

Multiuser MIMO Industry Course

organised by the FP6-IST project



Nokia Research Center Helsinki
Itämerenkatu 11–13
Helsinki, Finland

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www.ist-mascot.org

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Announcement

The wireless industry has started to integrate MIMO techniques into existing multi-user cellular standards and to define new cellular standards based on MIMO. The goal of this industry course is to highlight, exemplify, and discuss concepts and techniques for multi-user MIMO communications both in cellular networks and in ad-hoc mode. This course will cover recent advances in multi-user MIMO techniques on the physical-, medium access-, and radio link control layers.



Multiuser MIMO Industry Course Programme

Friday November 16, 2007

09:00 *Ari Hottinen, Nokia, Finland*

Welcome Message

09:15-10:00 *Helmut Bölcskei, ETH, Zurich*

MIMO multiuser basics, multiple-access schemes, and multi-user space-time coding

10:00-10:45 *Helmut Bölcskei, ETH, Zurich*

Feedback-based multi-user MIMO communication

Coffee break 10:45-11:00

11:00-12:30 *Martin Schubert, Heinrich Hertz Institut, Germany*

Resource Allocation and Interference Functions

Lunch break 12:30-14:00

14:00-15:30 *Emanuele Viterbo, Università della Calabria, Italy / NRC Helsinki, Finland*

Algebraic tools for code design in MIMO systems

Coffee break 15:30-15:45

16:00-16:45 *Christoph Mecklenbräuer, FTW, Austria*

MU-MIMO scheme performance evaluations using measured channels in specific environments

16:45-17:30 *Christoph Mecklenbräuer, FTW, Austria*

MU-MIMO schemes in current standards for 3GPP Long Term Evolution, Wireless LAN, and WiMax.

Closing 17:30