

## COMPUTING IN CIVIL ENGINEERING 1998

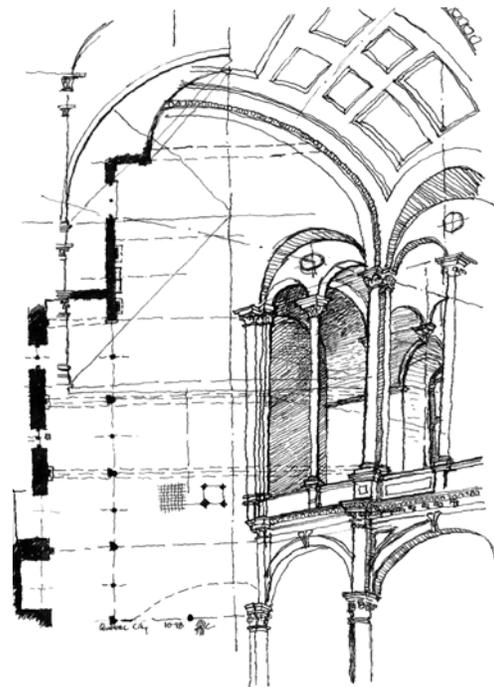
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Just before our ACADIA 98 conference, a conference was held in Boston addressing similar issues in the related profession of civil engineering. Sponsored by the American Society of Civil Engineers (ASCE), the conference was titled the International Computing Congress in Civil Engineering and was the fifteenth in the Computing in Civil Engineering series. Although the interests of civil engineers include non-architectural subjects such as traffic engineering, bridge building, and sanitation engineering, a large number of participants at the conference identify their area of interest as building engineering. Consequently, the conference addressed many issues of interest to architects.

Sessions and presentations at the Congress paralleled those at ACADIA conferences. The World Wide Web was a topic of much discussion, just as it has been at ACADIA conferences. Civil engineering researchers are also exploring how to put courses on the Web, how to use the Internet to support collaboration, and how to distribute product data across the Web. Other papers addressed case-based reasoning, applications of object-oriented programming, expert systems, design education, automated building code checking, and product modeling. Not only did the Congress include a wide range of architecturally relevant topics, it was truly international, including participants from Asia, Europe, Australia, Africa and the Americas.

A highlight of the 1998 Congress was the session on "4D CAD". 4D CAD is the idea of animating 3D digital models of constructed facilities to portray the construction process. The effect is similar to time-lapse photography of a construction site. 4D CAD can reveal potentially expensive errors in construction schedule or even designs that are impossible to construct. Researchers from Stanford University, the University of Colorado and the University of Washington presented several papers that demonstrate a clear utility to the technique. In partnership with construction companies, researchers have demonstrated that 4D CAD is cost effective even if the general contractor must build the entire 3D CAD model from architect's and engineer's 2D representations. Further research efforts are incorporating knowledge-based systems to automatically generate construction schedules and to factor construction knowledge into the design stage.

There are clearly ways by which ACADIA members can contribute to research and dialogue addressing computing in civil engineering. Although there will be no Congress in 1999, a conference will be held at Stanford University August 14-17, 2000. The 8th International Conference on Computing in Civil and Building Engineering has a theme of Bringing the Architecture, Engineering, and Construction Professions Together Again. The Conference Chair, Renate Fruchter, expressly extends an invitation to ACADIA members to contribute to the conference. More information is available at <http://pbl.stanford.edu/cce2000.html>



Sketches from Quebec City by Mark Clayton