



# **Eighth IEEE International Symposium on Spread Spectrum Techniques and Applications (ISSSTA) - First Call for Papers**

*Wideband Signal Processing - Taking Spectrum into the Future*

**Sydney, Australia**  
**30 August - 2 September, 2004**

*With new developments in wireless technology, the scope of spread spectrum (SS) application has expanded to include new and unexpected areas. Developments in 3G systems based on SS / CDMA have reached a level of maturity where commercial products and operational networks are in place. WLAN systems based on SS have exhibited enormous growth in popularity even during a period of slow acceptance of other technology. Newer areas such as MIMO systems and, Ultra wideband systems herald impressive performance improvements for the future.*

ISSSTA 2004 will highlight theoretical performance of existing and future systems, as well as novel applications and implementations of spread spectrum technology. **MIMO systems** and **Ultra wideband** will join the list of topics which will include

## **Theory**

- Information theory of SS, MIMO channels
- Performance bounds, capacity limits
- SS signal processing including Ultra wideband
- Sequence and waveform design
- Signal acquisition and tracking
- Coding and modulation for SS and multi-user systems
- Information security LPI, LPD
- Receivers and diversity techniques
- Space-Time coding for SS systems
- Adaptive equalization, channel estimation and SS signal detection
- Interference suppression and cancellation
- Multiple access techniques and capacity analysis
- Antenna arrays, multi-sensor channels
- Remote sensing, radar, sonar and positioning system performance
- Multicarrier CDMA

## **Applications**

- Performance of SS/CDMA MIMO and multi-sensor systems
- Ultra wideband (UWB) systems
- Resource allocation, power control
- Ad-hoc SS/CDMA networks
- Performance of SS/CDMA satellite systems
- 4G System concepts
- Quantum applications
- Tools for system analysis
- Integrated circuit design and implementation
- Communications using chaos

## **Submission Deadlines**

The deadline for submission is **1 February 2004**, with notification of decisions by **1 April 2004**. Camera ready copies must be submitted by **1 June 2004**. Information for electronic submission of papers will be posted at a later date. Inquiries to paper submissions should contact the chairs or <http://www.isssta2004.org>

## **Paper Submissions**

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