IEEE Central Coast Event – 19 February 2020 @ 6PM

Professor Jerry D. Gibson Ph.D. – UCSB Presents:

The Compression of Everything

FREE EVENT

Location – Rusty's Pizza

5934 Calle Real, Goleta, CA 93117

6:00 PM – Complimentary Pizza, Salad, Beverage

6:25 PM – Central Coast Status

6:30 PM – Dr. Gibson's Presentation

Please REGISTER for EVENT –

https://events.vtools.ieee.org/event/register/219488

The Compression of Everything

Everything you consume or create on your cell phone, laptop, or tablet is compressed or will be. Compression is fundamental to our media-rich society today but is largely hidden behind the physical and network distribution layers. Compression is the representation of a signal in digital form with as few bits as possible while retaining the quality required for the given application. The technologies used for voice, audio, still images, and video all differ but broadly consist of time or frequency domain decompositions, quantization, and lossless coding. The need for compression is established in this talk and details of the compression methods are outlined, with particular emphasis on the signal processing required. Developing compression applications for biological signals such as EEG, ECG, and EMG are discussed.

Jerry D. Gibson

Jerry D. Gibson is Professor of Electrical and Computer Engineering at the University of California, Santa Barbara. He has been an Associate Editor of the IEEE Transactions on Communications and the IEEE Transactions on Information Theory. He was an IEEE Communications Society Distinguished Lecturer for 2007-2008. He is an IEEE Fellow, and he has received The Fredrick Emmons Terman Award (1990), the 1993 IEEE Signal Processing Society Senior Paper Award, the 2009 IEEE Technical Committee on Wireless Communications Recognition Award, and the 2010 Best Paper Award from the IEEE Transactions on Multimedia. He is the author, coauthor, and editor of several books, the most recent of which are The Mobile Communications Handbook (Editor, 3rd ed., 2012), Rate Distortion Bounds for Voice and Video (Coauthor with Jing Hu, NOW Publishers, 2014), and Information Theory and Rate Distortion Theory for Communications and Compression (Morgan-Claypool, 2014). His research interests are lossy source coding, wireless communications and networks, and digital signal processing.

EDUCATION: Ph. D., Electrical Engineering, Southern Methodist University, 1973. M. S., Electrical Engineering, Southern Methodist University, 1971. B. S., Electrical Engineering, University of Texas at Austin, 1969.