

## **Z.P. Bažant's Remarks upon Conferral of ACI Honorary Membership, Tampa, 4/3/2011**

*Mr. President, Ladies and  
Gentlemen:*

At this exalted moment I wish to thank my students, university and sponsors without whose help and generosity I would not be standing here.

This election fills me with enormous delight, for which I am thankful. But it also brings me enormous surprise and puzzlement.

For decades. I have been a vocal critique of certain aspects of the ACI code and committee recommendations. I have had protracted arguments in the ACI committees dealing with creep prediction and size effect. And I have mostly been unsuccessful and frustrated.

In this light, it is a noble act of ACI to bestow upon me this top honor nonetheless.

The entire ASCE Engineering Mechanics Institute, entire IA-FraMCoS, and entire ACI-446 believe there is a size effect. The Japanese introduced it into their code for beam shear 30 years ago, and the Europeans 19. Although

they haven't done it correctly enough, it was better than nothing — as in ACI.

ACI committees scrupulously follow democratic rules and have a strong representation of practitioners. This is good, but insufficient for problems such as multi-decade creep or the size effect, which require major extrapolations of experiments in time, or in size.

For such problems a theory is indispensable. Lacking it, the ACI code and recommendations often lead to excessive failure probability of very large structures, compromise the durability of creep-sensitive structures, or need to impose overcautious ad hoc restrictions on the designer's freedom.

In closing, I call upon ACI to balance the committees generating its code and recommendations by an adequate representation of theoretical researchers. I am thus echoing the words of ACI President Izquierdo-Encarnacion 8 years ago:

*Ars sine scientia nihil est – Art without science is nothing.*<sup>1</sup>

<sup>1</sup>Jose M. Porticus Izquierdo-Encarnacion, ACI Concr. Int. 2003  
285 words (1 min = 110 words)

