

CPEG 852 — Advanced Topics in Computing Systems

Introduction

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September 1, 2015

- 1 **Administrative Information**
- 2 **Grades**
- 3 **References**
- 4 **Relevant Academics Resources**
- 5 **Major Topic Areas**

Lead instructor	Stéphane ZUCKERMAN szuckerm@udel.edu 201B Evans Hall
Guest Speakers (tentative)	Prof. Guang R. GAO Dr. Haitao WEI ...and others
Teaching Assistant	Pouya FOTOUHI pfotouhi@udel.edu 121 Evans Hall

Web page: <http://www.caps1.udel.edu/courses/cepg852/2015f/>

GRADES

Course work will carry the following weights towards your final grade:

- ▶ Course participation (attendance, assignments, presentations, *etc.*): 50%
- ▶ Project report: 50%

REFERENCES

- ▶ A set of papers—to be assigned.
- ▶ Books:
 - ▶ No textbook needed.
- ▶ Other references will be provided on the course web site.

RELEVANT ACADEMICS RESOURCES: JOURNALS

IEEE	Computer Transactions on Computers Concurrency Transactions on Parallel & Distributed Systems
ACM	TOPLAS – Transactions On Parallel Languages And Systems Transactions on Computer Systems
JPDC	Journal of Parallel and Distributed computing
JSC	Journal of Supercomputing
IJPP	International Journal on Parallel Programming

RELEVANT ACADEMICS RESOURCES: CONFERENCES

PLDI	Symposium on Parallel Languages Design & Implementation
POPL	Symposium on Principles of Programming Languages
PPoPP	Symposium on Principles & Practice of Parallel Programming
ICPP	International Conference on Parallel Processing
ICS	International Conference on Supercomputing
ISC	High-Performance Conference
SC	International conference on High-Performance Computing, Storage and Analysis
LCPC	International workshop on Languages, Compilers, and Parallel Computing
PACT	International conference on Parallel Architectures and Compiler Technology
IPDPS	International Parallel & Distributed Processing Symposium
Euro-Par	European conference on Parallel Processing
MICRO	Symposium on Microarchitectures
ISCA	International Symposium on Computer Architecture
ASPLOS	ACM Symposium on Architecture Support for Programming Languages and Operating Systems
HPCA	High-Performance Computing Architecture

MAJOR TOPIC AREAS (TENTATIVE)

- ▶ Topic A: Introduction to Execution Models
- ▶ Topic B: The Dataflow Model of Computation
- ▶ Topic C: Modern Dataflow Computing: hybrid von Neumann/Dataflow Approaches
- ▶ Topic D: Memory Models
- ▶ Topic E: Hardware and Software co-design to implement PXMs.