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

2002 IMECE Meeting
New Orleans, LA
November 18, 2002

The meeting was called to order by Sumanta Acharya at 7:05 pm.

Attending:

Sumanta Acharya	Malcolm Andrews	Jamil Khan
Ben Blackwell	Darrell Pepper	Tom Shih
Laxmi Gewali	Pradip Majumdar	Robert Spall
Laila Guessous	Rod Douglas	Therese Rhodes
Graham de Vahl Davis	Eddie Leonardi	Roy Hogan

Approval of Previous Minutes

The minutes of the K-20 committee meeting held at the 2002 ASME/AIAA meeting in St. Louis, MO were approved.

Announcements

- Sumanta Acharya announced that Therese Rhodes will be nominated to be the next K-20 Chairperson. We will need a volunteer to replace her as Vice-chair & Secretary; with the expectation that that person would eventually assume the Chair of the committee.
- Graham DeValDavis described the Third International Symposium on Advances in Computational Heat Transfer, April 19-24, 2004, to be held on a cruise ship off of Norway. Cost is approximately $1300 (double check with Graham) for 5 nights/6 days and all meals. Organizers are looking for feedback. If anyone is interested, e-mail cht04@cfd.mech.unsw.edu.au More information is available at http://cht04.mech.unsw.edu.au
- Sumanta Acharya described the 6th India International Heat & Mass Transfer Conference, January 5-7, 2004 to be held in Kalpakkam, India. The conference is jointly sponsored by ASME. More information is available at http://www.igcar.ernet.in/seminars/nhmtc.htm
- Training for the web-based conference toolkit is being offered during the IMECE. All session organizers and KCRs were encouraged to attend.

Executive Committee Report

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

- The 2003 ASME NHT will be July 20-23 in Las Vegas. Conference hotel is the Rio (an all suites hotel) and room will be $89 for a single or double. Registration fee will be $390 and will include the 2 breakfasts, HTD Luncheon, 2 lunches, refreshments during breaks, Transactions CD, and an Opening Reception. The HTD checked with an outside vendor - 3D. ASME matched 3D's cost and is organizing the conference. Executive Committee negotiated to minimize conference expenses (registration fee) and increase what attendees get in return. The registration fee includes a component that will go to the will go to the Division as 'profit.'

- After 2003 HTD may not support future JSME/ASME meetings in March (like we have in Hawaii in 2003). Van Carey is in charge of the conference. All papers will be 3-6 pages extended abstracts with later deadlines. The short abstract is due in January, extended abstract due in March for review. Final extended abstract due approximately 2 months before the conference.
- In 2004 we will have a joint conference with AIChE and the ASME Fluids Division. It will be in either Boston or Chicago.
- Heat transfer is in the latter part of the week at the 2003 IMECE in Washington, DC. Basic Engineering Group will vote on whether to participate or not later this week at the K-5 Committee Meeting. Issue is costs vs benefit to attendee.
- Rod invited interested people to a training session for Session Organizers that he is conducting.
- Future 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
- 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
- The Executive Committee Chair is Yogesh Jaluria; Vice Chair is Yildiz Bayzitoglu; Rod Douglass is Treasurer.
- Consider subscribing to Heat Transfer Recent Contents. If interested, contact jepete@ufl.edu

Review of Sessions in 2002 IMECE

TPR: Yildiz Bayazitoglu
KCR: Aki Runchal

Sessions:

- High Performance Computing in Thermal Problems (Pepper, Farouk) – 7-8 abstracts submitted, 6 papers, tried to get invited speakers, but it didn't work out. Session
- Numerical Modeling of Turbulent Heat Transfer (Anand, Pletcher) – Combined with a K-12 session. 11 abstracts submitted, 10 papers in two sessions. Session
- Parameter Estimation in Thermal Systems (Emery, Blackwell, Woodbury w/ K-12) – 9 abstracts submitted, 9 papers. Two sessions, 6 papers in one, 3 in the other. Session HTD-15D
- Industrial Applications of Computational Heat Transfer (Rhodes, Clarksean) – 17 abstracts submitted, 17 papers in three sessions, Sessions HTD-10D, 13B and 14C.
- Computational Methods for Environmental Heat Transfer (Pepper, Runchal, w/ K-19 - who?) – 3 abstracts submitted, 3 posters. Session
- Computational Heat Transfer in Reduced Gravity (Hochstein, Ben Li w/ K-12 & K-22) – 4 abstracts, 4 papers, Poster Session
- Parallel Computing for Heat Transfer Problems (Acharya, w/K-8) – All invited talks (5)

Review of Sessions in 2003 NHTC, Las Vegas (with AIChE) – late April, information is being requested now

TPR: Van Carey
KCR: Roy Hogan

Roy Hogan reported 53 abstracts are presently in the system. Web-based management process is being used. It is an on-the-fly learning process, so be patient, anticipate problems, ask questions, and provide feedback.
Sessions:

- Radiation Heat Transfer (Emery, Thynell w/ K-8) – 0 abstracts
- Inverse Methods (Dulikravich, Blackwell) – 6 abstracts
- Computational Techniques in Bio Heat Transfer (Runchal – w/ K-17) – 2 abstracts, Sumanta will contact K-17 to see if they have any more.
- Computational Techniques for Micro/Nano Systems (Murthy, Amin) – 11 abstracts
- Computational Advances in Free and Forced Convection (Spall, Guessous) – 15 abstracts
- Computational Heat Transfer for Reaction-"Related Processes (Zheng, Khan w/ AIChE) – 7 abstracts
- Computational Heat Transfer in Manufacturing and Material Processing (Majundar, Khan w/ K-15) – 6 abstracts
- Meshless Heat Transfer Computations (Pepper, Runchal with K-12)
- Tutorial on Numerical Heat Transfer (Runchal)

  A discussion about the intent and implementation of this session occurred. Aki's intent was to focus on existing members, mostly from industry. He was thinking of having 3-4 invited specialists on different topics. Discussed the pros/cons of focused verses broad-based format. Aki, Darrell Pepper, and Ashley Emery agreed to identify others participants and topics and to organize the session. A potential session title might be 'Numerical Heat Transfer Clinic: Promises and Pitfalls.' Session might include issues on accuracy, experiences, etc. Plan is to allocate four hours for the session.

Review of Sessions in 2003 IMECE, Washington, DC

TPR: Russ Skocypec
KCR: N.K. Anand

Sessions:

- ~~Meshless Heat Transfer Computations~~ (Pepper, Runchal with K-12) – moved to 2003 NHT
- Validation of Computational Models (Dowding, Emery) – Stand up session
- Benchmark and Verification (Heinrich, Rhodes) – Juan sent potential problem to Therese, planning on proceeding with session, Poster session
- Computational Interphase Dynamics & Phase Change (Amin, Heinrich) - Stand up session
- Forum on Discontinuous Finite Elements in Heat Transfer (Li, Heinrich) - Stand up session
- Computational Geometry, Meshing and Visualization (Douglass, Pepper, Acharya) – Poster session

- Industrial Applications of Computational Heat Transfer (Clarksean, Rhodes) – Stand up session
- Computational Transport Issues in Nuclear Industry (Clarksean, Pepper) – Stand up, name revised
- Computational Heat Transfer in Porous/Composite Media & Heat Exchanger Systems (Andrews, Kahn) – Stand up
- Numerical Modeling of Turbulent Heat Transfer (Guesseous, Acharya) – Stand up

Review of Sessions in 2004 NHTC, (Boston with ASME FED)

TPR: Raj Manglik
KCR: ??

Sessions:

- Computational Heat Transfer for Hazardous Waste Management (Pepper)
- Applications of Computational Heat Transfer (Spall, Guessous)
- Mesh Generation and Mesh Quality (Douglass, w/ Fluids Division)
- Tutorial on Grid Generation (???)
- Stochastic Heat Transfer (Emery, Pepper)
- Verification Problems for Computational Heat Transfer (Blackwell, Anand)
- Computation of Heat Transfer for Biomedical Applications (Zhang w/ K-17)

Other Discussion

- Results of Ashley Emery's email survey seeking opinions on whether to organize sessions based on 'extended abstracts' or on the 'traditional' way with complete papers. Vote was a draw, with 49% voting for each approach, with 2% unclear.
- It was proposed that the K-20 committee develop a position on the process of accepting papers and have Sumanta present it as a strawman for the division at the K-5 meeting. After considerable discussion, two options were developed and a vote was taken. Either option maintains the 'no paper on CD, no podium at the conference' policy. The results were:

  1. Accept papers based on extended abstracts of at least 1000 words.
  2. Accept papers based on peer-review of full-length papers.

  Option 1 was approved by a 23 to 9 vote.

  NOTE: At the K-5 committee, it was decided to allow each K-committee to decide which options would be the best for them. No uniform policy was accepted.

Meeting Adjournment

The Meeting adjourned at 9:05 p.m.

Respectfully submitted,

Roy Hogan