**Undergraduate Research and Possible Internship Opportunity**

**Research and Development of New LDPC Decoders**

January-September 2019

We are excited to announce an opportunity for two UCLA undergraduates to participate in research in Professor Wesel’s Communications Systems Laboratory during winter and spring quarters of 2020 followed by a possible summer internship at Physical Optics Corporation in Torrance, California (South Bay of Los Angeles).

Working as a team with mentoring from Professor Wesel and his PhD students and senior undergraduates, two UCLA undergraduates will use an FPGA development kit provided by [Physical Optics Corporation](https://www.poc.com/) to implement a new lower-complexity LDPC decoder in FPGA. The research team will be supported in their efforts by Prof. Wesel, his graduate students, and other more-experienced undergraduates in the Communication Systems Laboratory (CSL), and engineers from Physical Optics Corporation and possibly other companies. Pay is $15/hour for winter and spring research at UCLA and higher if hired to continue at POC. Students will report progress weekly at the CSL research meeting and give formal quarterly presentations to the POC management team.

The preferred skill set includes the ability to work well on a team as well as proficiencies in Introductory Digital Design Laboratory (ECE M152A), C++ (CS31), probability (ECE 131A), and communications systems (ECE 132A).

More information about the CSL can be found at <http://www.seas.ucla.edu/csl>.

More information about this specific project from project lead Chester Hulse can be found [here](https://docs.google.com/document/d/1-9MCDbJqTiTWur0kjrMb5XdMVNo-0Z-s2I-wVILK31Y/edit?usp=sharing).

Applications should send a resume and cover letter to Professor Wesel at [wesel@ucla.edu](mailto:wesel@ucla.edu) with the subject line “FPGA LDPC research and internship program.” Applicants should be interested in the full 9-month experience. Applications accepted immediately but due by Friday January 17 with candidates selected for interview announced the following week. An early email letting us know you are planning to apply is appreciated.