Term Paper Information

The term paper component of the course provides an opportunity for the study and discussion of a topic related to the field of wireless sensor networks by small teams of 2 or 3 collaborators. As such, a main part of the effort should be allocated to discussion meetings with your teammates to study and discuss the details of the collection of papers on the selected topic, including the merits, shortcomings, alternative approaches, and comparative analysis of the works you study.

At least 3 published papers in a topic related to wireless sensor networks must be included in the study. All team members are supposed to study all of the selected papers. A list of some suggested topics is attached at the end of this handout, but you can choose a different topic as well.

The term paper should summarize your collective understanding of the work presented in the papers, and the results of your discussion and analysis, and must have a coherent and clear flow. The paper should not be formatted as a cascade of disconnected sections contributed by different team members. Instead, try to deliver a cohesive analysis throughout your paper. The term paper must present an analysis of the studied papers either in the form of evaluating and criticizing the work reported in the papers, or in the form of a comparative analysis between two or more methods presented in the studied papers.

The credit for the term paper component of the course grade is a total of 20%, which is split to 5% for the proposal and 15% for the term paper.

Deadlines:

- Topic and paper proposals are due on Sunday 01/30 midnight. The proposal has to include a description of the topic, its importance in the field of wireless sensor networks, the list of papers selected for study, and the names of the team members. The length of the proposal should be 1-2 pages. You are encouraged to start teaming up with your classmates early on so you would have adequate time to discuss and choose a topic and for literature search. Feel free to use the office hours to discuss your selected topic with the instructor prior to the deadline. Email the proposal as an attachment to the instructor by the stated deadline. Do not forget to include the names and Email addresses of the team members in the title space of the proposal.

- Term papers are due on Sunday 02/27 midnight. A typical term paper would be around 4-5 pages long and papers should not exceed 5 pages. Make sure to include and cite your references in the paper. Direct copying of portions of the papers into your paper is not acceptable. Instead, use your own words to describe a paper’s approach or results. The final paper must be sent to the instructor as an Email attachment. Do not forget to include the names and Email addresses of all the team members in the title space of the paper.

- Bonus credit of up to 5% of total course grade will be given to term papers that include introduction and evaluation of your own original idea related to the topic of study. This
should include a comparative study between your suggested idea and the other techniques presented in the papers you have discussed in the term paper.

Some Suggested Domains for Term Paper Topics:

- Energy-awareness in wireless sensor networks
- Network localization
- Target detection and tracking
- Distributed hypothesis generation and testing
- Distributed image sensors and applications
- Routing in wireless sensor networks
- Time synchronization
- Data compression, aggregation, redundancy management
- Network coding and correlated sources
- Techniques based on distributed image sensors