

Information Theory I

Fall Semester 2016

Prof. Dr. A. Lapidoth

Signal and Information
Processing Laboratory

Institut für Signal- und
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Information about the Course

<http://www.isi.ee.ethz.ch/teaching/courses/it1/>

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Lectures Wednesdays, 1.15 - 3.00 pm in ETZ E 9

Tutorials Wednesdays, 3.15 - 5.00 pm in ETZ E 9

Prerequisites

- Solid foundation in probability and calculus
- Pleasure with mathematics
- English (lectures and tutorials are held in English)

Lecture Notes Thomas M. Cover and Joy A. Thomas, *Elements of Information Theory*, 2nd Edition, John Wiley & Sons, 2006.

Tutorials The assistant explains and provides hints for the weekly homework exercises. Exercises may be handed in one week after the assignment (no Testat).

Exam The exam is oral (30 min, in English).

Recommended Literature

- Thomas M. Cover and Joy A. Thomas, *Elements of Information Theory*, 2nd Edition, John Wiley & Sons, 2006.
- Robert G. Gallager, *Information Theory and Reliable Communication*, John Wiley & Sons, 1968.
- Imre Csiszár and János Körner, *Information Theory: Coding Theorems for Discrete Memoryless Systems*, Academic Press, 1981.
- Raymond W. Yeung, *A First Course in Information Theory*, Kluwer Academic Press, 2002.
- Robert McEliece, *The Theory of Information and Coding*, Cambridge University Press, 2004.