# **BAY AREA ENGINEER**





NEWSLETTER

Lifford McLauchlan - Secretary

November 2010

## **IEEE Section Speaker Meeting**

Thursday, November 18, 2010

Visual Representation of Defects in Conductive Materials

by Rafic Bachnak

at

Texas A&M International University (TAMIU) Lamar Bruni Vergara, Room 209 Laredo, Texas

Social: 4:30 p.m. (Pizza and refreshments will be served) Presentation: 5:15 p.m.

> RSVP: L McLauchlan, <u>kfllm00@tamuk.edu</u> (Refreshments will be provided)

### FROM THE CHAIRWOMAN— Mehrube Mehrubeoglu (Ruby.Mehrubeoglu@ieee.org)

IEEE Corpus Christi Section Members: We are coming to the end of another year and we will be sending the ballots for the Corpus Christi section elections out around the first week in December. Please send the names of nominees to one of the board members to assure their names appear on the ballot to be mailed. Please remember IEEE membership renewal deadline is around the corner, and encourage new and existing members from industry, government laboratories and agencies, and academia, including graduate and undergraduate students, to join the IEEE as we strive to increase our membership at the Section level.

Presenter: Rafic Bachnak, Professor at Texas A&M International University (TAMIU)

Title: "Visual Representation of Defects in Conductive Materials"

#### **Summary:**

Nondestructive Testing plays an important role in ensuring that components and systems are free of defects that compromise their functionality. NDT testing techniques, for example, are used to locate flaws that might otherwise cause major catastrophic events such as plane crashes, train accidents, and plant explosions. The tests are performed in such a way that objects under inspection are not damaged or affected in any way. While there are several NDT methods, the three widely used techniques for materials testing and evaluation are radiography, ultrasonic, and eddy-current. The presentation will describe the development of an inspection system for visual representation of defects in conductive materials and present test results that demonstrate the usefulness of gyroscopes in acquiring depth measurements.

#### Bio:

Dr. R. Bachnak is a Professor at Texas A&M International University (TAMIU). He received his B.S., M.S., and Ph.D. degrees in Electrical and Computer Engineering from Ohio University in 1983, 1984, and 1989, respectively. Prior to joining TAMIU in 2007, Dr. Bachnak was on the faculty of Texas A&M-Corpus Christi, Northwestern State University, and Franklin University. His experience includes several fellowships with NASA and the US Navy Laboratories and employment with Koch Industries. Dr. Bachnak is a registered Professional Engineer in the State of Texas, a senior member of IEEE and ISA, and a member of ASEE. During the 2009-2010 academic year, Dr. Bachnak was a Fulbright Scholar at Notre Dame University, Lebanon.

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