

## **W4. Future gReen End-to-End wireless Network (FREENET)**

### **Abstract:**

Energy consumption and electromagnetic pollution are societal and economic challenges of prime importance that developed countries have to tackle. The evolution of future communication infrastructures will have to take into consideration both the aforementioned factors. The increasing demand for bandwidth-hungry multimedia and internet-related wireless devices and services has spurred the need towards maximal exploitation of spectral resources. Since 2006, data traffic on wireless networks has grown by approximately 400% and is expected to continue to increase rapidly in the coming years. The widespread use of complex, spectrum efficient techniques to support such high data volumes, the demand for higher data rates and the ever-increasing number of wireless users translate to rapidly rising power consumption. Currently consuming 3% of the energy and causing 2% of the CO<sub>2</sub> emissions globally, the Information & Communication Technology (ICT) industries are facing an increase in associated energy consumption of 16-20% per year. Furthermore, the energy costs for mobile operators can be as high as half of their annual operating budgets. The foregoing considerations highlight the urgent need for designing smart and green communications and networks.

This workshop will be held in conjunction with IEEE WCNC 2013 on April 7 - 9th, 2013 in Shanghai, China.

**Duration of Workshop: Half Day**

### **Speakers:**

**Shugong Xu, Huawei Technologies, China**