The 4th Circuit Element

Seminar Series on Selected Topics in Electrical and Electronic Engineering—2017

Venue: Billings Room
DATE: [Rescheduled] Thursday, 2nd February, 2017
TIME: 3:00 - 4:00PM

Abstract
In this talk, memrsitor (as a fourth circuit element postulated by L.O. Chua in 1971) is introduced. Basic circuit theory of memristor is briefly reviewed and HP memristor is revisited. Some applications of memristor are discussed. A memristor based chaotic circuit is constructed and studied. Also, a universal mutator for transformations among memristor, memcapacitor and meminductor is developed. Finally, dynamic behaviour of coupled memristor circuits will be studied.

About the presenter
Herbert Ho-Ching lu received the B.Eng. (Hons) degree in electrical and electronic engineering from the University of Hong Kong in 1997. He received the Ph.D. degree from the Hong Kong Polytechnic University in 2000.

In 2002, he joined the School of EECE, UWA as a Lecturer. He is currently a Professor at the same school. His research interests include power electronics, renewable energy, nonlinear dynamics, current sensing techniques, and memristive systems. He currently serves as a Guest Editor for IEEE Trans. on Industrial Electronics and IEEE Journal on Emerging and Selected Topics in Circuits and Systems, an Associate Editor for IEEE Trans. on Circuits and Systems Part II, IEEE Trans. on Power Electronics, IEEE Access, IEEE Circuits and Systems Magazine, an Senior Editorial Member of IEEE Journal on Emerging and Selected Topics in Circuits and Systems. He won the Vice-Chancellor’s Mid-Career Research Award in 2014 and IEEE PES Chapter Outstanding Engineer Award in 2015.

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