

# 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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<b>Addresses</b>	<b>Lecturer</b> 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>	<b>Assistant</b> 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>
<b>Lectures</b>	Wednesdays, 1.15 - 3.00 pm in ETZ E 9	
<b>Tutorials</b>	Wednesdays, 3.15 - 5.00 pm in ETZ E 9	
<b>Prerequisites</b>	<ul style="list-style-type: none"><li>• Solid foundation in probability and calculus</li><li>• Pleasure with mathematics</li><li>• English (lectures and tutorials are held in English)</li></ul>	
<b>Lecture Notes</b>	Thomas M. Cover and Joy A. Thomas, <i>Elements of Information Theory</i> , 2nd Edition, John Wiley & Sons, 2006.	
<b>Tutorials</b>	The assistant explains and provides hints for the weekly homework exercises. Exercises may be handed in one week after the assignment (no Testat).	
<b>Exam</b>	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.