

### Ενδεικτικά Θέματα Εργασιών (projects)

*Σημείωση:* Τα παρακάτω αποτελούν ενδεικτικά θέματα εργασιών. Κάτω από κάθε θέμα παρατίθεται ενδεικτική βιβλιογραφία. Μπορείτε να επιλέξετε και άλλα θέματα, αρκεί να έχει ενημερωθεί και να έχει συμφωνήσει ο διδάσκων. Περισσότερες οδηγίες και διευκρινίσεις για τις εργασίες δίνονται στο Φυλλάδιο 7.

#### \* Network Coding

- R. Ahlswede, N. Cai, S.-Y. R. Li, and R. W. Yeung, "Network information flow," *IEEE Trans. Inf. Theory*, vol. 46, pp. 1204–1216, 2000.
- C. Fragouli et al, Network Coding: An Instant Primer, ACM SIGCOMM 2006, <http://infoscience.epfl.ch/getfile.py?mode=best&recid=58339>.
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#### \* Channel capacity when the channel is unknown or partially known

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- M. Medard, "The Effect upon Channel Capacity in Wireless Communications of Perfect and Imperfect Knowledge of the Channel," *IEEE Trans. Inf. Theory*, vol. 46, no. 3, May 2000

#### \* Capacity of fading channels

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#### \* Capacity of discrete channels with memory

- Βιβλίο Gallager κεφ. 4

- Βιβλίο Ash κεφ. 7

\* Relay channel

- T. M. Cover and A. A. El Gamal, "Capacity theorems for the relay channel," *IEEE Trans. Inf. Theory*, vol. 25, no. 5, pp. 572-584, Sep. 1979.

\* Relay Networks

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#### \* Capacity Calculation for Discrete Memoryless Channels

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#### \* Kolmogorov complexity and Algorithmic Information Theory

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\* Secrecy capacity

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