Cesar Goncalves, Alexandre Landesmann

Feasibility of Unprotected Steel Framing in Sprinklered Buildings

R.S. Fike, V.K.R. Kodur

### **SS2: Tu 2:15-3:15 Task Group Technical Presentations Session 2**

Moderator: Ronald Ziemian – SSRC Chair

Cross-Section Stability of the Human Femur

V.M. Zeinoddini, A. Khaled, T.J. Beck, B.W. Schafer

Cyclic Elastoplastic Finite Element Analysis and Stability Evaluation of Steel Braced Frames

Iraj H.P. Mamaghani, Saman Montazeri, Navid Nemati

Toward Direct Strength Method for Cold-Formed Steel Beam-Columns

Y. Shifferaw, B.W. Schafer

Post-Buckling Behavior and Strength of Lipped Channel Steel Columns Affected by Local/Distortional/Global Interaction: Experimental and Numerical Study

Eduardo M. Batista, Dinar Camotim, Pedro B. Dinis, Eliane Santos

### **SS3: Tu 3:30-5:00 Task Group Workshop 1: Member Stability**

Summary report from 2009 AISC and 2010 Charge

Breakout session for Task Groups

Members Breakout: TG1 Centrally Loaded Columns - Robert Driver, TG15 Beams - Donald White\*, TG26 Stability of Angle Members - Iraj Mamaghani

Bridges Breakout: TG14 Horizontally Curved Girders - James Davidson, TG27 Plate and Box Girders - Reagan Herman\*

Thin-walled and Testing Breakout: TG13 Thin-Walled Metal Construction - Benjamin Schafer\*, TG6 Test Methods - Perry Green\*

### **SS4: Tu 5:15-6:45 Task Group Workshop 2: System Stability and Outreach**

Summary report from 2009 ASC and 2010 Charge

Breakout session for Task Groups

Systems and Bracing Breakout: TG4 Frames - Andrea Surovek\*, TG30 Bracing - Todd Helwig\*

Extreme Loads Breakout: TG24 Stability under Seismic Loading - Robert Tremblay, TG20 Compression Members and Fire - Amit Varma

Outreach Breakout- Education programs – Todd Helwig, TG 11 International Cooperation of Stability Studies – Dinar Camotim\*

SS5 Tu 6:45-7:00 SSRC Annual Business Meeting

SS6 Tu 7:00-8:00 SSRC Social Hour

## **SSRC Sessions at the 2010 NASCC – Preliminary Program October 2009**

### **S1 W 3:00-4:00 Topics in Structural Stability**

Moderator: Ronald Ziemian

Welcome to the 2010 SSRC Annual Stability Conference

Lateral-Torsional Buckling of Steel Beam-Columns under Fire Exposure

M.M.S. Dwaikat, V.K.R. Kodur

Spatial Stability Design of Free Standing Tubular Arches of a Road Bridge

Dagowin la Poutre, Markus Vill, Rudolf Immig

### **S2 W 4:15-5:45 Stability under Dynamic (Earthquake) Loads**

Moderator: Peter Birkemoe

On the Interface of Stability and Seismic Design Requirements for Steel Buildings

Taichiro Okazaki, Larry A. Fahnestock, Matthew Parkolap,

Large Scale Test of a Steel Plate Shear Wall with PEC Columns and RBS Connections

Mehdi Dastfan, Robert G. Driver

Appropriate Adjustment Method for Experimental Results of Cold-Formed Steel Shear Walls Sheathed with Steel Sheets

Cheng Yu, Yujie Chen

Stability Evaluation of Thin-Walled Steel Tubular Columns under Cyclic Multidirectional Loading

Saman Montazeri, Iraj H.P. Mamaghani

### **S3 Th 8:00-9:30 Thin-walled Steel Behavior and Design**

Moderator: Roger LaBoube

The Effective Section Method for the Design of Thin-Walled Cold-Formed Steel Members

Eduardo de Miranda Batista

Direct Strength Design of Cold-Formed Columns with Holes

C.D. Moen, B.W. Schafer

Distortional Behavior and Failure of Cold-Formed Steel Rack-Section Columns under Fire

Alexandre Landesmann, Dinar Camotim, Eduardo Batista

Stability and Strength of Cold-Formed Steel Columns Braced with Dissimilar Sheathing

Y. Shifferaw, L. Vieira, B.W. Schafer

### **S4 Th 10-11:30 Thin-walled Steel Analysis and Design**

Moderator: Donald Sherman

Non-Linear GBT for Thin-Walled Steel Frames: Formulation, Implementation and Application

Cilmar Basaglia, Dinar Camotim, Nuno Silvestre

The Constrained Finite Strip Method for General End Boundary Conditions

Z. Li, B.W. Schafer

Elastic Buckling of Cold-Formed Steel Beams in Shear

R.T. Naik, C.D. Moen

Local/Distortional Global Buckling Mode Interaction in Cold-Formed Steel Rack-Section Columns

Pedro Borges Dinis, Dinar Camotim

### S5 Th 1:15-2:15 Stability of bridges during erection

Moderator: Leroy Lutz

Stability Recommendations for Partially Constructed Bridges During the Erection Sequence

B. Petruzzi, J. Stith, T. Helwig, K. Frank, M. Engelhardt, E. Williamson

User-Friendly Finite Element Analysis Programs for Steel I-Girders during Lifting, Erection, and Concrete Placement

J. Stith, B. Petruzzi, H. Kim, E. Williamson, T. Helwig, K. Frank, M. Engelhardt

Optimization of the Cross-Frame Spacing in Straight, Skewed and Curved Steel I-Girder Bridges for Deck-Casting Loads

Nohemy Y. Galindez, Karl E. Barth

### S6 Th 3:00-4:00 Stability and Design of plate girders

Moderator: Donald White

Bending and Shear Strength of Horizontally Curved Plate Girders with Longitudinally Stiffened Webs

Gaby Issa-El-Khoury, Daniel Linzell, Louis F. Geschwindner, ,

Behaviour of Longitudinally Stiffened Plate Girders Subjected to Bending-Shear Interaction

Darko Beg, Franc Sinur

Effective Width of Slender Elements in Composite Plate Girder Bridges

Ghada El-Mahdy, Metwally Abu-Hamd

### S7 Th 4:15-5:15 Behavior and Design of Stability Bracing

Moderator: Joseph Yura

Impact of Connection Flexibility on the Brace Stiffness Requirements in Skewed Steel Bridges

Craig Quadrato, Anthony Battistini, Michael Engelhardt, Todd Helwig, Karl Frank

Bracing Behavior for Steel Trusses

Rangsan Wongjeeraphat, Todd A. Helwig

Bracing Strength and Stiffness for Sheathed Cold-Formed Steel Walls

L. Vieira, B.W. Schafer

### S8 F 8:00-9:30 Stability and design of beams

Moderator: W. Samuel Easterling

Lateral Buckling of Beams with Inflection Points

Joseph A. Yura, Todd A. Helwig

Simplified Mono-Symmetric Beam Design

Ian MacPhedran, Gilbert Y. Grondin

Flexural Resistance of Nonprismatic Thin-Walled Members

M.M. El-Sadaawy, M.T. Hanna

Design Methods for Local-Global Interaction of Locally Slender Steel Members

M. Seif, B.W. Schafer

### S9 F1:45-3:15 Beedle Presentation

Moderator: Benjamin Schafer

Beedle Award Presentation: Columns: From Single Members to Framework Components

Reidar Bjorhovde

Lateral-Torsional Buckling Strength of Prismatic and Web-Tapered I-Beams:  
Reliability Assessment

Y.D. Kim, D.W. White

Stability of Open Web Steel Joists Subjected to Ponding Loads

Duncan Stark, Christopher C. Higgins, Perry Green

S10 F3:30-5 Topics in Structural Stability

Moderator: Clarence Miller

Plastic Collapse of Unstiffened and Edge-Stiffened Plates

Bo Dowswell

Improving the Ductility of Steel I-Beams Through the Use of Glass Fiber Reinforced Polymers

O. Ozgur Egilmez, Deniz Alkan, Timur Ozdemir

New Simplified Analytical Method for the Prediction of Global Stability of Steel and  
Composite Sway Frames

Jean-Francois Demonceau, Lam Ly, Jean-Pierre Jaspert

Determination of Antisymmetric Buckling of Thin Walled Cylindrical Shell Roof

Ozden Caglayan, Kadir Ozakgul, Ovunc Tezer