

## **High-resolution identification of 3D chromatin interactions**

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The family Chromosome Conformation Capture experimental techniques allow for highly parallel measurement of 3d chromatin interactions. The primer based 5C variant in particular allows assaying all interactions among a set of selected regions. However, achieving unbiased high-resolution measurements with this techniques requires decreasing both the size of and distance between regions interrogated, at which point numerous systematic issues make identifying interactions extremely difficult. We will discuss these challenges and our work on developing new approaches to model these effect and extract interaction patterns from these types of data. We will demonstrate how these techniques allow high-resolution mapping of changes in chromatin interactions across different cellular conditions.