

Minutes from the Meeting of the Committee on Emerging Computing Technologies

May 21st, 2001, 2:30 pm – 4:30 pm

2001 Structures Congress & Exposition

Renaissance Hotel, Washington, D.C., USA

Committee members in attendance:

- Paul de Paoli (Engineering Investigations & Testing)
- Eduardo De Santiago, *Secretary* (Illinois Institute of Technology)
- Ian Smith (Swiss Federal Institute of Technology)
- Elisa D. Sotelino, *Chair* (Purdue University)
- Colby Swan, *Vice-Chair* (University of Iowa)
- Yuan Zhao, *for Kim Roddis* (University of Kansas)

Visitors in attendance:

- Gary Consolazio (University of Florida)
- Marc Hoit (University of Florida)
- Laura Lowes (University of Washington)
- Ali Memari (Pennsylvania State University)
- Enrico Spacone (University of Colorado)

1 CALL TO ORDER

The meeting was called to order at 2:40 pm by Elisa Sotelino who chaired the meeting. All members and guests in attendance were introduced.

2 MEETING AGENDA

Elisa Sotelino proposed an agenda for the meeting which was approved by all members in attendance.

3 MINUTES OF PRECEDING MEETING

Minutes from the preceding ECT Committee meeting (May 7th 2000, Philadelphia) were approved by those in attendance.

4 CURRENT AND OLD BUSINESS

4.1 Report on the Analysis and Computation Committee Meeting

Elisa Sotelino presented a report on the meeting of the Analysis and Computation committee (A & C), which is the parent committee to ECT. A concern about the lack of papers related to computing published in the Journal of Structural Engineering was raised at the A & C meeting. This concern was discussed by those present at the ECT committee meeting. A suggestion was made that submissions related to computing be sent directly to John Baugh (Associate Editor). However, current ASCE policy is to have all submissions sent directly to ASCE as opposed to individual editors. Also an additional concern was raised that requests for particular reviewers or editors could lead to suspicions of impartial reviews. Also, to decrease publishing time ASCE will be pushing for a 3 month review process followed by a 6 month publishing process for accepted manuscripts.

For the 2002 Structures Congress in Denver, 14 sessions from the Analysis and Computation committee will be held. Submissions will be limited to 2 page abstracts (including references) and all presentations will be made with powerpoint and must be submitted electronically ahead of time. Colby Swan raised the issue of allowing submissions in PDF format instead. As part of the 2002 Structures Congress, a special ASCE publication of the proceedings of the 15th Analysis and Computation Conference in which submitted papers will undergo a rigorous review process is tentatively planned (depending on approval by the Executive Committee). A mini-seminar on push over analysis will also be presented at the 2002 Structures Congress by the A & C committee.

4.2 ECT Sponsored Sessions at 2001 Structures Congress

ECT did not sponsor any technical sessions at the 2001 Structures Congress in Washington, D.C..

4.3 ECT Sponsored Sessions at the 2002 Structures Congress

ECT will be sponsoring a session on Information Technology (IT) in Structural Engineering Education titled "Information Technology Education for the Future of the Profession". The session will be in the format of a panel discussion with a focus on how IT is or should be taught to civil and structural engineering students. The panel will consist of 4 or 5 panelists. Each panelist will give a brief presentation (approx 5 minutes) addressing two questions: 1) How do you envision your students use of IT after graduation?; and 2) What new (future) technologies should be taught to civil and structural engineering students? The following is a list of possible follow up questions that will be asked by the facilitators (Elisa and Colby) if necessary to stimulate discussion:

- Should a programming language be required for undergraduate education in CE? If yes, explain which language and why this language?
- Given that CE students are most likely not going to be programmers why should they be taught IT?
- What are the topics/concerns in IT that should/shouldn't be taught?
- How is IT used in the rest of your curriculum?
- Should high level programs/packages be taught?

The following is a list of potential panel speakers that were suggested by the attending members:

- Don Grierson (University of Waterloo)
- Wilfred Nixon (University of Iowa)
- Ian Smith (Swiss Federal Institute of Technology)
- Bob Vanderbei (Princeton University)
- Panelist from a large structural or civil engineering firm (eg, Skidmore, Owings & Merrill)
- Renate Fruchter (Stanford University)

To build momentum for this panel Ian Smith, Colby Swan, and Elisa Sotelino will submit a related article to be published in the ASCE civil engineering magazine prior to the 2002 Structures Congress. ECT will also sponsor a second session on High Performance Computing. The final form of the 2002 Structures Congress sessions are due by mid July.

5 NEW BUSINESS

5.1 New Members

The committee reviewed the application of Prof. Graham C. Archer who is applying for membership to the ECT committee. The consensus was that Dr. Graham C. Archer be approved as a new member of the committee. All members were also asked by the Chair to increase recruitment efforts for new members of the committee.

5.2 Sessions for 2003 Structures Congress

The following topics were discussed as potential technical session themes for ECT sponsorship at the 2003 Structures Congress:

- New Search Methods for Design Solution (Ian Smith)
- Internet Based Computing (Elisa Sotelino)
- Virtual (Augmented) Reality (chair needed)
- Visualization (chair needed)

All members are encouraged to submit other suggestions. The deadline for session proposals is October 1st, 2001.

5.3 New initiatives

The attending members agreed that a good activity for the ECT would be to guest edit a special issue of the ASCE Structures Journal on Emerging Computing Technologies. Topics of interest include, but are not limited to the following:

- Embedded sensors—smart materials/structures.

- Internet-based computing.
- Model-based simulation.
- Virtual (augmented) reality.
- New search methods for good solutions.
- Networking.
- High performance computing.

The ECT chair, Elisa Sotelino, in conjunction with John Baugh, the Associate Editor of the Journal of Structural Engineering for ECT, will coordinate efforts in this activity.

6 ADJOURNMENT

The meeting was adjourned at 5:30 pm.

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