

**Minutes of the  
K-20 Committee Meeting on Computational Heat Transfer**

**2003 IMECE  
Washington, DC  
November 20, 2003**

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Therese Rhodes called the meeting to order at 4:00 pm.

Attending:

|                 |                |                |
|-----------------|----------------|----------------|
| Sumanta Acharya | Ashley Emery   | Laurent Pilon  |
| N.K. Anand      | Baki Farouk    | Jayathi Murthy |
| Malcolm Andrews | Sean Hseih     | Darrell Pepper |
| Dave Carrington | Roy Hogan      | Dick Pletcher  |
| Yitung Chen     | Milind Jog     | Therese Rhodes |
| Randy Clarksean | Jerry Jones    | Aki Runchal    |
| Al Crosbie      | Jamil Khan     | S.P. Vanka     |
| Rod Douglass    | Eddie Leonardi | Stephen Webb   |
| Kevin Dowding   | Ben Q. Li      | Lili Zheng     |

### **Award for Sumanta Acharya**

Therese presented Sumanta an award recognizing his leadership and service to the K-20 committee.

### **Approval of Previous Minutes**

The minutes of the K-20 committee meeting held at the 2003 Summer Heat Transfer Conference were reviewed and approved. Motion to approve minutes made by Sumanta Acharya; seconded by Darrell Pepper.

### **Announcements**

- Eddie Leonardi reminded us that the Third International Symposium on Advances in Computational Heat Transfer will be held April 19-24, 2004 on a cruise ship off of Norway. Cost is approximately \$1300 for 5 nights/6 days and all meals. Presently have ~150 abstracts, 8 keynotes, and a V&V panel. More information is available at <http://cht04.mech.unsw.edu.au>

### **Executive Committee Report**

Tim Tong reported the following from the Heat Transfer Division Executive Committee:

- Final registration for the 2003 Summer Heat Transfer Conference was 460 attendees, which consisted of 340 paying attendees and 120 students (non-paying). Conference made approximately \$4K; first time in a long time. We will probably charge students a small fee in the future. HTD is also considering requiring registration prior to putting paper into the program. Discussed "what if" the presenting author is a student issue.
- Custodial account balances is \$30-35K now. The intent is to build it up to \$50K or more. Executive Committee is seeking ideas on how to use the money.
- Summary of HTD participation in 2003 IMECE – 234 papers in 63 sessions. WEB tool was used for conference organization. Still under development, will be continuously improved.
- ASME reorganization to make ASME more "streamlined"

- Council on Engineering proposal was discussed in Las Vegas. Also, Board of Governors proposal on the table that proposes to eliminate one layer of management (Council on Engineering). Decision to be made March 2004. More information is on the ASME web site. Membership input is solicited via the web site.
- Impact on the Heat Transfer Division and possible options
  1. could stay as we are now
  2. Could join with 2-4 other divisions to form an institute. Candidates for combining could be within or outside of the Basic Engineering Group (Fluids, Applied Mechanics, Bio, Tribology Divisions). HTD is big contributor to the IMECE. Basic Energy Group makes up for 45% of attendees. Journal of Heat Transfer is also one of the more profitable journals. JHT ~ \$150K, All journals in Basic Engineering Group makes about \$600K. Journal 'profits' go directly to ASME and none presently flow back to the HTD. Institute 'may' be able to hold on to a portion of these profits. These issues will have to be negotiated with ASME at some point. Likewise, dues presently do not flow to the divisions. Stay informed via the web site, be thinking about the pros & cons of becoming an institute. An open forum is planned at the next meeting (Charolette) to continue the discussion of options.
  3. Much discussion on concerns, issues, and opportunities for HTD associated with ASME reorganization. Stay tuned to <http://www.asme.org/change> for periodic updates and information. Provide comments and feedback to ASME and copy the HTD Executive Committee.
- Please check your contact information on the HTD roster on the HTD web site and update as appropriate. You can 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

Edison will put notes on the web.

## **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, 5 papers, 5 authors showed, session was well-attended
- HT-11C Computational Heat Transfer in Porous / Composite Media & Heat Exchanger Systems I (Andrews, Kahn), Format: Technical Publication, 4 papers, 4 authors showed, poorly attended.
- HT-10C Discontinuous Finite Elements in Heat Transfer (Li, Heinrich), Format: Technical Publication, 4 papers, 5 presentations, session is later in conference
- HT-10A Computational Heat Transfer in Porous / Composite Media & Heat Exchanger Systems II (Kahn, Andrews), Format: Technical Publication, 4 papers, 3 authors showed.
- HT-11A Industrial Applications of Computational Heat Transfer I (Clarksean, Rhodes), Format: Technical Publication/Extended Abstract, 4 papers, ~12 attended
- HT-10B Industrial Applications of Computational Heat Transfer II (Clarksean, Pepper), Format: Technical Publication/Extended Abstract, 4 papers, ~18 attended

- HT-10D Advances in Computational Heat Transfer (Douglas, Pepper, and Acharya) Format: Technical Paper, 5 papers, later in conference
- HT-11D Numerical Modeling of Turbulent Heat Transfer (Guessous, Acharya), Format: Technical Publication, 5 papers, later in conference
- HT-11B Tutorial on Micro-and Nano-scale Heat Transfer -II (Jayathi Murthy), Format: Panel, with K-16, two sessions, both later in conference

### **Other 2003 IMECE Discussion**

Issues related to audio-visual that need to be addressed in future.

- Probably best to have one computer hooked up to the projector with all presentations on it. Significant amounts of time can be wasted dealing with pc/video issues if you change computers between presentations. CDs can be an option for use with a single computer. Bottom line is that it is easiest if the session chair has a laptop and all presentations
- Schedule changes were made up to the week prior to the conference. This causes difficulties for authors with respect to travel, etc. and could cause some authors to miss their presentations. Session chairs should be diligent about checking the schedule and communicating with authors.

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

TPR: Raj Manglik

KCR: Lili Zheng

Presently have 436 abstracts, deadline for abstracts is being extended. Full papers are due January 10, 2004. Authors will have to have one paid registration to have paper in proceedings. Registration fee is \$400 and includes some meals, snacks, etc. Need approximately 600 attendees to cover costs.

Sessions:

- Computational Heat Transfer for Hazardous Waste Management (Carrington, Webb, Runchal w/K-19)
- Applications of Computational Fluid Dynamics and Heat Transfer (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 (Anand, others?? w/K-12)
- Computation of Heat Transfer for Biological 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)
- Advances and Applications of DNS/LES for Heat Transfer Problems (Acharya, Hauser)

### **Review of Sessions for 2004 IMECE, Anaheim, CA (early part of week)**

TPR: Mike Jensen

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, Vanka, w/K15)

- Meshless Fluid Flow and Heat Transfer Computational Methods (Pepper, Runchal)
- Computational Heat Transfer for Reaction Related Processes (Zheng, Khan)
- Industrial Applications of Computational Heat Transfer (Rhodes, Clarksean)
- Advances in Numerical Techniques in Heat Transfer (Anand, Hogan, Acharya)
- Tutorial on Numerical Heat Transfer and Fluid Flow (Runchal, Pepper, Vanka, Acharya) -- shoot for four sessions (2 for heat transfer, 2 for fluid flow), back to back, two in the morning, two in the afternoon
- Benchmarking of a 3D Backward Facing Step with Heat Transfer (Heinrich, Carrington, Armaly, Pepper)

### **Review of Sessions in 2005 NHTC, “Bay Area”**

TPR:

KCR:

Sessions:

- Computational Heat Transfer
- High Performance Computing using Grid Computing (Pepper, Chen)
- Massive Scale Problems
- Tutorial on Numerical Micro/Nano Scale Heat Transfer
- Computational Techniques for Multi-phase Heat Transfer
- Radiation Heat Transfer (w/K-12)
- Session with a “good title” on mistakes
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### **Meeting Adjournment**

The meeting adjourned about 6:00 p.m.

Respectfully submitted,

Roy Hogan