It is our great honor to introduce this conference proceeding of the first International Conference on Electrical and Computer Engineering (ICECE 2013) which had been held in Benghazi, Libya, during March 26–28, 2013.

The accepted papers in this proceeding can be divided into two tracks:

(I) Power Generation, Control, and Distribution.


(II) Telecommunication Electronics and Signal Processing. ICECE 2013 papers in this track touch topics in wireless communication and signal processing. In the article "Dual analysis of the capacity of spectrum sharing cognitive radio with MRC under nakagami-m fading," both the effective and the ergodic capacities have been analyzed for cognitive radio with MRC. The obtained mathematical algorithms have been
validated through several intensive simulations. On the other hand, the fault of mobile networks is a very critical topic. One way to expect and prevent possible faults is by analyzing the frequent huge number of alarms reported by the OMC in mobile network. In the article “Decision support system for alarm correlation in GSM networks based on artificial neural networks,” the artificial neural network is proposed to recognize such alarms and provide meaningful data for the decision makers. Novel speech recognition algorithm for Arabic digits has been proposed in “Speech recognition of arabic spoken digits.” After the recent war in Libya, many people lost their arms and hands. Artificial arms with the capability of an immediate respond to the brain signals (EMG) have been presented in the following promising work: “The development of body-powered prosthetic hand controlled by EMG signals using DSP processor with virtual prosthesis implementation.” Last but not least, a new design of a mini- ture RF MEMS metal-contact switch has been presented in the article “Cantilever beam metal-contact MEMS switch.”

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