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Property testing distinguishes a structure which satisfies a property from a structure which is ε -far from satisfying the property, using a constant number of queries (samples). In some cases, a sublinear number of queries may also be considered. We first show that VPL (Visibly Pushdown languages) can be recognized by a streaming property tester with $O(\text{poly}(\log n)/\varepsilon)$ queries (joint work with F. Magniez, O. Serre and N. François).

We then consider graphs which follow a power law degree distribution, as a stream of edges and study the existence of clusters. We give probabilistic algorithms which detect with $O(\sqrt{n})$ queries, clusters of size $O(\sqrt{n})$ with high probability (recent work with Claire Mathieu) and which may also approximate the clusters.