


**Message from the Chair**



## The State of Engineering Design Graphics

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This May I will be giving a talk on the “State of Engineering Design Graphics in the United States” to the Japan Society for Graphics Science in Tokyo. While planning for this talk, I began thinking about where our division has come since I joined in 1987 and how the types of presentations have become more diverse. I know the division has had a rich history dating back to the 1940’s, but I believe developments in technology over the last three decades have forced us to change at an exponential rate.

The first midyear conference I attended was in Austin, Texas in January of 1987. I was almost 24 years old and beginning my second semester teaching at NC State. I was naïve and easily persuaded to indulge in the Austin night-life by my veteran colleagues (thanks John Crow, John Freeman, Garland Hilliard, Bill Ross, and Bill VanderWall). Austin was where I was first introduced to the folks who would shape who I am professionally. Some have been a consistent influence, while others I only remember seeing a few times over my career. Since then many others in the divisions have been a big part of who I am. I pulled out the agenda for that conference today, and skimmed over the articles again. I was surprised to see that almost every one of the papers addressed some issue related to computer graphics. It was obvious that this was a time when we were all trying to figure out how computer graphics would influence our profession. Topics included computer graphics laboratory layout, computer graphics hardware, integration of CAD into freshman courses, and 3D graphics. Many of the papers involved picks and clicks (if I may borrow a term from my colleague Nate Hartman). Ron Barr and Davor Juricic presented a paper that was a little more philosophical. They speculated that

the “reign of this 3D CADD” would only last about 5 years, and that by “1995 we could expect a new cornerstone in the development of the procedures available to the designer.” I think they were right. Constraint-based CAD has definitely changed the tools available to designers. They also predicted that 10 years down the road we would still have the name *Engineering Design Graphics*, but that the topics taught would not be the same. They predicted our introductory courses would revolve around “three-dimensional detail design and StereoCAD literacy.”

Here we are 20 years later, and I still believe we are involved in three-dimensional design. I am not sure if *StereoCAD literacy* is an integral part of what we all do. One might argue that *spatial literacy* is what we are all about. I know some in our division have investigated how stereoscopic technologies and virtual reality environments can change the way people visualize and design.

What **are** we doing now? Today I also pulled out the proceedings from the 61<sup>st</sup> Annual Midyear in San Diego this past January. There were a couple papers that mention something about computer graphics in the title. There were presentations about approaches to solving visual communications problems, civic engagement, design strategies in a sophomore level aerodynamics class, online questioning strategies, a revised Bloom’s taxonomy, image-based lighting, interactive information design learner-centered experience, utilizing legacy CAD data, visual data mining operations, collaborative design, a phenomenological examination of spatial ability, 3D CAD and STEM education, accreditation vs. program ...

review, developing 3D spatial abilities among K-12 students, and non-parametric statistics. Wow!

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What a difference. Are all of these folks involved in *Engineering Design Graphics*? Probably not, but the ones who are no longer emphasize the tool as much as what we do with the tool. What do all of these papers have in common? I think all of the authors are folks involved with *graphics* in some kind of *design* environment. They care about *what they teach* and reflect on *how they teach*. Does it matter if our division is no longer such a homogeneous group? To some people it might, but I have to say Jon Duff hit the nail on the head when in San Diego he said, “The *Engineering Design Graphics Division* has been successful because of our ability to change.”

What will the presentations look like 20 more years down the road? I don’t know if I can even imagine at this point, but I’m sure we’ll have fun finding out!

## THE CHAIR’S AWARD

### 2006 AWARD:

**Nicholas Bertozzi** is an Associate Professor of Engineering at Daniel Webster College and Chair of the Engineering, Math, and Science Division. His major interest over the past eight years has been the concurrent engineering design process. Mr. Bertozzi is a member of the ASEE and the SME. *Address:* Engineering, Math, and Science Division, Daniel Webster College, 20 University Drive, Nashua, NH 03063-1300, *Email:* [bertozzi@dwc.edu](mailto:bertozzi@dwc.edu)

#### *Given By:*

Yearly by the current ASEE/EDGD Chair.

#### *Description:*

The **Chair’s Award** recognizes the outstanding paper delivered at the ASEE Annual Meeting.

#### *Details:*

1. Paper must be orally presented at a session hosted or co-hosted by the EDGD.
2. Paper must be published in the proceedings of the annual conference or distributed at the session. Each session moderator will collect all distributed papers and forward them to the Division Chair.
3. All papers satisfying the first two requirements will automatically be considered for the award.

#### *Procedure:*

The Chair will identify all eligible papers from a list made available by the Annual Meeting Program Chair and request the EDGD Director of Publications print adequate copies from the electronic proceedings in a document arranged in the order the papers were presented at the conference.

The Chair will convene a panel of at least three (3) reviewers from the membership of The Division and distribute the papers to the panel. This panel will rank the papers on three criteria:

- a. Significance-lasting impact on the teaching, learning, or study of Graphics.
- b. Scholarship-the level of research, testing, validation, and inference involved in preparing the paper or its findings.
- c. Authorship-the craft of writing, illustrating, and elaborating the technical information contained in the paper.

The paper with the lowest numerical ranking will be deemed the outstanding paper.

#### *Award:*

The award will be a framed citation and cash award.

The Chair will notify the awardee by mail no later than September 30th following the Annual Meeting. Additionally, notice of the award will be published in the Winter Issue of the Journal and announced at the following Midyear Meeting.