

# GDR ISIS workshop on "Coding Theory and Its Applications to Data Storage, Communications and Security"

30 11 2019 13:00



Iryna Andriyanova from ETIS co-organized a GDR ISIS workshop on "Coding Theory and Its Applications to Data Storage, Communications and Security". It was held in Institut Poincaré, Paris, Friday November 22, 2019.

Several guest speakers from Sweden, LabSTICC/IMT Atlantique, INRIA, Bordeaux Univ and ETIS presented their works, see program below. Gada Rezgui (PhD) and Nicolas Charpenay (M2) from ETIS presented their work with Iryna Andriyanova and Mael Le Treust respectively.

## Organizers

- Iryna Andriyanova (ETIS, ENSEA-Université de Cergy-Pontoise-CNRS); [iryna.andriyanova@ensea.fr](mailto:iryna.andriyanova@ensea.fr)
- Charly Poulliat (IRIT, ENSEEIHT), [charly.poulliat@enseeiht.fr](mailto:charly.poulliat@enseeiht.fr)

## Program

9:30-10:15 Finite-length scaling of spatially coupled LDPC codes under window decoding over the binary erasure channel, Alexandre Graell i Amat, in collaboration with Roman Sokolovskii and Fredrik Brännström Chalmers University of Technology, Sweden

10:15-11:00 List decoding of short LDPC codes with a CRC, Michael Lentmaier, in collaboration with Wei Zhou Lund University, Sweden

11:00-11:45 Non-binary turbo codes: design, simplified decoding and comparison with SoA codes, Charbel Abdel Nour, in collaboration with Rami Klaimi and Catherine Douillard, IMT Atlantique, Brest

Lunch time

13:15-14:00 Magic state distillation with error-correcting codes, Jean-Pierre Tillich, INRIA, Paris

14:00-14:45 Quantum LDPC codes: an introduction and a survey, Gilles Zémor, University of Bordeaux, Bordeaux

14:45-15:30 LDPC codes for extractable source coding and application to 360 degree images, Elsa Dupraz, in collaboration with Fangping Ye, Navid Bidgoli, Aline Roumy, Thomas Maugey and Karine Amis, IMP Atlantique, Brest

15:45-16:05 On high-rate non-binary LDPC codes with extremely low bit error rates, Gada Rezgui, in collaboration with Iryna Andriyanova, Charly Poulliat and Cyril Méasson, University Paris Seine, Cergy

16:05-16:25 Variable-length coding for zero-error information transmission, Nicolas Charpenay, in collaboration with Mael Le Treust, University Paris Seine, Cergy