



HARVARD  
FAS Center for Systems Biology



Department of  
Systems Biology

## Undergraduate Summer Internship in Systems Biology

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### Internship Project Description: Summer 2018

**Project Title:** Validation of functional CTCF deletions from large scale non-coding CRISPR screen

**Supervisor Name:** Pardis Sabeti

**Lab PI Name:** Pardis Sabeti

#### **Project Description:**

We have been developing the first genome-wide, non-coding CRISPR screens. Projects like ENCODE have created cell-type specific maps of millions of regulatory elements identified by their associations with biochemical marks and proteins that are associated with function. While these elements are associated with marks of regulatory activity, very few of these million sites have been characterized for function. We're interested in understanding how non-coding variation plays a role in disease and evolution, but that requires understanding the function of these elements. We're endeavouring to build these types of new tools to characterize regulatory functions, in a high throughput manner, genome wide.