

21Club Social, Dinner and a Talk
Monday September 22, 2014

Student Union Building UNM Campus: Santa Ana A

Social: 5:30 p.m. Wine, Beer, Hors d'oeuvres.

Plated Dinner: 6:30 p.m. *Rosemary Roasted Chicken- Marinated Chicken Breast served with a Herb and White Wine Sauce, Rice Pilaf, and Roasted Italian Squash.*

Vegetarian Option: Quinoa/Kale Stuffed Bell Peppers Sauteed Vegetables tossed with Herbed Quinoa & Kale served with Asparagus and Roasted Garden Vegetables.

Meals are served with large House Salad, Ranch and Italian Dressings, Dinner Rolls, Carrot cake for Desserts, Coffee and Iced Tea and Iced Water

Talk: 7:30 Scholars Room

Tim Ross *Professor, Department of Civil Engineering; Fulbright Awardee in Brazil 2013-2014*

The Bamboo Paradigm: Why aren't we doing More?

An area of evolving interest around the world is in using bamboo as a serious construction engineering material. Strength and stiffness issues of bamboo, and its fast growth, light-weight, low cost, and major environmental benefits are well known around the world. However, this material is still not being used in the construction of 1-3 story buildings in developed countries in Europe and in the United States. In my research under my Fulbright Grant I have identified some non-engineering problems that might be responsible for the slow appearance of this material in the construction marketplace. These seem to center on 4 key issues: 1) lack of standards in building codes; 2) lack of trained workers who can assemble bamboo buildings of 3-4 stories; 3) lack of connection designs to enable the transfer of bending moments between beams and columns; and 4) lack of distribution networks for raw bamboo poles. Some of these issues are addressed by three different assessment methods: classification, cognitive maps, and agent based models, which will be described, and which explore the understanding needed to get bamboo into the mainstream of construction materials.

Biographical Sketch

Prof. Ross is a registered professional engineer with over 30 years experience in the fields of computational mechanics, hazard survivability, structural dynamics, structural safety, stochastic processes, risk assessment, and fuzzy systems. He was awarded a prestigious J. William Fulbright Fellowship for study during his sabbatical leave at the Department of Civil Engineering, University of Calgary, Alberta, for the 2001-2002 academic year. He has BS, MS and PhD degrees in Civil Engineering from Washington State, Rice and Stanford Universities, respectively. He has been an engineering educator at the University of New Mexico (UNM) since 1987. Prior to 1987, Prof. Ross conducted research for the US Defense Department in Albuquerque, New Mexico, and in Washington, DC. Prof. Ross is the founding Editor-in-Chief of the International Journal, Intelligent and Fuzzy Systems. His 1995 textbook by McGraw-Hill, Fuzzy logic with Engineering Applications, was the first classroom text for undergraduates in this field. The second edition of this text was published in 2004. He was elected a Fellow in ASCE in 1992 and was bestowed with the UNM Regents' Lectureship title in 1993. He is an active volunteer in youth ice hockey, and is the current academic advisor and assistant coach to the UNM club ice hockey team, the Ice Wolves.