

Creative Thermal Solutions, Inc.

2209 N. Willow Rd., Urbana IL 61802, USA

**Announces a Workshop**

## **Emerging MAC Technologies**

**Monday, September 23<sup>rd</sup>, 2013**

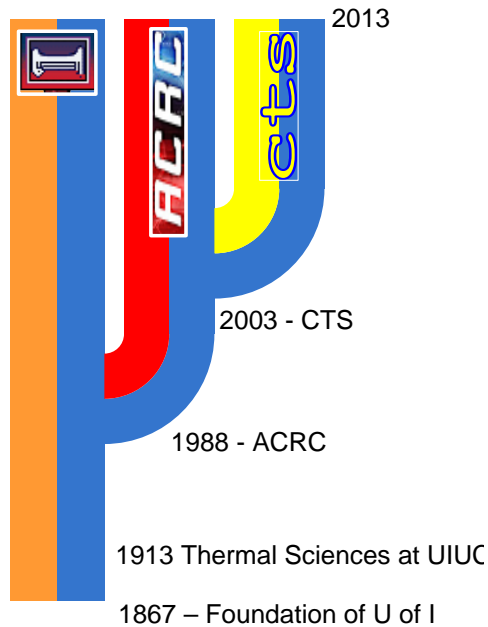
**Co-sponsored by:**

**Air Conditioning and Refrigeration Center [ACRC], University of Illinois,**

**with the support of SAE MRB CRP, ICC**

**marking the 10 year anniversary of CTS,**

**25 years of ACRC and 100 years of Thermal Sciences at the University of Illinois**



**08:00-18:00 Central USA Time**

**CTS campus, Building #5**

**Urbana, IL 61802**

***Registration and questions about the program:***

Please contact Debbie Smith (217-344-7663, ext203) or Steve Henry (217-344-7663, ext215)

Email: [workshop@creativethermalsolutions.com](mailto:workshop@creativethermalsolutions.com)

<http://creativethermalsolutions.com/bulletin.html>

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## Preliminary schedule:

|             |   |                       |
|-------------|---|-----------------------|
| 8:00        | Arrival and registration                                      |                       |
| 8:30        | Opening   | Pega Hrnjak           |
| 8:50        | SAE CRP with the emphasis on MRB                              | Bill Hill             |
| 9:10        | Mexichem refrigerant overview                                 | Bob Low               |
|             | <b>Systems</b>  |                       |
| 9:30        | Battery cooling systems                                       | Andy Musser           |
| 9:55        | Fundamentals of flash gas bypass in MAC systems               | Hanfei Tuo            |
| 10:20       | Location of refrigerant and oil in MAC systems                | Shenghan Jin          |
| 10:45       | <b>Q&amp;A – Panel discussion</b>                             |                       |
| 11:05       | Lunch   |                       |
| 11:40       | Lab tour  |                       |
|             | <b>Heat exchangers</b>  |                       |
| 12:20       | Distribution parameter and effect of developing flow          | Chad Bowers           |
| 12:45       | Refrigerant distribution in vertical headers                  | Yang Zou              |
| 13:10       | Effect of oil on distribution in headers                      | Huize Li              |
| 13:35       | <b>Q&amp;A – Panel discussion</b>                             |                       |
| 13:55       | Coffee break  |                       |
|             | <b>Compressors</b>  |                       |
| 14:15       | Oil- refrigerant flow at compressor discharge                 | Scott Wujek           |
| 14:40       | Compressor calorimetry and durability (open and hermetic)     | Andy Musser           |
| 15:05       | Ejectors in vapor compression systems                         | N. Lawrence, S. Elbel |
| 15:30       | <b>Q&amp;A – Panel discussion</b>                             |                       |
| 15:50       | Coffee break  |                       |
|             | <b>Other topics</b>   |                       |
| 16:10       | Refrigerant leak measurements                                 | Xinzhong Li           |
| 16:35       | Brazing technologies for compact AI and other heat exchangers | Hui Zhao              |
| 17:00       | Experience with heat pumps R744 and R445A                     | P. Hrnjak, A. Musser  |
| 17:25       | <b>Q&amp;A – Panel discussion</b>                             |                       |
| 17:45       | Wrap-up and feed-back form                                    |                       |
| 18:00       | End of the Workshop   |                       |
| 18:00-20:30 | Barbeque  |                       |

### **Transportation**

Urbana and Champaign are adjacent cities served by Willard University of Illinois Airport (CMI) in Champaign. Jet service is available on AA from Chicago and Dallas.

Bloomington (BMI) is 45 min away and is served among other by Delta flights from Detroit (departing on Sunday 8:20pm, arriving 8:47pm and departing on Tuesday 6:40am, arriving to DTW at 9:02 am.

Indianapolis (IND) and Chicago (ORD and MDW) are at 1.5 and 2.5 hours away.

### **Hotel and motel accommodations:**

Numerous hotels are available and special offers will be announced soon.

### **Cost and what is provided:**

Registration cost includes presentation material, lunch, coffee breaks and barbeque dinner.

Early Bird Registration (before Sept. 1<sup>st</sup>) \$90

Regular registration (Sept. 2<sup>nd</sup>-22<sup>nd</sup>) \$340

Walk up registration on the day of the conference \$440