

# Structural Stability Research Council TG Sessions and Annual Meeting

11 May 2010

Orlando, FL

# SSRC Tuesday Schedule

2:00-2:45 Presentation Session 1

3:00-3:45 Presentation Session 2

4:05-5:15 TG Workshop: Member Stability

5:40-6:45 TG Workshop: System Stability

6:45-7:00 Annual Meeting

7:00-8:00 Social Hour

*Note, SSRC technical sessions Wed. – Fri. will be in the Orange Blossom room. See you there.*

- To receive PDH credits : Log onto the conference PDH website:

[www.aisc.org/conferencepdh](http://www.aisc.org/conferencepdh)

- Enter the bar code ID number from your registration badge and the course ID for these sessions
- You need these codes to get any continuing education hours related to these meetings

– SS1            AA16Y

– SS2            SI31G

– SS3            TN55H

– SS4            FL34U

## SS1: Tu 2:00-2:45 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,
- Application of a 3D Fluid-Thermal-Mechanical Model for Performance-Based Analysis of Composite Structures under Fire,  
Julio Cesar G. da Silva, Alexandre Landesmann
- Effect of SFRC on the Fire Resistance of Composite Floor Assemblies  
R.S. Fike, V.K.R. Kodur

SS2: Tu 3:00-3:45 Task Group Technical  
Presentations Session 2

Moderator: Ronald Ziemian – SSRC Chair

- Cyclic Elastoplastic Finite Element Analysis and Stability Evaluation of Steel Braced Frames  
Iraj H.P. Mamaghani, Saman Montazeri
- Towards a Direct Strength Method for Cold-Formed Steel Beam-Columns  
Y. Shifferaw, B.W. Schafer
- Practical Stability Criteria for Orthotropic Steel Bridge Girders  
Brian. T. Kozy, Ben T. Yen

SS3: Tu 4:00-5:15 Task Group Workshop 1: Member Stability  
Summary report from 2009 ASC and 2010 Charge (Yura)

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\*

# Summary report from 2009 ASC and 2010 Charge (Yura)

- Professor Yura did not use slides, some key points he made:
- For columns, retrofits with new steel (and different  $f_y$ ) design of such columns is not obvious by the Spec.
- The column chapter of the Guide might want to add flexural-torsional modes
- Beams – load height effects not treated clearly
- Cantilevers.. Cb solutions in the Guide need to be put in a more amenable form for designers

# Yura, continued

- Composite construction, research in Australia primarily calls the mode when the bottom flange moves distortional buckling – this needs more thinking as they cast their solution as a function of length, but it is not – should start from basic torsion problem instead of LTB
- More thought on compactness and rotation capacity in continuous beams is needed (many cases appear not to work in SS condition, but...)
- Angles – as brought up last year! – Ajavo (sp?) need to resolve Wagner hypothesis, just requires some testing!  
Challenge the Council (us!) to do this work

- Yura notes compiled by Ben Schafer

## SS4: Tu 5:30-6:45 Task Group Workshop 2: System Stability and Outreach

Summary report from 2009 ASC and 2010 Charge (Ziemian)

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\*