

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

**2004 IMECE
Anaheim, CA
November 13, 2004**

Therese Polito called the meeting to order at 2:00 pm.

Attending:

N.K. Anand	Juan Heinrich	Darrell Pepper
Malcolm Andrews	Roy Hogan	Therese Polito
Aaron Brundage	Deborah Kaminski	Aki Runchal
Dave Carrington	Alain Kassab	X Sheldon Wang
Yitung Chen	Eddie Leonardi	Guo-Xiang Wang
Al Crosbie	Ben Q. Li	Stephen Webb
Graham de Vahl Davis	Pradip Majumdar	Hui Zhang
Ashley Emery	W.J. Minkowycz	Lili Zheng
Baki Farouk	Jayathi Murthy	

Approval of Previous Minutes

The minutes of the K-20 committee meeting held at the 2004 HTD/FED Summer Conference were reviewed, corrected, and approved.

Announcements

- Graham de Vahl Davis reported that the Third International Symposium on Advances in Computational Heat Transfer Conference, co-sponsored by the ASME took place in April 2004 aboard a cruise ship in Norway. Approximately 120 papers were presented and 50 additional accompanying people attended.
- Graham de Vahl Davis also reported that the 13th International Heat Transfer Conference will be August 13-18, 2006 in Sydney, Australia. Additional information is available on the conference web site at www.ihct-13.com.
- Therese Polito pointed out the session organizer training opportunities and the HTD open forum to discuss HTD options in the Continuity & Change process that is ongoing.

Executive Committee Report

Tim Tong reported the following items from the Heat Transfer Division Executive Committee.

- Division is updating HTD membership rosters. We will be updating our membership list and will be providing to the Executive Committee.
- The nomination process for positions in the HTD went well. Executive Committee has selected nominations for open positions. Selections will be announced once they have been approved (about a month). Overall, process was good because it encouraged us to be engaged and participate.
- Executive Committee requested that we appoint a "webmaster" to review and revise our web page. Dave Carrington volunteered to update our web page.

- Rod Douglas needs to know our K-Committee Representative (KCR) and the names of our sessions for the 2005 IMECE by November 30, 2004.
- Several HTD options in the Continuity & Change Initiative are being considered. One would be to continue as a Division under the Knowledge & Communities Sector, much as we do now. Another option would be to join with other BEG Divisions to form an “Engineering Sciences Institute.” Several changes to funding processes are being considered by ASME. One option, which is being considered is to split profits from Journal; 1/3 to the Divisions and 2/3 to ASME. Other options for sharing member dues will probably be considered as part of the restructuring. 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. An open forum of the HTD Executive Committee was held on Monday to discuss potential options.
- Several issues related to programming at this IMECE were discussed. Status-quo is unacceptable. Basic Engineering Group had sessions over the entire seven days of the conference. We were “informed” that HTD had Saturday sessions and had little/no participation in setting the schedule. HTD is considering other conferencing options to address these kinds of issues. One option is to not program at IMECE and only have one meeting per year. Another option being considered is to hold a “BEG” conference, co-located with the IMECE.
- Executive Committee has asked the K-2 Committee to review operation and organization of the HTD to be more responsive and effective in serving our membership.
- R.D. Skocypec, Chair; T.W. Tong, Secretary; C.H. Oh, Treasurer; R.W. Douglass, Member; and Y. Bayazitoglu, Past Chair.

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

TPR: Raj Manglik

KCR: Lili Zheng

Lili provided the following summary. Session organizers please check and update missing information. There was a total of 112 papers in the following listed sessions.

Sessions:

- 2-1-1 Radiative Heat Transfer and Stochastic Methods (Emery w/ K-6)
Format: Technical Publication, 1 session, 5 papers, ? authors showed, about ? attended.
- 4.1 Applications of Computational Fluid Dynamics and Heat Transfer (Guessous, Spall, w/FED Brzoska)
Format: Technical Publication, 9 sessions, 55 papers, well attended, about 20 for each session
- 4-2 LES_SYMP_04_2 (Acharya, Celik)
Format: Technical Publication, 5 sessions, 25 papers, extremely well attended, over 70 attended in the 1st session
- 4-5 Computational Heat Transfer for Hazardous Waste Management / for Yucca Mountain (Webb, Carrington, Runchal w/K-19)
Format: Technical Publication, 3 sessions, 12 papers, 12 authors showed, about 7-10 attended.
- 4-6-1 Verification Problems and Benchmarking in Computational Fluid Dynamics & Heat Transfer (Anand, Emery)
Format: Technical Publication, 1 session, 3 papers, 1 author showed, about 8 attended.
- 4-8-1 Mesh Generation and Application (Douglas)
Format: Technical/Short paper forum, 1 session, 4 papers.
- 9-1-1 Computation of Heat Transfer for Biological Applications (Bergman, Zheng, w/ K-17)
Format: Technical Publication, 4 papers, 4 authors showed, over 10 attended.
- 10-4-1 Inverse and Conjugate Problems and Optimization of Heat Transfer (Dulikravich, Jones)
Format: Technical Publication, 4 papers, 4 authors showed, over 10 attended.
- 14-1 Tutorial on Grid Generation (Douglas, Dowding)
Format: Tutorial lectures for 2 sessions

Review of Sessions in 2004 IMECE, Anaheim, CA

TPR: Mike Jensen

KCR: Pradip Majumdar

HTD sessions will start on Saturday, November 13, 2004. Most sessions have papers out for review. Sessions that haven't, need to get them out immediately. We presently have 44 papers in the system.

- Boundary Element Methods in Heat Transfer (Kassab, Emery) 5 papers
- Computation of Multi-scale Heat Transfer (Li, w/K-15)
- Computational Heat Transfer for Manufacturing Processes (Majumdar, Vanka, w/K15) 4 papers
- Meshless Fluid Flow and Heat Transfer Computational Methods (Pepper, Runchal) 4 papers
- Computational Heat Transfer for Reaction Related Processes (Zheng, Khan) 5 papers
- Industrial Applications of Computational Heat Transfer (Rhodes, Clarksean) 4 papers
- Advances in Numerical Techniques in Heat Transfer (Anand, Hogan, Acharya) 2 sessions, 5 & 6 papers
- Tutorial on Numerical Heat Transfer and Fluid Flow (Runchal, Pepper, Vanka, Acharya) -- 2 sessions back to back
- Benchmarking of a 3D Backward Facing Step with Heat Transfer (Heinrich, Carrington, Armaly, Pepper) didn't make

Review of Sessions in 2005 NHTC, San Francisco, CA

TPR: Cristina Amon

KCR: Lili Zheng

Meeting at the Westin St. Francis, July 17-22, 2005 and co-located with the InterPACK'05 Conference. Accounts for most session organizers have been established on the web site, four left to contact. Organizers should go to the web site and update their personal information. Seven papers are in the system right now.

Sessions:

- "micro/nano/chip-level" cooling heat transfer --- (Emery, Ashley will contact Jim Hurd)
- Computational Methods for Thermo-acoustic and Acoustic Problems (Farouk, Kamiski)
- Computational Heat Transfer in Material Processing (w/K-15, Zheng, Li)
- Inverse and Conjugate Problems and Optimization Heat Transfer (Jones, Woodbury, Dowding)
- High Performance Computing In Convective Heat Transfer (Pepper, Chen)
- Advances and Applications of LES/DNS for Heat Transfer Problems (Vanka, Kalib, Khan)
- Application of Computational Heat Transfer (Khan, Spall)
- Computational Heat Transfer for Nuclear Applications (Webb)
- Computational Heat Transfer Applications in Porous Media (Khan, Amin)
- Tutorial on Numerical Micro/Nano Scale Heat Transfer (Jayathi Murthy, w/K-16 Laurent Pilon)
- Computational Heat Transfer for Interfacial Phenomena (Hui Zhang)

Review of Sessions in 2005 IMECE, Orlando, FL

November 5-11, 2005, Walt Disney World Dolphin

TPR:

KCR: Malcolm Andrews

Sessions: (we need to coordinate with other K-committees)

- Advances in Computational Heat Transfer (Anand, Li, Hogan, Jones)
- Multiphase Heat-Mass Transfer and Melting/Solidification in Materials Processing (w/K-15 and FED Multi-phase, Andrews, Hui Zhang)
- Multigrid Methods and Adaptive Refinement Techniques in Heat Transfer (Vanka, Choudhury)
- Uncertainty Quantification, Verification, and Validation Applications (Dowding, Hogan)
- Computational Heat Transfer in Industrial Applications (Clarksean, Rhodes)
- Using Math Packages in Numerical Heat Transfer (Pepper, Chen)
- Stochastic Radiation (Pepper, Kaminski)
- Modeling Thermo-mechanical Systems (Chen, Majumdar)

Review of Sessions in 2006 SHTC, San Francisco, CA

9th AIAA/ASME Joint Thermophysics and Heat Transfer Conference, June 5-8, 2006, Hyatt

Regency San Francisco at Embarcadero Center

TPR: ???

KCR: Dave Carrington

Sessions: (we need to coordinate with other K-committees)

- Tutorial on Numerical Heat Transfer (Runchal)
- Panel on Numerical Issues in Homeland Security (Pepper)
- Modeling Heat and Mass Transfer in Bio-systems (G. Wang, S. Wang)
- Applications of Computational Heat Transfer (Polito, Clarksean)
- Numerical Modeling of Turbulent Heat Transfer (Anand, Majumdar)
- Computational Heat Transfer for Multi-scale Phenomena (S. Wang, Carrington)
- Heat Transfer in Micro-channels (Majumdar, Kandlikar)

Meeting Adjournment

The meeting adjourned at 4:00 p.m.

Respectfully submitted,

Roy Hogan