ECE 8030: Computing Frontiers
Section 001
FALL 2020

MEETING TIME: Wednesday 1010-1100AM

MEETING LOCATION: 430 Sirrine Hall

INSTRUCTOR(s): Dr. Melissa C. Smith; smithmc@clemson.edu; 110 Riggs Hall; 864.656.2119

OFFICE HOURS AND PROCEDURES: Office hours will be conducted by Zoom by appointment

COURSE MODALITY: HYBRID

COURSE DESCRIPTION: Emerging and potentially disruptive computing architectures, methods, etc., in the literature are introduced. In addition, best practices in research, literature reviews, and technical speaking are presented. Current articles and papers on computing architecture are reviewed and discussed.

COURSE PREREQUISITES: None

STUDENT LEARNING OUTCOMES: Students will be able to conduct focused literature reviews, read current literature from a critical and technical perspective, formulate a technical summary of a paper, develop and present a technical presentation, and better understand the publication process.

REQUIRED MATERIALS: No required text. Students are required to have a laptop computer, internet connectivity capable of transmitting and receiving video, a video camera, a microphone, and a cell phone.

TOPICAL OUTLINE: Each week in class, time will be spent reviewing one or more papers on computing architecture and related topics from the current literature (**within past 3 years and a minimum of 8 pages from Journals or top-tier conferences such as IEEE or ACM**). Each student is expected to participate in class discussions and present one or more literature reviews.

Week 1   Course overview, discussion of literature review process, criteria for selected papers, rubric for presentation assessment, and discussion of topic areas for the semester.

Week 2   Sample presentation from current PhD student, overview of some sample papers, discussion of paper selection and approval process for each week.

Week 3-15   Students will rotate selecting and presenting an instructor approved paper (one per week). Other students in the class will provide a technical summary and critique prior to the start of class and engage in the in-class discussions. At least 2 weeks of this period will be used to conduct "mock" reviews of conference papers where students complete a typical conference review form (provides students with insight into the paper review process).

CLASS CANCELLATION POLICY: Class is cancelled if the instructor is more than 10 minutes late to class.

GRADING POLICY: The course is graded on the student's class participation.

- **35% attend** each week and **participate/engage** in discussions
- **30% write** a brief summary of each paper covered (1/2 page single-spaced minimum), answering:
  - What did the authors do (technical contribution)?
  - What are the strengths / weaknesses / potential improvements?

    Summaries should be submitted via box in the folder for the week with a filename:
    `userID.pdf`

    Summaries are due **15 minutes before the beginning of the class**.

- **25% lead the discussion** (including a presentation of the paper), depending on the number of students, at least twice during the semester. You may select a paper either from the suggested list developed at the beginning of the semester or you may find one yourself and have it approved by the instructor; all students will be asked to submit at least 2 papers to the list for review. Either way, you should notify the instructor and get approval of the paper at least one week before your presentation. (Note: A paper summary is not required for the week that you lead the discussion.)

- **10% participate** in the group paper reviews by:
  - Helping with presentation
  - Lead the discussion
  - Provide critique
  - Complete paper review form

Grades will be based on the following percentages:

- A – 90 and above
- B – 80 to 89
- C – 70 to 79
- F – 69 and below

ATTENDANCE POLICY:

1. According to the university's hybrid process, the university will assign students a day of the week they are to come this class; on other days, they must attend online.
2. Students are required to attend either in person (available when the university is operating in hybrid mode) or online to participate in the discussion.
3. In the event of a class cancellation, the paper discussion will be rescheduled.
4. Please send the instructor an email to inform of student absences.
5. To maintain physical distancing, individuals arriving first to the classroom should sit farthest from the door. Similarly, at the conclusion of class, students closest to the door should leave first.
6. While on campus, face coverings are required in all buildings and classrooms. Face coverings are also required in outdoor spaces where physical distance cannot be guaranteed. If a student does not have a face covering or refuses to wear an approved face covering without valid documented accommodation, the instructor will ask the student to leave the academic space

ACCESSIBILITY STATEMENT: Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to a class should let the instructor know and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848 or by emailing studentaccess@lists.clemson.edu. Students who receive Academic Access Letters are strongly encouraged to request, obtain, and present these to their instructors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: http://www.clemson.edu/campus-life/campus-services/sds/.

TITLE IX STATEMENT: Clem[son University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972.

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a. Ensure you are signed up for emergency alerts (https://www.getrave.com/login/clemson)
b. Download the Rave Guardian app to your phone (https://www.clemson.edu/cusafety/cupd/rave-guardian/)
c. Learn what you can do to prepare yourself in the event of an active threat (http://www.clemson.edu/cusafety/EmergencyManagement/)

ACADEMIC INTEGRITY: As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning.' Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form. In instances where academic standards may have been compromised, Clemson University has a responsibility to respond appropriately to charges of violations of academic integrity. Further information on Academic Integrity can be found in the *Undergraduate Announcements* and in the *Graduate School Policy Handbook*.

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MODIFICATION STATEMENT: The instructor reserves the right to modify any aspect of the syllabus at any time during the semester for reasons including but not limited to COVID-related situations. [August 10, 2020]