



# SSRC Annual Meeting

Tuesday, 10 May 2011  
Pittsburgh, Pennsylvania

# SSRC Program

- SSRC Annual Meeting (Tues.)
  - Technical Sessions
  - Task Group Meetings
  - Business Meeting
    - Vinnakota Award
- SSRC Annual Stability Conf. (Wed.-Fri.)
  - Eleven technical sessions
  - Beedle Award Session (Fri. 10 am)

# SSRC Membership

- Professionals (engineers, academics, etc.) and students interested and engaged in the stability of steel structural members are encouraged to apply.
- For more information or to apply pick up a flyer or go to
  - [www.stabilitycouncil.org](http://www.stabilitycouncil.org)

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# SS1: Tu 2:00-2:45 Technical Presentations Session 1

Moderator: Benjamin W. Schafer, Johns Hopkins University, Baltimore, MD, USA

- Welcome to the 2011 SSRC Annual Meeting
- Modeling Elastic and Inelastic, Critical- and Post-Buckling Behavior of Bracing Members
  - Swaminathan Krishnan, California Institute of Technology, Pasadena, CA, USA
- **Parameters for the Optimal Section Design of Steel Cold-Formed Channel in Bending**
  - Zacaria M. Chamberlain Pravia, Moacir Kripka, Rodrigo Bordignon, University of Passo Fundo, Passo Fundo, Brazil

# SS2: Tu 3:00-3:45 Technical Presentations Session 2

Moderator: Dagowin La Poutré, Bernard Ingenieure ZT GmbH, Hall in Tirol, Austria

- **Cyclic Behavior and Ductility Evaluation of Thin-Walled Stiffened Steel Box Columns**
  - Iraj H.P. Mamaghani, Navid Nemati, Ersoz Erdogan, University of North Dakota, Grand Forks, ND, USA
- Impact of cross-section stability on cold-formed steel member stiffness and ductility
  - Deniz Ayhan, Benjamin W. Schafer, Johns Hopkins University, Baltimore, MD, USA
- Report from 2010 Task Group Meetings and 2011 Charge
  - Benjamin W. Schafer, Johns Hopkins University, Baltimore, MD, USA

### **SS3: Tu 4:00-5:15 Task Group Meetings Session 1**

Parallel breakout sessions for Task Groups

- Table 1: TG02 Members: stability of steel members  
Chair: Don White
- Table 2: TG03 Systems: stability of steel systems, especially frames  
Chair: Chris Foley
- TG Chairs Summary Report at ~ 5:05

*5:15-5:30 SSRC Students - Organizational Mtg (Facilitator: Todd Helwig)*

### **SS4: Tu 5:30-7:00 Task Group Meetings Session 2**

Parallel breakout sessions for Task Groups

- Table 1: TG04 Stability of metal bridges and bridge components  
Chair: Dan Linzell Vice-Chair: QiuHong Zhao
- Table 2: TG05 Thin-walled: stability of thin-walled metal structures  
Chair: Cris Moen, Vice-Chair: Cheng Yu
- Table 3: TG06 Extreme Loads: stability under extreme loads  
Co-Chairs: Amit Varma, Robert Tremblay
- TG Chairs Report at ~ 6:45

## SS4: Tu 5:30-7:00 Task Group Meetings Session 2

Parallel breakout sessions for Task Groups

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Co-Chairs: Amit Varma, Robert Tremblay
- TG Chairs Report at ~ 6:45

# Business Meeting and Social Hour

- **SS5 Tu 7:00-7:15 SSRC Annual Business Meeting**

Chair: Ron Ziemian

- **SS6 Tu 7:15-8:00 SSRC Social Hour**



# TG Meetings

Report from 2010 and  
Charge for 2011

# Report from 2010

- 6 combined TG's met under the 'tentative' names:
  - Bridges, Extreme Loads, Members, Outreach, Systems and Bracing, and Thin-walled
- 2010 Charge was to begin organizing under these tentative groupings and to identify activities for the coming year
- 2010 meeting excerpts follow

## Members TGs

[Ed. The members took up Joe Yura's call to arms to try to address a longstanding issue with respect to the mechanics and behavior of angles]

## Thinwalled (and testing) TGs

International Outreach and Collaboration, System Design, Student and Practitioner → Education  
 AEC Connections, State of the art → tools, optimization, manufacturing  
 Multi-disciplinary design (aerospace) (interaction)  
 Sustainability – energy efficiency, new systems  
 Pre-standards: Buckling interaction L+D, System vs. component calibration, Material interaction – composite construction

## Bridges TGs(TG14 & TG27)

Need to reorganize the task groups  
 Review 3 Chapters (Linzell)  
     Focus on Plate Girder Ch.  
     A lot of redundant material – eliminate

## Frames/Systems Stability and Bracing TGs

[Ed. Discussion on how best to leverage longstanding work of these TGs]

## "Extreme Loads" TGs

**Fire:** Creep buckling, What is the actual load in a member under fire, Stability under extreme loads (fire & seismic), SSRC session  
 Next SSRC Guide → chapter on stability under fire  
**Collapse modeling** Current procedures used simplified modeling (e.g., ATC 63 etc), Experimental data, benchmark problems  
**Next SSRC meeting**  
 3 sessions?

## Outreach and Education TGs

International Cooperation  
 Workshop 2012 , Thin-walled Stability?  
 Education: Ideas/volunteers for short courses  
 Session on the Guide 2011

## 2011 NEW TGs formalized

- TG02 Members: stability of steel members
- TG03 Systems: stability of steel systems, especially frames
- TG04 Bridges: stability of metal bridges and bridge components
- TG05 Thin-walled: stability of thin-walled metal structures
- TG06 Extreme Loads: stability under extreme loads

# 2011 TG Charge

- Formalize TG name
- Formalize TG Chair, TG Vice-/Co-Chair
- First draft of TG Mission statement needed, can be simple, but we need a basic mission statement for each TG.
- Commit to at least one TG activity between now and the 2011 conference
- Provide a list of anything you need from SSRC (mailing lists, wiki page, what do you need to make your TG work more effectively?)

## 2011 TG Charge (cont.)

- Potential TG activities
  - Review and summarize a key literature set
  - Benchmarking
  - Tackling unresolved technical issues through tests, modeling, etc.
  - Pre-standards
  - Technical Note / Other tech. documents
  - Invited Speaker Session for 2012 SSRC
  - ..much more...



- To maintain a forum where the structural stability aspects of metal structures and their components can be presented for evaluation and pertinent structural research problems proposed for investigation.
- To review the world literature on structural stability of metal structures and study the properties of materials available for their construction, and to make the results widely available to the engineering profession.
- To organize, administer and guide cooperative research projects in the field of structural stability, and to solicit financial support for such projects.
- To promote publication and dissemination of research information in the field of structural stability.
- To study the application of the results of research to stability design of metal structures and to develop comprehensive and consistent strength and performance criteria and encourage consideration thereof by specification, code and standard-writing bodies

# TG CHAIRS REPORT @ 6:45

- 6:45 Todd Helwig
- 6:50 TG04 Dan Linzell
- 6:55 TG05 Cris Moen
- 7:00 TG06 Amit Varma
- 7:05 Annual Business Meeting