

# Information Theory I

Fall Semester 2017

Prof. Dr. A. Lapidoth

Signal and Information  
Processing Laboratory

Institut für Signal- und  
Informationsverarbeitung



## Information about the Course

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

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Addresses	Lecturer	Assistant
	Prof. Dr. Amos Lapidoth ETF E 107 Tel: +41 44 632 51 92 E-mail: <a href="mailto:lapidoth@isi.ee.ethz.ch">lapidoth@isi.ee.ethz.ch</a>	Christoph Pfister ETF D 108 Tel: +41 44 632 65 59 E-mail: <a href="mailto:pfister@isi.ee.ethz.ch">pfister@isi.ee.ethz.ch</a>

**Lectures** Wednesdays, 1.15 - 3.00 pm in **ETF E 1**

**Tutorials** Wednesdays, 3.15 - 5.00 pm in **ETF E 1**

**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.