Information Theory and Coding

Time and location:
- Mondays, 13–15, ELA 1 (lecture)
- Tuesdays, 13–15, ELA 2 (lecture)
- Tuesdays, 15–17, ELA 2 (exercise)

Instructor:
Emre Telatar (INR 117, 37693, emre.telatar@epfl.ch)
Office hours: by appointment.

Teaching assistants:
- Elie Najm (INR 141, elie.najm@epfl.ch)
- Aleksei Triastcyn (INR 238, aleksei.triastcyn@epfl.ch)
- Pierre Quinton (pierre.quinton@epfl.ch)

Administrative assistant:
Muriel Bardet, (INR 137, 37695, muriel.bardet@epfl.ch)

Prerequisite:
Probability and Statistics (I and II) or
Stochastic processes for communications

Web page: http://ipg.epfl.ch/

Textbook:
T. M. Cover and J. A. Thomas, Elements of Information Theory, Wiley, 2006

Course mechanics:
Weekly assignments,
One graded homework (date TBA, 10%),
Midterm quiz (Tuesday October 31, 40%),
Final exam during finals period (50%).

Approximate Outline:
Properties of information measures (4–5 lectures)
Source coding (7–8 lectures)
Capacity and the channel coding theorem (5–6 lectures)
Coding techniques for reliable communication (4–5 lectures)
Multi-user channels (4–5 lectures)
Additional topics (1–2 lectures)

Reference Material: