**ECE471: Embedded Systems – Homework #10**

Pi Cluster Reading

**Due: Friday 30 November 2018, 10am**

1. ## Read the Paper

   Submit individual assignments; unlike previous homeworks this is not a group project.

   Read the following paper:

   *A Raspberry Pi Cluster Instrumented for Fine-Grained Power Measurement* by Cloutier, Paradis, and Weaver. MDPI Electronics special issue on Raspberry Pi Applications.

   `http://www.mdpi.com/2079-9292/5/4/61`

   You might want to read the pdf (rather than the HTML version) if only because you won't have to click around to get the figures/tables.

2. Answer the following questions (10pts)

   (a) If you wanted maximum floating point (GFLOPS) performance with one ARM system (meaning, not a cluster), which would you use?

   (b) If you wanted lowest power under load with one ARM system, which board would you use?

   (c) If you wanted maximum GFLOPs/W, which architecture should you use, x86 (Intel and AMD) or ARM?

   (d) If you wanted maximum MFLOPs per dollar, which architecture should you use, x86 (Intel and AMD) or ARM?

   (e) If you were personally building a compute cluster, what type of device would you make it out of? Why?

3. **Submitting the Results**

   Just e-mail me the answers to the 5 questions. Just plain text in the e-mail is fine. Or you can attach the answers as a txt, pdf, or Libre-office file.