



ASME K-20 Committee Meeting Minutes

Minutes at 1996 IMECE, Atlanta

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The minutes of our previous meeting were approved without modifications

This ad hoc committee officially becomes K-20, Committee on Computational Heat Transfer, in the summer of 1997 at the National Heat Transfer Conference, Baltimore, MD. Ben Blackwell will succeed Darrell Pepper as chairman at that time.

Report from the Executive Committee of HTD.

- Presented by Ralph Nelson

- i.** The K-3 Honors and Awards Committee presented a proposal for having a "classic" paper award for the Journal of Heat Transfer. Debbie Kaminski of RPI has done some research using the Science Citation Index to support this idea. Number of citations over the past 10 years in the Journal will be used as a screening process. The final decision will be made by K-3. If you have comments on this proposed award, please address them to Peter Simpkins of AT&T, Chairman of K-3.
- ii.** Members are invited to submit nominees for Calvin Rice Lecture award, given to a non-US heat transfer researcher. John Collier is a past recipient of this award.
- iii.** The executive committee would like to stimulate expedited sessions, from proposal to room assignment. We must provide author names (published in the program), papers are not reviewed, streamlined procedure. This will allow more timely publications (advantageous for those in industry) but may be disadvantageous for those in academia, who need reviewed publications.

- iv. JHT - currently, there is no publication backlog, currently 5 months required from receipt to acceptance/rejection, 9 months from submittal to publication. These are much shorter times than in the past.
- v. Satellite Programs - ASME is interested in pursuing this, and is now in the process of obtaining corporate sponsorship.
- vi. Conference Organization - we are operating under the new process that was begun in Houston, and are clearly having problems. Biggest problem is poor communication to the authors. A critical timing sequence falls on the shoulder of the K-Committee Representatives (KCR). Will continue to solve these problems as fast as possible.
- vii. HT Division is very well represented here in Atlanta -We had 45 sessions with 222 papers, 3 panel, and 2 poster sessions.
- viii. There will be a two-year grace period for dual membership in K-20 and other K-Committees. After 2 years, you will be allowed to serve on only one.
- ix. HTD Banquet - tomorrow night, 7:30 PM, expensive...

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Q&A

Award - The award mentioned above is only for papers in JHT. Also noted that citations will not be the only criterion, but will have other metrics of quality such as relevance to industry, etc. Final criteria not yet determined - the HTD Executive Committee wants your comments. Address comments to Peter Simkins , chair of K-3.

3. George Dulikravich is a new ASME Fellow, and will be "anointed" tomorrow.

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4. Planning for Future Sessions

i. Dick Pletcher is the KCR for the 1997 HT Conference in Baltimore key action item: Dick has a new set of suggested deadlines:

January 17 Manuscripts Due (formerly was December 31)

March 14 Acceptance/Rejection notification

April 4 Revised Manuscripts Due

April 18 Final Paper Due (on mats)

K-20 had 36 abstracts as of this morning. One very good hit: 21 abstracts on inverse methods (this is good). Rest in 2 categories: 6 in "methods," rather than physics, some use moving grids, one BE paper, 3 others; 9 in "flow

physics," employing numerical methods. Authors need to be notified about acceptance of abstracts immediately. Matt Kelleher needs to be notified as to session partitioning.

Comments from Chair: Papers are very diverse.; need to devise coherent sessions (noted that K-7 ended up with zero sessions for the Atlanta meeting). Our area (computational heat transfer) is pretty popular now.

Ralph suggests that we send out our own calls for papers. Need 5 items listed: (1) where, (2) what, (3) session chair, (4) copy to general liaison, (5) suggest saying "please put this in a specific session." Objective of central receipt of papers was to provide coherence, but there were communication problems (past number of abstracts: 370 submitted, about 300 "panned out").

ii. Woody Fiveland is the 1997 IMECE representative; he is also coordinating a large conference in Europe next year and needs some help. Pat Burns volunteered to help.

iii. George Dulikravich volunteered to be the KCR for the 1998 Thermophysics and Heat Transfer Conference in Albuquerque.

This Meeting

i. Benchmark Problem - were 4 papers, but only three are in proceedings. Someone said the fourth is in the Proceedings somewhere. There are supposed to be 4 in there.

ii. Numerical Methods for Coupled.... supposed to be 5 papers, but only four are in the volume. Where is the missing paper? Also, the schedule has not been corrected from this summer.

iii. Computational HT in non-Newtonian Fluids - did not go. Received 12 abstracts, and zero papers.

iv. Inverse problems, Keith Woodbury - 6 papers, started out with 12 abstracts, 8 requests to submit, all published. Some shown in program, but were withdrawn. 25 inverse related papers scheduled '96 Baltimore meeting.

Q - How interested are we in having all our papers in one volume? Ralph - economic factors; if there are "many" papers, there is a good chance of this. This should be a short-term issue. ASME is planning to publish the entire proceedings on CD-ROM in 1999, for about \$100.

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5. National HT Conference, Baltimore

Matt Kelleher - Technical Program Representative

Carlos Brebbia - possible keynote on Boundary Elements; have only 1 paper in this area now. Suggestion - re-label the session as "...methods..." which would encompass Boundary Element Methods. Jim Beck was also mentioned by George Dulikravich as possible keynote speaker. Suggestion - overwhelming interest in inverse problems, maybe we need to do a keynote in that area... Can we have two keynotes? Woody does not see why not. Session Chairs meet with Dick afterwards to coordinate.

Therese - Multiblock, multigrid...

Industrial Applications - Randy

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6. 1997 IMECE - Woody is Program Technical Rep.

- Parallel Architectures - Bruckner and Douglas (not Ahmad)
- 3-D Computational HT - Amin and Camari
- Benchmark Problems - need a volunteer: Therese Chopin volunteered to co-chair, picked a co-chair (who).
- (d) Computational Methods for Multiphase Flow - Malcom Andrews
- (e) Transient Computational Heat Transfer - Roy Hogan and Anand

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7. 1998 in Albuquerque.

(a) Flow induced vibration w/HT - Bryan and Therese Chopin

(b) Panel on Unresolved Issues in Computational HT

- need a new session, suggested an ad hoc session combined w/

K-12: Uncertainty Analysis for Computational HT (joint w/

K-12), Keith and Ashley Emery

(c) Multi-disciplinary Design Optimization in Heat Transfer: Amon, Blackwell and Amin

(d) Visualization Methods - Hanson and Douglass

(e) Hardware Issues for Computational HT - Pletcher

(f) Other Business

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8. 1998 IMECE - Anaheim

Numerical Methods in Compressible Flows? - hard to get papers in this area, as AIAA gets the papers.

Numerical Methods for Radiative Transport? - already offered by K-8 and K-12 (pie may not support an additional "slice").

Gridding, mesh generation? - Woody suggests making it very broad, to attract enough papers.

Developments in Numerical Heat Transfer - OK. Maybe "Recent Advances in Numerical Heat Transfer" - Woody advocates one general session per year on "algorithm development." If we get 25 papers, then we can have a symposium.

Heat Transfer at Microscale? Has broad appeal...

Q - Is session better at winter or summer? Fluids emphasis better in the winter, as they will be at the IMECE. Woody suggests we come up with "theme sessions" which we will offer year after year.

Dick Pletcher thinks a mix, some "bread and butter" sessions, plus some "hot" topics will be good.

Suggestion: Computational Methods in Emerging Heat Transfer Technologies?

Flavor is "Algorithmic Developments" - Woody says a "companion session" would be fine, where the focus is more applied, but need an entire session on fundamentals.

Darrell - in summer of 1998 - let's run "Advances in Algorithms for Computational Heat Transfer." Woody will help, but not lead, as he will be the Chair of the HT Division that year.

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9.IMECE 98 in Anaheim - Joint with Fluids

- "Algorithmic Developments in Computational Heat Transfer and Fluid Flow"- Achara
- "Applications of Computational Codes in Thermal System Design" - Lazaridis and Huang; could be commercial codes, but not restricted to it, also ties in with benchmark activity.
- Panel on Hardware Issues for Computational Heat Transfer - Pletcher
- Benchmark Problem - Cochran
- "Finite element Methods in Heat Transfer" - Henirich and Chopin
- 10th Int'l Conf "Finite Elements in Fluids" held at Arizona, abstracts due 1 March 1997.

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Other Business

i. The CGCFD (FED) has appointed a 3 person subcommittee (but subsequently changed to 4) to address their benchmarking related issues; the members are Ghia, Freitas, Chopin, and . This subcommittee will work with a similar group from K-20. The purpose is to define the objectives of the benchmarking sessions and to see if K-20 (HTD) and CGCFD (FED) can co-sponsor benchmarking sessions. Ashley Emery, Roy Hogan, and Lazaridis, volunteered; Cochran was asked to join to balance the 4 th member of the CGCFD.

ii. WWW Page: Ben Blackwell passed out an outline of a K-20 WWW page. It will contain some analytical solutions that can be used to verify Computational Heat Transfer Codes; no copyright issues, everything will be free. Copies of calls for papers should be submitted to Ben so that they can be posted on the WWW.

iii. Computational HT Conference in Turkey next year, 26-30 May 1997. Call for abstracts available now. \$10,000 grant from NSF to support young scientists - encourage students to attend. Airfare is about \$800. \$60 per day per diem. \$100 registration for students. On the Adriatic Coast.

iv. Burns - any interest in vetting whole codes? Will bring a specific example to next meeting.

v. Any interest in breaking up into subgroups? Identify two technical areas , send to Ben, and will be included in web page membership list.

Satellite broadcast session planned by ASME Headquarters, broadcast live from Las Vegas, also taped. There will be Q&A period. Looking for corporate sponsors. Costs about \$1,000/hr. Planning 28-30 lectures.

Ben Blackwell - handout for presentation by Sandia/NSF, primarily for University types looking for money.

Call for papers passed out too.

Adjourn 4 PM.

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