



**Department of Electrical and Computer Engineering
Computer Architecture and Parallel Systems Laboratory – CAPSL**

**CPEG852 - Advanced Topics in Computing Systems
Fall 2015**

Final Project

Each group can download topic-related references in the course webpage.

Should you have any questions about the final projects, contact Pouya Fotouhi (pfotouhi@udel.edu).

Topic F1 — Cilk

Students: Gongyuan He, Jinghe Huang

Questions for topic F1:

1. Can you describe how chares and branched-chares work ?
2. How are chares different from hyperobjects?

Topic F2 — MPI, CHARM++

Students: Haochen Xiong, Siyao Zhang

Questions for topic F2:

1. How is programming Charm++ different than programming Chapel programs according to you?
2. In particular, describe the difference of viewpoint with respect to memory distribution between the two languages.

Topic F3 — OpenMP

Students: Hui Ding, Xin Song

Questions for topic F3:

1. Compare the OpenMP memory model and DAG consistency.
2. In particular, how do FLUSH operations differ from what the BACKER algorithm does?

Topic F4 — PGAS

Students: Yifeng Cong, Junpeng Zhu

Note: "The Cilk++ Concurrency Platform" may be a good read before group 4 reads the assigned paper.

Questions for topic F4:

1. Describe how Cilk++'s hyperobjects are different from shared memory objects are handled in a PGAS language (e.g., Chapel).