

# **Séminaire ICI : Michael Lentmaier**

11 Septembre 2014, 14:00 – 15:30

## **Titre du séminaire et orateur**

Braided Convolutional Codes – A Class of Spatially Coupled Turbo-Like Codes.  
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## **Date et lieu**

Jeudi 11 septembre à 14h00.  
ENSEA Cergy-Pontoise, salle 384.

## **Abstract**

We investigate the impact of spatial coupling on the thresholds of turbo-like codes. Parallel concatenated and serially concatenated convolutional codes as well as braided convolutional codes (BCCs) are compared by means of an exact density evolution (DE) analysis for the binary erasure channel (BEC). We propose two extensions of the original BCC ensemble to improve its threshold and demonstrate that their BP thresholds approach the maximum-a-posteriori (MAP) threshold of the uncoupled ensemble. A comparison of the different ensembles shows that parallel concatenated ensembles can be outperformed by both serially concatenated and BCC ensembles, although they have the best BP thresholds in the uncoupled case.