

**Minutes of the  
K-20 Committee Meeting on Computational Heat Transfer  
2003 Summer Heat Transfer Conference  
Las Vegas, NV  
July 22, 2003**

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Therese Rhodes called the meeting to order at 6:10 pm.

Attending:

Sumanta Acharya	Bingmei Fu	Pradip Majumdar
N.K. Anand	Laila Guessous	W. J. Minkowycz
Ben Blackwell	Thomas Hauser	Jayathi Murthy
Dave Carrington	Juan Heinrich	Darrell Pepper
Rod Douglass	Roy Hogan	Therese Rhodes
Kevin Dowding	Jerry Jones	Aki Runchal
George Dulikravich	Alain Kasab	Jian Su
Ashley Emery	Jamil Khan	Lili Zheng
Baki Farouk	Ben Q. Li	

### **Approval of Previous Minutes**

The minutes of the K-20 committee meeting held at the 2002 IMECE in New Orleans were corrected and approved.

### **Election of Vice-chair**

Lili Zheng and Roy Hogan were nominated as candidates. Discussion ensued and an election was conducted. Roy was elected.

### **Announcements**

- Darrell Pepper reminded us that the Third International Symposium on Advances in Computational Heat Transfer will be April 19-24, 2004 on a cruise ship off of Norway. Cost is approximately \$1300 for 5 nights/6 days and all meals. Organizers are looking for feedback. If anyone is interested, e-mail [cht04@cfm.mech.unsw.edu.au](mailto:cht04@cfm.mech.unsw.edu.au) More information is available at <http://cht04.mech.unsw.edu.au>

### **Executive Committee Report**

Rod Douglas reported the following from the Heat Transfer Executive Committee:

- Advanced registration for the 2003 Summer Heat Transfer Conference was approximately 250. Final registration was 328 paid attendees and 62 students.
- Presently have 250 papers for the 2003 IMECE in Washington. Still time to squeeze some in, particularly 'extended abstracts.'
- In 2004, we will have a joint conference with AIChE and the ASME Fluids Division in Charlotte, NC. AIChE is also interested in participating with HTD in other future conferences.
- AIChE is hosting a Spring meeting in New Orleans and has invited ASME HTD to join them. Yildiz Bayazitoglu will send out information on how to co-organize with them.

- Update on future JSME/ASME meetings -- We will probably continue working with JSME in future conferences. They are listed as cooperating for summer of 2007; every 4 years (this year was in Hawaii). The desire is to have them join our regular summer conference, which would be located on the west coast of the US or in Hawaii to accommodate their travel. JSME may be willing to shift the date away from spring to July/August.
- ASME is considering reorganizing and it will have an impact on HTD. We need to be thinking about opportunities for the HTD. K-committees will need to provide feedback to the Executive Committee on this topic. Not clear what the drivers are. ASME HQ wants to make the changes by Spring. K-2 has proposed 2 meetings at the 2003 IMECE to discuss these changes and get membership feedback. Look for a session featuring a discussion of the ASME vision, questions of interest to HTD and its future. The second session will be hosted by the HTD Executive Committee. More information is available on the web site at <http://www.asme.org/change> .
- Future international meetings include:
  - August 18-23, France (The United States has 150 papers)
  - 2006 INHT Conference – August in Sydney, Australia, in the Sydney Convention Center. Will have a major exhibition with 200-300 HT and HVAC equipment/industry participants.
  - 2010 INHT Conference – Washington, DC
- A new award, known as the **Bergles-Rohsenow Young Investigator Award in Heat Transfer** has been established by the Heat Transfer Division as a Society Award through the generosity of these two well-known members of the community. The Award will encourage research in heat transfer, by recognizing young investigators for the quality of their research. The award will be given annually by the Society to recognize a researcher who is under the age of 36, on June 1 of the year he/she is nominated, and has received a Ph.D. or an equivalent degree in engineering. Individuals nominated must be committed to pursuing research in heat transfer, and must have demonstrated the potential to make significant contributions to this field.

Nominations may be sent to the HTD Honors and Awards Committee (Prof. Ayyaswamy at [ayya@seas.upenn.edu](mailto:ayya@seas.upenn.edu) is the Chair over the next year) by October 1 or to the ASME General Awards Committee by March 1 each year.

- HTD has a web site (<http://www.asme.org/divisions/htd>) with meeting announcements, forms, rosters, etc.
- Please check your contact information on the HTD roster on the HTD web site and update as appropriate. You can to check your information on the roster at <http://cronos.rutgers.edu/~jaluria/roster.html> E-mail corrections to Rod Douglass at [rwd@lanl.gov](mailto:rwd@lanl.gov)
- The 2003-2004 Executive Committee is Y. Bayazitoglu, Chairperson; R.D. Skocypec, Vice Chairperson; M.K. Jensen, Member; R. W. Douglass, Treasurer; Timothy Tong, Secretary; and Y. Jaluria, Past Chairperson

## **Review of 2003 Summer Heat Transfer Conference, July 20-23, Las Vegas, NV**

TPR: Van Carey  
KCR: Roy Hogan

Roy Hogan reported 44 papers in 12 sessions and 14 presenters in the tutorial on Numerical Heat Transfer. Web-based management process was very effective method to communicate papers, reviews, etc. It is still an evolving tool. More detailed feedback from session organizers is provided below.

Sessions:

- Meshless Heat Transfer Computations (Pepper, Runchal with K-12) – 5 invited presentations

- Inverse Methods (Dulikravich, Blackwell) – 4 papers
- Computational Techniques in Bio Heat Transfer (Runchal, Emery – w/ K-17) – 2 papers
- Computational Techniques for Micro/Nano Systems – I (Murthy, Amin) – 5 papers
- Computational Techniques for Micro/Nano Systems – II (Amin, Murthy) – 4 papers
- Computational Advances in Free and Forced Convection – I (Spall, Guessous) – 5 papers, 4 showed
- Computational Advances in Free and Forced Convection – II (Guessous, Spall) – 4 papers, 3 showed
- Computational Advances in Free and Forced Convection – III (Hauser, Spall) – 4 papers, 3 showed
- Computational Heat Transfer for Reaction-Related Processes (Zheng, Khan) – 3 papers
- Computational Heat Transfer for Reaction-Related Processes (Zheng, Khan) – 4 papers
- Computational Heat Transfer in Manufacturing Processes – I (Amin, Majumdar w/ K-15) – 4 papers, 2 showed
- Computational Heat Transfer in Manufacturing Processes – II (Majumdar, Amin w/ K-15) – 5 papers, 2 showed
- Tutorial on Numerical Heat Transfer (Runchal) – 14 presenters

Sessions were well attended (some standing-room only). Could have had more question and answer time. Slower pace may be desirable. Should repeat again in a year or so, with updated material. Aki Runchal is willing to organize again. Noted that IMECE might be good choice because of more diverse attendees. Darrell will collect presentations and send them to ASME. Edison will put notes on the web.

### **Other 2003 SHTC Discussion**

- Question regarding how to respond to requests for “Invitation/Acceptance Letters” from authors. These letters often are needed to justify their attendance at the meeting and to help authors obtain travel funding. In general, it is sufficient for session chairs (or K-20 KCR) to draft letter on ASME letterhead congratulating the author on acceptance of their work, recognizing that they will be presenting at the conference, noting that we are looking forward to their participation in the session, etc.
- Issues related to 2003 SHTC that need to be addressed in future.
  - Schedule published on the web was different than the on-site program... some authors missed their presentations.
  - Paper ordering specified by session organizers was not used in the program... low-probability presenters were in the middle of sessions... resulted in no-show gaps in the session.
  - K-20 sessions were not spread across conference timeline adequately... too many were on the last day... Conference organizers did not provide feedback to KCRs regarding the final scheduling of sessions.... Some K-20 members had scheduling conflicts due to double-booking.
  - Session organizers must have FINAL approval of revised papers to ensure that appropriate papers are in sessions and that conference program reflects only accepted papers.
  - Session organizers need to clearly define the type of sessions (technical papers, posters.. ) on the web site prior to soliciting and accepting abstracts.

- HTD policy regarding 'no paper, no podium' needs to be defined and enforced.

## **Review of Sessions in 2003 IMECE, Washington, DC**

TPR: Russ Skocypec

KCR: N.K. Anand

### Sessions:

- HT-9D Validation of Computational Models (Dowding/Emery), Format: Technical Publication
- HT-11C Computational Heat Transfer in Porous / Composite Media & Heat Exchanger Systems I (Andrews, Kahn), Format: Technical Publication
- HT-10C Discontinuous Finite Elements in Heat Transfer (Li, Heinrich), Format: Technical Publication, may turn into a forum with extended abstracts
- HT-10A Computational Heat Transfer in Porous / Composite Media & Heat Exchanger Systems II (Kahn, Andrews), Format: Technical Publication
- HT-11A Industrial Applications of Computational Heat Transfer I (Clarksean, Rhodes), Format: Technical Publication/Extended Abstract
- HT-10B Industrial Applications of Computational Heat Transfer II (Clarksean, Pepper), Format: Technical Publication/Extended Abstract
- HT-10D Advances in Computational Heat Transfer (Douglas, Pepper, and Acharya) Format: Technical Paper
- HT-11D Numerical Modeling of Turbulent Heat Transfer (Guessous, Acharya), Format: Technical Publication
- HT-11B Tutorial on Micro-and Nano-scale Heat Transfer -II (Jayathi Murthy), Format: Panel

## **Review of Sessions in 2004 NHTC, with ASME FED, Charlotte, NC**

TPR: Raj Manglik

KCR: Lili Zheng

### Sessions:

- Computational Heat Transfer for Hazardous Waste Management (Runchal, Carrington, Webb w/K-19)
- Applications of Computational Heat Transfer (Spall, Guessous)
- Mesh Generation and Mesh Quality (Douglas, w/ FED) – Rod will contact Peter Raad in FED
- Tutorial on Grid Generation (Douglas, Dowding, Runchal)
- Stochastic Heat Transfer (Emery, Pepper)
- Verification Problems for Computational Heat Transfer (Blackwell, Anand, with K-12)
- Computation of Heat Transfer for Biomedical Applications (Zheng, Bingmei Fu, w/ K-17)
- Computational Heat Transfer Involving Electric and Magnetic Fields (Dulikravich, Li)
- Computational Inverse Problems and Optimization of Heat Transfer (Dulikravich, Jones)
- Computational Heat Transfer in Porous/Composite Media and Heat Exchanger Systems (Andrews, Kahn)
- DNS/LES for Heat Transfer Problems (Acharya, Hauser)

## **Review of Sessions for 2004 IMECE, Anaheim, CA**

TPR: ??

KCR: Pradip Majumdar

- Boundary Element Methods in Heat Transfer (Kassab, Emery)
- Computation of Multi-scale Heat Transfer (Li, w/K-15)
- Computational Heat Transfer for Manufacturing Processes (Majumdar, w/K15)
- Meshless Fluid Flow and Heat Transfer Computational Methods (Pepper, Runchal)
- Computational Heat Transfer for Reaction Related Processes (Zheng, Khan)
- Applications of Industrial Heat Transfer (Rhodes, Clarksean)
- Advances in Numerical Techniques in Heat Transfer (Anand, Hogan, Acharya)
- Tutorial on Numerical Heat Transfer (Runchal) -- shoot for two sessions, back to back, both in either the morning or afternoon... try not to split over lunch
- Benchmarking of a 3D Backward Facing Step with Heat Transfer (Heinrich, Carrington, Armaly, Pepper)

## **Meeting Adjournment**

The meeting adjourned about 8:05 p.m.

Respectfully submitted,

Roy Hogan