



International Workshop on Channel Coding and Cooperation in Wireless Communications

June 10-12, 2009, in conjunction with ICT Mobile Summit 2009, Santander, Spain

The main objective of this one-day Workshop is just to attract all those people, as well as researchers from the non-EC-projects-related scientific community to build a temporary forum at the European level and give an opportunity for a thorough coordinated discussion. At a first glance the subject may appear as dedicated to specialists only. On the contrary, the workshop aims at involving a broader audience since the techniques that will be discussed are included in any of the forthcoming standards for the (wireless) Internet of the future, and have a large impact on the design of user terminals. This is particular relevant since it is relatively difficult to find such an occasion in large International conferences, and/or EC-generated meetings.

This Workshop aim is twofold: on one hand it intends to review what we may call now the "classical" techniques (channel coding and modulation), especially trying to sum up about their myths and realities. On the other, the latest research trends in the field will be showcased: non-binary LDPC codes, rateless and fountain codes, efficient/parallel decoding algorithms for VLSI implementation, joint iterative decoding and parameter estimation, just to mention a few. Particular attention will be devoted to cooperative coding techniques that may play a key role in future scenarios for wireless information interchange such as sensor and vehicular networks.

Programme:

9.00-10.00 Registration

10.00-10.30 Chairmen's Welcome and presentations of the FP7 projects NEWCOM++ and DA VINCI

10.30-11.00 Emmanuel BOUTILLON (Univ. Bretagne Sud, DaVinci): "Hardware optimization of error control decoders",

11.00-11.30 Coffee Break

11.30-12.00 David DECLERCQ (ENSEA, DaVinci): "Finite Generalized Non Binary LDPC Codes: Split LDPC Codes",

12.00-12.30 Marco LUISE (Univ. Pisa, DaVinci/NEWCOM++): "From Cooperation to Cognitive Positioning: a Signal Processing Perspective"

12.30-13.00 Iryna ADRIYANOVA (ENSEA, DaVinci): "From Finite-Length Performance of Punctured Codes Towards the Throughput and Delay Estimation for HARQ Retransmission Protocols",

13.00-14.00 Lunch

14.00-14.30 Jossy SAYIR (FTW Vienna, NEWCOM++): "Low Complexity Decoder Design with Role Models",

14.30-15.00 Luc VANDENDORPE (Univ. Cathol. Louvain, NEWCOM++) : "Recent advances in cooperative techniques for wireless transmission",

15.00-15.30 Davide GREGORATTI, Xavier MESTRE (CTTC Barcelona, NEWCOM++): "Randomized space-time block codes for cooperative communications: asymptotic performance analysis"

15.30-16.00 Erdal ARIKAN (Bilkent University, NEWCOM++): "Channel polarization and polar codes"

Workshop Co-Chairs

[Marco Luise](#)

University of Pisa, Italy

[David Declercq](#)

ENSEA Cergy - Pontoise, France

Co-organized with



[NEWCOM++ FP7 NoE](#)



[EC ICT Mobile Summit](#)



[FP7 Cooperation](#)

Click [here](#) for more information